



## Final Environmental Impact Statement

Prepared in Accordance with Chapter 343,  
Hawai'i Revised Statutes and Title 11,  
Chapter 200 Hawai'i Administrative Rules

# Hā'ena State Park Master Plan

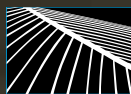
**Accepting Authority:**  
Governor, State of Hawai'i

**Prepared for:**



State of Hawai'i,  
Department of Land and Natural Resources,  
Division of State Parks

**Prepared by:**



**PBR HAWAII**  
& ASSOCIATES, INC.

**May 2018**





# Hā ena State Park Master Plan

## FINAL ENVIRONMENTAL IMPACT STATEMENT

### ***Proposing Agency:***



State of Hawai'i  
Department of Land and Natural  
Resources  
Division of State Parks

This document and all ancillary documents were prepared under my direction and in accordance with the content requirements of Chapter 343, Hawai'i Revised Statutes, and Title 11, Chapter 200, Hawai'i Administrative Rules.

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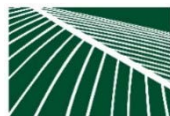
Suzanne Case, Chairperson  
Board of Land and Natural Resources

Date

### ***Accepting Authority:***

Governor  
State of Hawai'i

### ***Prepared by:***



PBR HAWAII  
& Associates, Inc.

**May 2018**



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## ACRONYMS AND ABBREVIATIONS

<b>ADA</b>	Americans with Disabilities Act of 1990, as Amended
<b>ALISH</b>	Agricultural Lands to Importance of the State of Hawai‘i
<b>amsl</b>	Above Mean Sea Level
<b>ATA</b>	Austin, Tsutsumi and Associates
<b>BLNR</b>	Board of Land and Natural Resources
<b>cal</b>	Calories
<b>CDP</b>	Census Designated Place
<b>cfs</b>	Cubic feet per second
<b>CGP</b>	Cultural Gathering Place
<b>CIA</b>	Cultural Impact Assessment
<b>cm<sup>2</sup></b>	Square centimeter
<b>CWRM</b>	DLNR, Commission on Water Resource Management
<b>DAR</b>	DLNR, Division of Aquatic Resources
<b>DCAB</b>	State Disability and Communication Access Board
<b>DEIS</b>	Draft Environmental Impact Statement
<b>DLNR</b>	Department of Land and Natural Resources
<b>DOCARE</b>	DLNR, Division of Conservation and Resources Enforcement
<b>DOFAW</b>	DLNR, Division of Forestry and Wildlife
<b>DOH</b>	Department of Health
<b>DOT</b>	State Department of Transportation
<b>DOW</b>	County of Kaua‘i, Department of Water
<b>ECC</b>	Education and Cultural Center
<b>EIS</b>	Environmental Impact Statement
<b>EISPN</b>	Environmental Impact Statement Preparation Notice
<b>EPA</b>	U.S. Environmental Protection Agency
<b>FEMA</b>	Federal Emergency Management Agency
<b>FEIS</b>	Final Environmental Impact Statement
<b>FIRM</b>	Flood Insurance Rate Map
<b>GP</b>	County of Kaua‘i General Plan
<b>gpd</b>	Gallons per day
<b>GPS</b>	Global Positioning System
<b>HAR</b>	Hawai‘i Administrative Rules
<b>HCBSF</b>	Hā‘ena Community-Based Subsistence Fishery
<b>HRS</b>	Hawai‘i Revised Statutes
<b><u>HSPCAC</u></b>	<u>Hā‘ena State Park Community Advisory Committee</u>
<b>KIUC</b>	Kaua‘i Island Utility Cooperative
<b>LSB</b>	University of Hawai‘i Land Study Bureau

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<b>LWCF</b>	Land and Water Conservation Fund
<b>mgd</b>	Million gallons per day
<b>MPAC</b>	Master Plan Advisory Committee
<b>NFIP</b>	National Flood Insurance Program
<b>NMFS</b>	National Marine Fisheries Service
<b>NOAA</b>	National Oceanic and Atmospheric Administration
<b>NPS</b>	National Park Service
<b>NRCS</b>	U.S. Department of Agriculture, Natural Resource Conservation Service
<b>NTBG</b>	National Tropical Botanical Garden
<b>NWI</b>	National Wetlands Inventory
<b>OCCL</b>	DLNR, Office of Conservation and Coastal Lands
<b>PV</b>	Photovoltaic
<b>PVC</b>	Polyvinyl Chloride
<b>s.f.</b>	Square feet
<b>SHPD</b>	DLNR State Historic Preservation Division
<b>SMA</b>	Special Management Area
<b>SOEST</b>	University of Hawai‘i, School of Oceanography and Earth Science and Technology
<b>TIAR</b>	Traffic Impact Analysis Report
<b>TMK</b>	Tax Map Key
<b>USFWS</b>	U.S. Fish and Wildlife Service
<b>USACOE</b>	U.S. Army Corps of Engineers
<b>UV</b>	Ultraviolet (light)

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## PROJECT OVERVIEW

Hā'ena, at the far northwestern corner of Kaua'i's beautiful North Shore, is one of Hawai'i's busiest state parks, Hā'ena State Park. Approximately 65.7 acres in area, it contains significant cultural and ecological resources, with beaches, a sheltered lagoon, and scenic resources that make it a popular visitor attraction. It has a beach for swimming and sunbathing, archaeological features that include the famous Ka Ulu a Paoa Heiau and Ke Ahu a Laka hula sites, Lohi'au's house platform, wet caves, and the trailhead to Kalalau Trail and the Nāpali Coast State Wilderness Park.

After several years of research, community meetings and interviews, and previous attempts to develop a master plan for the park, the State of Hawai'i Department of Land and Natural Resources (DLNR), Division of State Parks (State Parks) engaged PBR HAWAII to complete the master plan and to process a Chapter 343, Hawai'i Revised Statutes (HRS) Environmental Impact Statement (EIS) for the park. Together with a 32-member ~~community~~ Master Plan Advisory Committee (MPAC), State Parks staff, and a team of consultants, PBR HAWAII refined a community-preferred alternative drafted in 2001 with a renewed emphasis on the cultural and historic significance of Hā'ena. Alternatives for transportation and parking were also incorporated into the plan given the growing traffic and safety concerns. ~~The draft pre-final master plan (Master Plan), which is the preferred plan and the subject of this EIS, has undergone additional revisions based on the feedback received during the Draft EIS (DEIS) process, was completed in October 2014 and is attached available in its entirety as an electronic file on the State Parks website for Hā'ena State Park (<http://dlnr.hawaii.gov/dsp/parks/kauai/haena-state-park/>) in Appendix I.~~ The Master Plan graphic is shown in (Figure 1) with a closer view of the park entry shown in Figure 2.

The Master Plan includes minimal physical improvements to the park in order to maintain the natural beauty and openness of the area. Only a few new structures are proposed including a Welcome Hale that is envisioned as an open traditional Hawaiian hale and located near the improved main parking lot. Interpretive and informational signage will be posted at the hale and two small comfort stations to the side of the main parking lot will provide a second set of facilities to reduce wastewater flows at the existing Kē'ē comfort station. The current overflow parking area will serve as the main parking lot and be resurfaced with permeable paving. Portions of it will be shifted slightly makai to avoid a rockfall hazard zone. According to the rockfall hazard study completed for the park (Appendix B), several areas along the existing highway are predicted to be within a Class A (high estimated potential) and Class B (medium estimated potential) rockfall hazard zone. After considering costly and undesirable engineering solutions that would deface Ka Pali 'Ōahi o Makana, the MPAC together with Hui Maka'āinana o Makana (Hui) leadership, recommended that all visitor facilities be located outside of the estimated rockfall hazard zones to the extent possible. This includes the main parking lot, new entry turnaround and shuttle stop, and a new pedestrian-only path that connects the main parking lot with Kē'ē Beach through the lo'i. The new pedestrian path would follow along the first berm of the lo'i closest to the highway. It is proposed to be placed just over the berm so as not to impact the

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berm or any of the historic resources and will maintain a low profile just above the berm. The new path will provide visitors with a unique view of Makana, a famous mountain peak, as well as views of the restored wetlands, loko, and lo'i as they walk to Kē'ē.

New restrooms are also proposed near the main parking lot in order to provide additional alternative comfort stations for visitors. The latest proven green wastewater treatment technologies should be installed and these new facilities will also help lessen the use of the existing comfort station at Kē'ē, which has sensitive cultural sites nearby.

The main parking lot is envisioned to be flexible, but with a maximum of 100 striped stalls. The overall size of the main parking lot would be adjusted accordingly to support visitor use of third-party shuttles to the park, or the County's proposed North Shore shuttle should it be established, with the goal of right-sizing the parking lot. The idea is to accommodate local demand, complement shuttle volume, and minimize parking impacts outside of the park. In addition, the main parking lot would be separated into a fee-paying lot and non-fee paying lot by moveable bollards and cordons so the parking can be adaptively managed on an as-needed basis to support the varying numbers in either group parking at the park on any given day and even throughout the day. A smaller special access parking lot will be located at Kē'ē in the existing paved areas. These stalls will be reserved for ADA accessibility, the lifeguards, park staff, the Hula Complex, and other cultural practices. It will also be accessible for emergencies as well as safety and rescue operations.

Other recommendations include reestablishing the area makai of the Kalalau trailhead and encompassing Ka Ulu a Paoa Heiau and the former Allerton property as a Hula Complex, recognizing the extreme significance of this ancient wahi kapu to hula practitioners worldwide. In addition, a Cultural Gathering Place will be created inland of Ka'ilio Point with a traditional hale and Hālau Wa'a, where educational and community programs could be staged, including overnight stays.

The plan also supports the continued restoration of the Agricultural Complex and encourages restoration of the varied historic, cultural, and natural resources throughout the park. It prioritizes the restoration of the dune complex as a potential first effort, recognizing the multiple benefits of ecological restoration, beach protection, and caring for the ancestors whose bones lay interred in the sand dunes. The plan also encourages green building design, integrated water use, reuse, and rainwater catchment, and renewable energy throughout the park.

The two key management recommendations include 1) the establishment of a Cultural Advisory Committee and a Community Advisory Committee, both of whom will be consulted on all aspects of park management and proposed improvements; and 2) the implementation of adaptive management principles with regards to all management issues at the park. This includes the 900 people per day on average visitor limit instituted during peak visitor hours and parking management, which will be adjusted as needed at the park. Together, these two key management recommendations mean that State Parks will consult with community and cultural experts for both the proposed construction projects at the park

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and ongoing management of the park in order to receive input early and throughout the processes so adjustments can be made as appropriate based on the advisory groups' recommendations.

The existing historic state highway that runs through the park is also recommended to be transferred from the State Department of Transportation to State Parks so that it may be closed to general through traffic and State Parks can shift the bulk of visitor traffic and parking outside of a potential rockfall hazard zone.

A significant proposal in the master plan is to limit the number of people who can enter the park to 900 people per day as an initial ceiling, and can be adjusted over time based on overall negative or positive impacts to the area with an emphasis on public safety. This initial number includes day hikers on the Kalalau Trail but does not include overnight campers or hunters with valid permits, members of the Hui, cemetery caretakers, kūpuna who have cultural or ancestral ties to the area, or attendees at special educational or cultural events such as volunteer workdays or events at the Hula Complex. This will encourage visitors to plan ahead and an informational system via the internet, text messages, and email could be developed to distribute real-time information on park access, entry ticket availability, special events, and weather, ocean and any hazardous conditions at the park. The Master Plan acknowledges that park access will be an ever-evolving operational issue and will likely change over time as new policies are implemented. However, the goal is to study the impacts of these proposed policies and to adjust them as appropriate to improve the long-term management of the park and visitor satisfaction. ~~sets forth a phased implementation process depending on available funding for the proposed park improvements. This EIS covers the full buildout of the Master Plan but also provides a discussion of the Near Term Plan which provides interim solutions as funding becomes available for the proposed improvements. The Near Term Plan for the Entry Complex (Figure 2) includes a controlled entry for the park at a new Welcome Pavilion equipped with restrooms. In addition, the Interpretive Path will provide access to Kē'ē makai of the highway via an elevated boardwalk that is located outside of a projected rockfall hazard zone. It will provide visitors with a unique view of Makana, a famous mountain peak, as they traverse the lo'i and walk through the Hau Tunnel which leads to Kē'ē Beach. There is also a unique opportunity for State Parks to work with the County and other agencies to initiate a North Shore shuttle and possibly a remote entry location in Princeville in the near term. If this happens, the size of the proposed parking lot should be adjusted in the Near Term Plan to support use of the shuttle.~~

~~The next phases would involve the full buildout of the Master Plan as funding becomes available. The plan includes additional facilities such as a larger Educational and Cultural Center (ECC), which would replace the Welcome Pavilion as the point of entry for the park, and a Caretaker's Cottage, which will support a 24-hour a day presence at the park. The area makai of the Kalalau trailhead and encompassing Ka Ulu a Paoa Heiau and the former Allerton property are designated as the Hula Complex, recognizing the extreme significance of this wahi pana to hula and practitioners worldwide. Coordination with the County of Kaua'i (County) will be required as the heiau sits on County land. Other features of the Master Plan include the development of a Cultural Gathering Place inland of Ka'ilio Point~~



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with a traditional hale and Hālau Wā'ā, where educational and community programs could be staged including overnight stays. The Master Plan prioritizes the restoration of the dune complex as a potential first effort, recognizing the multiple benefits of ecological restoration, beach protection, and caring for the ancestors whose bones lay interred there. The Master Plan also supports the continued restoration of the Agricultural Complex and encourages restoration of the varied historic, cultural, and natural resources throughout the park which are covered in various studies and restoration plans previously prepared, and encourages green building design and renewable energy use for the proposed facilities.

Parking at the park is a contentious issue as there are some community members who feel having a large parking lot within the park boundaries is inappropriate as there is the potential to locate it outside of the park at a remote entry facility in Princeville. Various transportation alternatives are discussed in the Master Plan and the proposed parking lot may be reduced in size or even eliminated should a shuttle/transit system provide adequate visitor access to the park. The area no longer needed for parking could be converted into other park uses such as additional educational gardens and picnic areas, event space with a grand entry lawn, or the ECC could be moved eastward into the graded area to open up more outdoor park/event space west of the facility. An expanded shuttle stop with shelters, benches and informational signage may also be required if a shuttle is the primary means for park entry.

The Master Plan includes key management strategies such as the establishment of a Cultural Advisory Group and community advisory group early in the implementation process, and prior to the awarding design and construction contracts. Mandatory visitor education and orientation is also recommended for all who come to the park. The existing historic state highway that runs through the park is also recommended to be transferred from the State Department of Transportation to State Parks so that it may be closed to general through traffic. It will also allow State Parks to shift the bulk of visitor traffic within the park outside of a potential rockfall hazard zone.

A significant management proposal in the plan is to limit the number of people who can enter the park to 900 people per day as an initial ceiling. This number may be adjusted over time based on the impacts to the natural and cultural resources, traffic, public safety and visitor satisfaction at the park among other potential variables. This initial number includes day hikers on the Kalalau Trail but does not include overnight campers or hunters with valid permits, members of Hui Maka'āinana o Makana (Hui) who care for the lo'i and famed hula heiau, or attendees at special education or cultural events such as volunteer workdays or events at the heiau. This will reduce the typical number of daily visitors by roughly half compared to current numbers and will encourage visitors to plan their visits to the park in advance. Information systems via the internet or other information technologies (IT) such as smartphone applications could be developed to distribute real time information on ticket and parking availability and could also include weather and hazard conditions. State Parks acknowledges that park access will be an ever evolving operational issue and will likely change over time as new policies are implemented. However, the goal is to study the impacts of these proposed policies over time and to adjust them as appropriate to improve the long-term management of park resources and visitor satisfaction.

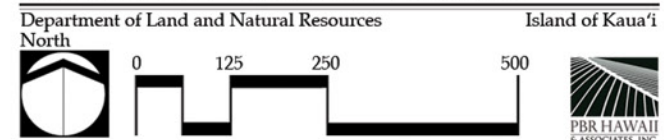
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~~Once the EIS process is completed, the Master Plan will be refined based on the input received and submitted to the Board of Land and Natural Resources for final approval. With a completed Master Plan and EIS, State Parks will then be able to pursue funding to construct the proposed improvements.~~





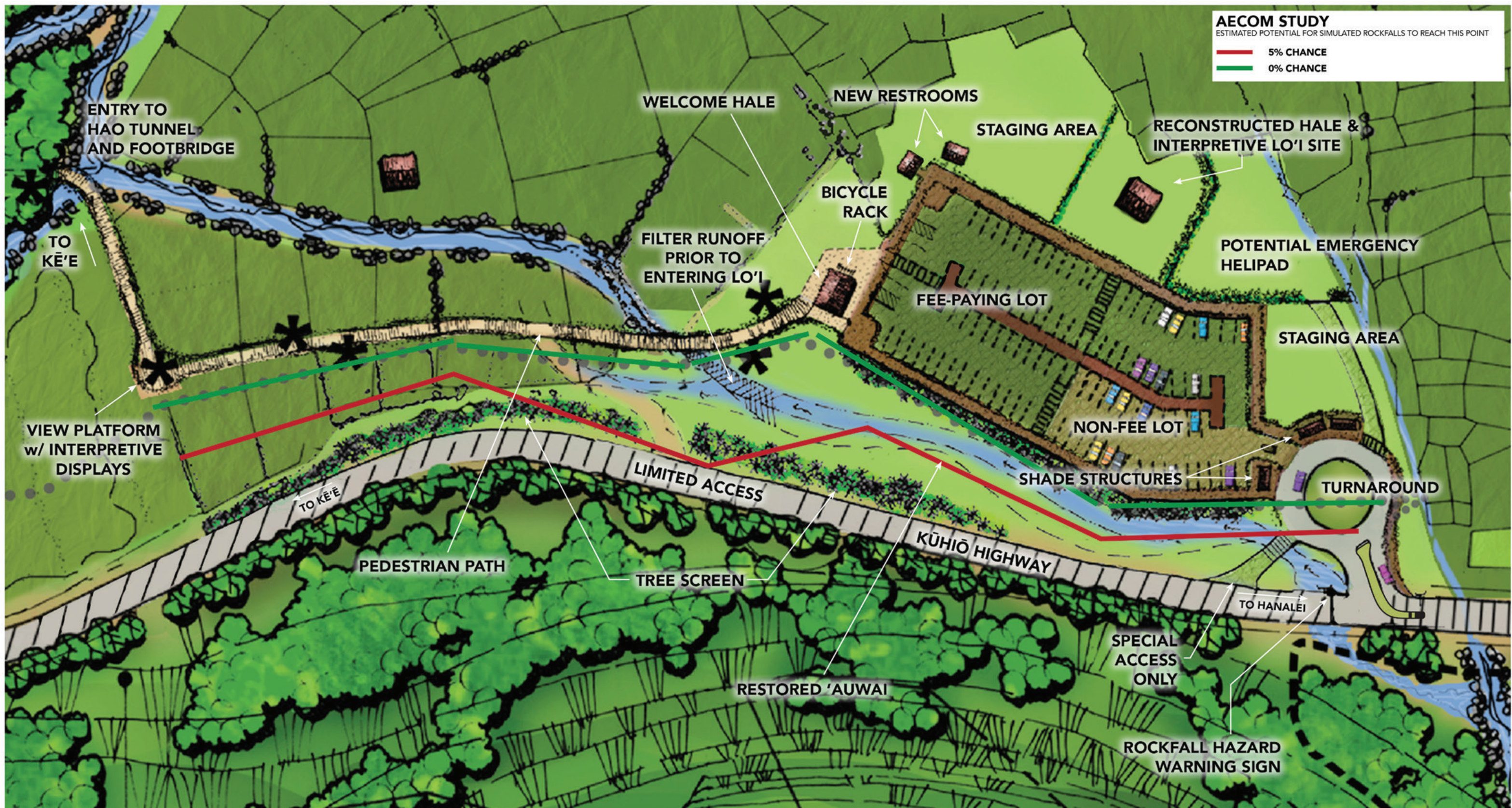
**FIGURE 1**  
**Master Plan**  
**HA'ENA STATE PARK**



Source: Based on 2001 Community Preferred Master Plan Prepared by The Keith Companies

Disclaimer: This Graphic has been prepared for general Planning purposes only and should not be used for boundary Interpretations or other spatial analysis.





**FIGURE 2**  
Detailed View of the Entry Complex  
**HĀ'ENA STATE PARK**

Department of Land and Natural Resources  
North

Island of Kaua'i



Disclaimer: This graphic has been prepared for general planning purposes only and should not be used for boundary interpretations or other spatial analysis.



# 1.0 INTRODUCTION

This Environmental Impact Statement (EIS) has been prepared in accordance with Chapter 343, Hawai‘i Revised Statutes (HRS), and Title 11, Chapter 200, Hawai‘i Administrative Rules (HAR), of the Department of Health for the Hā‘ena State Park Master Plan.

## 1.1 PROJECT SUMMARY

<b>Project Name:</b>	Hā‘ena State Park Master Plan	
<b>Location:</b>	Hā‘ena Ahupua‘a, Halele‘a Moku, Kaua‘i, Hawai‘i	
<b>Judicial District:</b>	Hanalei	
<b>Applicant:</b>	State of Hawai‘i, Department of Land and Natural Resources (DLNR), Division of State Parks	
<b>Landowner:</b>	State of Hawai‘i and County of Kaua‘i	
<b>Tax Map Keys:</b>	(4) 5-9-008:001, (4) 5-9-001:025 and (4) 5-9-001:022 (por.)	
<b>Project Area:</b>	Approximately <del>65.7</del> <u>68.6</u> acres	
<b>Existing Uses:</b>	State park. Outdoor recreation includes beach activities, picnicking, sightseeing, and a hiking trailhead. Other uses include traditional agriculture, fishing, hula, and a cemetery.	
<b>Proposed Uses:</b>	State park. All existing uses would continue but additional facilities such as the <del>Education and Cultural Center; Interpretive Corridor and associated interpretive devices; Caretaker’s Cottage; baseyard; Welcome Hale; restrooms; pedestrian paths; staging areas; bicycle racks;</del> picnic areas; Hālau Wa‘a and Cultural Gathering Place with overnight uses; reconfigured parking and access; relocated lifeguard tower; ecosystem and archaeological restoration; and agricultural restoration activities within a community garden.	
<b>Land Use Designations:</b>	<i>State Land Use District:</i>	Conservation District
	<i>Conservation District Subzones:</i>	Resource and Limited Subzones within the park; Protective Subzone (offshore)
	<i>Kaua‘i General Plan:</i>	Park
	<i>North Shore Development Plan:</i>	Open
	<i>County Zoning:</i>	None
<b>Special Management Area:</b>	Within the Special Management Area	

**Need for Statement:** Compliance with Chapter 343, HRS

- Use of State lands and funds
- Use of County lands and funds
- Use within a shoreline area
- Use within a Historic site as designated on the Hawai‘i and National Registers of Historic Places
- Land uses within the Conservation District
- Modification of existing helicopter facility within the State that may affect lands within a Conservation District, shoreline area, and registered historic site

**Permits/Approvals Required:** Compliance with Chapter 343, HRS; Compliance with Chapter 6E, HRS (Historic Preservation); Special Management Area Use Permit; Site Plan Approval; Conservation District Use Permit; Shoreline Setback Determination; Wetland Delineation Study and Determination and other Department of the Army permits; National Pollution Discharge Elimination System (NPDES) Permit; FAA Form 7480-1 Notice of Landing Area Proposal; Permit to Perform Work within a State Right-of-Way; Grading and Grubbing Permits; Building Permits; and dependent on extent of instream activities pursued, Stream Channel Alteration Permit; Stream Diversion Works and/or Petition to Amend Instream Flow Standard

**Accepting Authority:** Governor of the State of Hawai‘i or Authorized Representative

## 1.2 LAND OWNERSHIP

Hā‘ena State Park encompasses approximately 65.7 acres. It is composed of three parcels, two of which are owned by the Division of State Parks, State of Hawai‘i, Department of Land and Natural Resources (DLNR) (see Table 1 below and Figure 4). A small parcel owned by the County of Kaua‘i encompasses Ka Ulu a Paoa Heiau and Ke Ahu a Laka and is surrounded by the State Park-owned parcels. The project also involves the portion of Kūhiō Highway (Route 560) that stretches from the park entry to Kē‘ē Beach, which is owned by the State Department of Transportation (DOT) and does not have a TMK number.

Parcel 01 of Tax Map Key (TMK) 5-9-008 is approximately 50 acres and entirely within the park boundary. Roughly fifteen acres of TMK: 5-9-001: 022 is located within Hā‘ena State Park. The remaining 165 acres falls within the Nāpali Coast State Wilderness Park. The small County-owned parcel TMK 5-9-001: 025 is roughly 0.68 acres. The portion of Kūhiō Highway is roughly 2.3 acres. The total project area is estimated at 68.6 acres when combining the park area and portion of the highway.



**TABLE 1: TAX MAP KEY AND OWNERSHIP**

TMK	AREA (IN ACRES)	OWNER
5-9-008: 001	50.38	State of Hawai‘i
5-9-001: 022 (por.)	15.23*	State of Hawai‘i
5-9-001: 025	0.68	County of Kaua‘i
<u>Unknown TMK (Portion of Kūhiō Highway)</u>	<u>2.3</u>	<u>State of Hawai‘i</u>
*Note: The entire parcel is 180.23 acres. Only a narrow portion of the parcel to the south of Kūhiō Highway is within Hā‘ena State Park.		

### 1.3 IDENTIFICATION OF THE PROPOSING AGENCY

The proposing agency is the State of Hawai‘i, Department of Land and Natural Resources, Division of State Parks.

Contact: ~~Daniel S. Quinn~~ Curt Cottrell, Administrator  
 Department of Land and Natural Resources  
 Division of State Parks  
 P.O. Box 621  
 Honolulu, Hawai‘i 96809  
 Telephone: (808) 587-~~0290~~-0300  
 Fax: (808) 587-0311

### 1.4 IDENTIFICATION OF THE ENVIRONMENTAL CONSULTANT

The State of Hawai‘i, Department of Land and Natural Resources’ consultant for the project is PBR HAWAII & Associates, Inc.

Contact: Kimi Yuen, LEED AP BD+C, ~~Senior Associate-Principal~~  
 PBR HAWAII & Associates, Inc.  
 1001 Bishop Street, Suite 650  
 Honolulu, Hawai‘i 96813  
 Telephone: (808) 521-5631  
 Fax: (808) 523-1402

### 1.5 IDENTIFICATION OF THE ACCEPTING AUTHORITY

In accordance with Chapter 343, HRS, the Accepting Authority is the governor or the governor’s authorized representative whenever an action proposes the use of state lands or the use of state funds. Since County lands are also involved as well as State lands, the governor or an authorized representative shall have final authority to accept the EIS. Acceptance of a required Final Environmental Impact Statement (FEIS) shall be a condition precedent to implementation of the proposed action. For this action, the governor is ~~anticipated to be~~ the accepting authority of the EIS.

Contact: The Honorable David Y. Ige  
Governor, State of Hawai‘i  
Executive Chambers  
State Capitol  
Honolulu, Hawai‘i 96813  
Telephone: (808) 586-0034  
Fax: (808) 586-0006

## **1.6 COMPLIANCE WITH STATE AND COUNTY OF KAUAI ENVIRONMENTAL LAWS**

This document has been prepared in accordance with the provisions of the State of Hawai‘i’s Environmental Impact Statement Law, Chapter 343, HRS and the Environmental Impact Statement Rules, Title 11, Chapter 200, HAR. Section 343-5, HRS, establishes nine (9) actions, or “triggers,” which require the environmental review process. Implementation of the Hā‘ena State Park Master Plan will involve the following triggers: 1) the use of State land and funds, 2) the use of county lands or funds; 3) a use within a shoreline area; 4) a use within a Historic District as designated in the Hawai‘i and National Registers of Historic Places; 5) the use of State lands classified as a Conservation District; and 6) the modification of existing helicopter facilities within the State that may affect lands within a Conservation District, shoreline area, and registered historic site.

In addition, the project may involve or impact State and/or County lands or funds relating to, connections to, and/or easements across, State or County facilities and lands including but not limited to infrastructure improvements for public roadways, water, sewer, utility, drainage, or other facilities. While the specific nature of each improvement is not known at this time, the EIS is intended to address all current and future instances involving the use of State and/or County lands or funds relating to the proposed park improvements.

The DEIS was preceded by the Hā‘ena State Park Master Plan Environmental Impact Statement Preparation Notice (EISPN) under the authority of Act 172-12. State Parks submitted the EISPN to the State Office of Environmental Quality Control (OEQC) on February 9, 2015. Notice of the availability of the EISPN was published in the February 23, 2015 edition of *The Environmental Notice*. Copies of the EISPN were provided to the appropriate government agencies and other individuals and organizations as listed in Section 8.3.1. The public comment period for the EISPN began on February 23, 2015 and ended on March 25, 2015. Comments and responses on the EISPN received during the public comment period are incorporated in this EIS and the letters are provided in Section 12.0.

Following the EISPN, State Parks submitted the DEIS to OEQC on July 13, 2015 and Notice of the availability of the Draft EIS was published in the July 23, 2015 edition of OEQC's *The Environmental Notice*. Copies of the DEIS were provided to appropriate government agencies, public officials, and other organizations and individuals (see Section 8.3.2). The official 45-day public comment period on the DEIS began on July 23, 2015 and ended on September 8, 2015. However, State Parks held a public meeting on August 19, 2015 to gather

more input on the DEIS and extended the DEIS public comment period until October 8, 2015. Comments on the DEIS received during this public comment period and the responses to the comments are incorporated in this FEIS and copies of those letters are included in Section 13.0.

## 1.7 AGENCY AND COMMUNITY GROUP ENGAGEMENT

Throughout the planning process for this project, various Federal, State of Hawai‘i, and County of Kaua‘i agencies as well as community groups, organizations and individuals have been engaged in the development of the Master Plan. A thirty-two member Master Plan Advisory Committee (MPAC) consisting of Hā‘ena kūpuna and ‘ohana members, cultural practitioners and scientific experts, business representatives, State and County agencies, and other North Shore community members provided recommendations to the physical plan and park management. Following the publication of the availability of the DEIS by OEQC in the July 23, 2015 *The Environmental Notice*, State Parks held a public community meeting on August 19, 2015 to gather input on the DEIS. A new Hā‘ena State Park Community Advisory Committee (HSPCAC) composed of a portion of the original MPAC as well as new members from the community met regularly to refine the master plan. These efforts culminated in an open house held on July 23, 2016 at Hā‘ena State Park to present to the community the revised master plan. The additional input and feedback was collected and incorporated into the plan. The HSPCAC provided further guidance on finalizing the master plan at a meeting held in November 2016 and via email through May 2018. A summary of the public and community meetings that were held is provided in Table 2.

At the onset of the project, pre-consultation letters were issued soliciting input into the Master Plan and environmental documents, and periodically through the process, public meetings and open houses were held to keep the greater community informed of the concepts being considered for the Park. Appendix A includes a record of and materials from the public meetings held with community members regarding this project with a summary of the public meeting held on August 19, 2015 for the Draft EIS in Section 8.3.3. Chapter 11.0 contains the pre-consultation correspondence.

**TABLE 2: PUBLIC AND COMMUNITY ADVISORY COMMITTEE MEETINGS**

DATE	LOCATION	PARTICIPANTS	PURPOSE
August 14 and 15, 2008	Hā‘ena State Park	Various stakeholders, consultants	Field visit
October 16, 2008	Honolulu	Debbie Gowensmith, Community Conservation Network	Learn more about the Hā‘ena community-based subsistence fishery project
October 24, 2008	Hanalei	Maka‘ala Ka‘aumoana	Learn more about the 1990’s effort to master plan Hā‘ena State Park and about her work at Hā‘ena and with the Hanalei Watershed Hui
October 24-25, 2008	Limahuli Gardens and County Planning Commission Room	Public	Open house

DATE	LOCATION	PARTICIPANTS	PURPOSE
February 4, 2009	Teleconference	Chad Listman, County of Kauaʻi Lifeguard	Discuss issues at the park with Kēʻē head lifeguard
October 14, 2009	Limahuli Gardens	SMA interveners that entered into resolution agreement with State Parks regarding comfort station	Final design for constructed wetlands and update on Master Plan progress
March 10, 2010	Honolulu	Debbie Gowensmith, Hawaiʻi Community Stewardship Network (HCSN)	Community coordination
April 17, 2010	Hanalei Elementary School	MPAC	Introductory meeting
May 8, 2010	Hanalei Elementary School	MPAC	Master Plan revisions and management issues
May 15, 2010	Hanalei Elementary School	MPAC	Master Plan revisions and management issues, continued
July 10, 2010	Hanalei	Public	Overview of process and Master Plan revisions
October 14, 2010	Land Board Conference Room, Kalanimoku Building	BLNR	Request the BLNR to accept recommendations proposed in draft Master Plan and endorse preparation of an EIS
February 17, 2011	Various	MPAC	Site visit to potential shuttle stop locations
March 1, 2011	Hanalei Community Center	Transportation and Parking Working Group	Transportation and Parking Working Group
March 18, 2011	Teleconference	Jean Souza, Hawaiian Islands Humpback Whale Marine Sanctuary	Hawaiian Islands Humpback Whale Marine Sanctuary and environmental interpretive tools
March 19, 2011	Hanalei Community Center	MPAC	Transportation issues
March 1, 2012	University of Hawaiʻi	Carlos Andrade, Konia Freitas	Learn about a conceptual initiative being discussed at Hawaiian Studies program
December 10, 2012	Hāʻena State Park	MPAC	View the pre-final Master Plan, discuss a near-term plan for the entry complex and discuss management strategies
December 26, 2012	Teleconference	Sue Kanoho, Kauaʻi Visitors Bureau	Discuss potential visitor limits at Hāʻena State Park and potential effects on visitor industry
January 10, 2013	Hāʻena State Park	MPAC	Revised plan and continuation of management issues
January 21, 2013	Hāʻena State Park	MPAC	Discuss proposed visitor limits, view pre-final Master Plan, and discuss capital improvement projects
February 7, 2013	Hāʻena State Park	MPAC	Review revised plan, capital improvement projects, and next steps
April 22, 2013	Hāʻena State Park	Hui Makaʻāinana o Makana	Rockfall hazard mitigation
May 3, 2013	Hāʻena State Park	MPAC	Pedestrian walkway alternatives, rockfall mitigation, and next steps

DATE	LOCATION	PARTICIPANTS	PURPOSE
August 27, 2014	Hā'ena State Park	MPAC	Review of latest changes to plan, kickoff for EIS
<u>August 6, 2015</u>	<u>County of Kaua'i Mo'ikeha Building</u>	<u>Kauai Historic Preservation Review Commission (KHPRC)</u>	<u>Present draft master plan to KHPRC and receive input and comments</u>
<u>August 19, 2015</u>	<u>Hanalei Elementary School</u>	<u>Public</u>	<u>Present DEIS and gather community input</u>
<u>September 2015 – November 2016</u>	<u>Waipā Foundation</u>	<u>MPAC, Hā'ena State Park Community Advisory Committee (HSPCAC)</u>	<u>Revise master plan; community outreach</u>
<u>July 23, 2016</u>	<u>Hā'ena State Park</u>	<u>Public</u>	<u>Community Open House to present revised master plan and collect input and comments</u>
<u>November 27, 2016</u>	<u>Waipā Foundation</u>	<u>HSPCAC</u>	<u>Discuss revisions to master plan</u>
<u>May 2018</u>	<u>Various</u>	<u>Key members of HSPCAC</u>	<u>Post-Flood Repairs</u>

## 1.8 STUDIES CONTRIBUTING TO THE ENVIRONMENTAL IMPACT STATEMENT

The information contained in this document has been gathered from agency and community consultations, document and historical research, site visits, technical studies and generally available information regarding the characteristics of the site and surrounding area. Technical consultant reports were commissioned as part of the 2001 and current master planning efforts. The following are included as appendices to this document as noted. Archaeological and historic information was prepared by in-house State Parks ~~staff~~ archaeologists. Section 9.0 provides the list of technical consultants who have been contracted for this current effort and have contributed to this EIS.

- Rockfall Hazard Assessment (Appendix B)
- Biological Survey (Appendix C)
- Marine Natural Resources and Recreation Assessment (Appendix D)
- Cultural Impact Assessment (Appendix E)
- Traffic Impact Assessment Report (Appendix F)
- Civil Baseline Report (Appendix G)
- Wastewater Preliminary Engineering Report (Appendix H)

## 1.9 EXECUTIVE SUMMARY

### 1.9.1 HĀ'ENA STATE PARK MASTER PLAN

The proposed master plan for Hā'ena State Park refines the master plan drafted in 2001 but never adopted with a renewed emphasis on the cultural and historic significance of Hā'ena. The Master Plan includes minimal physical improvements to the park in order to maintain the natural beauty and openness of the area. Only a few new structures are proposed including a Welcome Hale that is envisioned as an open traditional Hawaiian hale and

located near the improved main parking lot. Interpretive and informational signage will be posted at the hale and two small comfort stations to the side of the main parking lot will provide a second set of facilities to reduce wastewater flows at the existing Kēʻē comfort station. The current overflow parking area will serve as the main parking lot and be resurfaced with permeable paving. In addition, a new entry turnaround and shuttle stop, and a new pedestrian-only path that connects the main parking lot with Kēʻē Beach through the loʻi are included in the plan. The new Pedestrian Path would follow along the first berm of the loʻi system closest to the highway. It is proposed to be placed just over the berm so as not to impact the berm or any of the historic resources and will maintain a low profile just above the berm. The new path will provide visitors with a unique view of Makana, a famous mountain peak, as well as views of the restored wetlands, loko, and loʻi as they walk to Kēʻē. Understanding there are funding limitations for improvements at State Parks, the Master Plan provides a Near-Term Plan for the Entry Complex (Figure 2) which includes a controlled entry for the park at a new Welcome Pavilion equipped with restrooms and the Interpretive Path which will provide access to Kēʻē Beach along an elevated boardwalk located makai of the current highway alignment to move the main visitor path outside of a projected rockfall hazard zone. The full buildout of the Master Plan is shown in Figure 1.

The main parking lot is envisioned to be flexible, but with a maximum of 100 striped stalls. The overall size of the main parking lot would be adjusted accordingly to support visitor use of third-party shuttles to the park, or the County's proposed North Shore shuttle should it be established, with the goal of right-sizing the parking lot. The idea is to accommodate local demand, complement shuttle volume, and minimize parking impacts outside of the park. In addition, the main parking lot would be separated into a fee-paying lot and non-fee paying lot by moveable bollards and cordons so the parking can be adaptively managed on an as-needed basis to support the varying numbers in either group parking at the park on any given day and throughout the day. A smaller special access parking lot will be located at Kēʻē in the existing paved areas. These stalls will be reserved for ADA accessibility, the lifeguards, park staff, the Hula Complex, and other cultural practices. It will also be accessible for emergencies as well as safety and rescue operations.

Other recommendations include reestablishing the area makai of the Kalalau trailhead and encompassing Ka Ulu a Paoa Heiau and the former Allerton property as a Hula Complex, recognizing the extreme significance of this ancient wahi kapu to hula practitioners worldwide. In addition, a Cultural Gathering Place will be created inland of Kaʻīlio Point with a traditional hale and Hālau Waʻa, where educational and community programs could be staged, including overnight stays.

The plan also supports the continued restoration of the Agricultural Complex and encourages restoration of the varied historic, cultural, and natural resources throughout the park. It prioritizes the restoration of the dune complex as a potential first effort, recognizing the multiple benefits of ecological restoration, beach protection, and caring for the iwi kupuna. The plan also encourages green building design, integrated water use, reuse, and rainwater catchment, and renewable energy throughout the park. The latest proven green wastewater



treatment technologies should be installed and these new facilities will also help lessen the use of the existing comfort station at Kē‘ē, which has sensitive cultural sites nearby.

Key management recommendations include: 1) the establishment of a Cultural Advisory Committee and a Community Advisory Committee, both of whom will be consulted on all aspects of park management and proposed improvements; 2) the implementation of adaptive management principles with regards to all management issues at the park; 3) instituting an initial limit of 900 visitors entering the park during peak park hours and calculated on an average daily basis as opposed to a hard limit; 4) required staff and volunteer education; and 5) visitor orientation prior to park entry.

The existing historic state highway that runs through the park is also recommended to be transferred from the State Department of Transportation to State Parks so that it may be closed to general through traffic and State Parks can shift the bulk of visitor traffic and parking outside of a potential rockfall hazard zone.

~~There are improved parking lots and a new entry turnaround shown in the proposed plans. However, there is also a unique opportunity currently being explored for State Parks to work with the County and other public agencies or to solicit a concession agreement with a third-party shuttle operator to initiate a North Shore shuttle and possibly a remote entry location in Princeville in the near term. If this happens, the size of the proposed parking lot in the Near-Term Plan and full buildout plan should be adjusted to support visitor use of the shuttle. The area no longer needed for parking at the entry could be converted into other park uses such as additional educational gardens and picnic areas, event space with a grand entry lawn, or more compact development of the entry facilities. An expanded shuttle stop with shelters, benches and informational signage may also be required if a shuttle is the primary means for park entry.~~

~~The full buildout of the Master Plan includes additional facilities such as a larger Educational and Cultural Center, which would replace the Welcome Pavilion as the point of entry for the park and a Caretaker’s Cottage which will support a 24-hour a day presence at the park. The area makai of the Kalalau trailhead and encompassing Ka Ulu a Paoa Heiau and the former Allerton property are combined to create the Hula Complex. Coordination with the County of Kaua‘i will be required as the heiau sits on County land. Other features of the master plan include the development of a Cultural Gathering Place inland of Ka‘Ōlio Point with a traditional hale and Hālau Wā‘ā, where educational and community programs could be staged including overnight stays. Restoration of the dune complex as well as the continued restoration of the Agricultural Complex, Allerton Caretaker’s Cottage, Montgomery House, and other historic, cultural, archaeological, and natural resources of the park are also recommended. Picnic areas, pedestrian and bicycle paths, expanded garden areas, integrated water/wastewater/drainage facilities, a permanent location for the lifeguard tower, baseyards and a helicopter landing area for DLNR and emergency use only are also elements of the proposed master plan.~~

~~The master plan includes key management strategies such as the establishment of a Cultural Advisory Group and community advisory group, and mandatory visitor orientation and education upon entry to the park. The existing historic State highway that runs through the park is also recommended to be transferred from the State Department of Transportation to State Parks so that it may be closed to general through traffic and allow State Parks to shift the bulk of visitor traffic within the park outside of a potential rockfall hazard zone.~~

~~A significant management proposal in the plan is to limit the number of people who can enter the park to 900 people per day as an initial ceiling. This number may be adjusted over time based on the impacts to the natural and cultural resources, traffic, public safety and visitor satisfaction at the park among other potential variables. This initial number includes day hikers on the Kalalau Trail but does not include overnight campers or hunters with valid permits, members of the Hui, or attendees at special education or cultural events such as volunteer workdays or events at the Hula Complex. This will encourage visitors to plan their visits in advance. State Park acknowledges that access will be an ever evolving operational issue and will likely change over time as new policies are implemented. However, the goal is to study the impacts of these proposed policies over time and to adjust them as appropriate to improve the long-term management of park resources and visitor satisfaction.~~

## **1.9.2 SUMMARY OF SIGNIFICANT IMPACTS AND MITIGATION MEASURES**

The following is a summary of the significant impacts and proposed mitigation measures discussed in Chapters 3.0 and 4.0 of this EIS.

**Climate** – The proposed Master Plan is not expected to have an impact on climatic conditions and no mitigation measures are anticipated.

**Geology and Topography** – The proposed Master Plan is not anticipated to have a negative effect on Kaua‘i’s geology, nor will it involve alteration to important geological features, such as the wet or dry caves within Hā‘ena State Park. The Master Plan recommends shifting most of the visitor traffic away from the base of the cliff due to the potential for rockfalls, which will also reduce visitor impacts to Wai a Kanaloa (wet cave) as fewer people will access it.

One of the priority recommendations identified in the Master Plan is the restoration of the coastal dunes (Section ~~2.5.2.8~~ 2.5.1.10). Restoration will have multiple benefits including shoreline protection, protection of the iwi kupuna interred within the dunes, removal of alien and invasive species, and the potential return of native wildlife. To avoid impacts to the coastal dunes, visitors will still be permitted to picnic on the beach, but not on the dunes. Other recreational activities such as driving on the sand will also be prohibited. The relocated lifeguard tower is proposed to be built up rather than excavated into the sand to mitigate subsurface impacts. Further, the public will be encouraged to access the beach via marked and cleared trails, rather than crossing over the dunes.

**Soils** – Impacts to soils, such as soil erosion can occur during construction and over the life of a development due to rainwater runoff. Sediment from soil erosion can negatively impact

freshwater habitat in streams and can smother coral reefs. Site work is proposed in previously disturbed areas due to the high possibility of encountering subsurface archaeology and minimized to the extent possible. This also minimizes the risk of soil sedimentation, both during construction and in the long term. During construction, best management practices for soil and erosion control will be implemented to contain and/or filter any runoff and to control sedimentation, erosion, and dust. Efforts will be made to minimize all large-scale grading, grubbing, and stockpiling of soil and limit such activity to the dry season whenever possible. Long-term soil and erosion control measures have also been designed into the Master Plan including an integrated water/wastewater/drainage system, bioswales and rain gardens, and rainwater catchment cisterns to capture and filter stormwater runoff and to create the opportunity to use collected rainwater for on-site nonpotable water uses such as irrigation and toilet flushing.

**Ground and Surface Water** – On-site wastewater disposal can potentially impact groundwater resources if not treated properly. The Master Plan recommends that all wastewater be treated with an aerobic system to a minimum R-2 water quality with aeration and non-chlorine treatment such as UV disinfection to improve effluent quality and minimize potential impacts. Treatment to R-1 water quality would further improve water quality of the effluent and allow additional uses of the effluent such as overground and drip irrigation.

The Master Plan also recommends the use of non-chemical disinfectants and cleaning products for maintenance, particularly in composting toilets if utilized, and environmentally-safe soaps that contain plant nutrients and biocompatible cleaners to minimize impacts to wastewater treatment processes and effluent quality. No withdrawals of groundwater are proposed at the park and potable water use from the County's water system is anticipated to be reduced due to the reduction in the number of visitors. Therefore, no mitigation measures to offset groundwater quantity are proposed.

The Master Plan does not propose any additional water diversions or change to the volume of water currently diverted from Limahuli Stream for irrigation. However, the Master Plan suggests investigating the potential of Limahuli Stream as a renewable source of energy through a microhydropower system. To minimize the impacts of microhydropower systems on native Hawai'i amphidromous biota, the diversion intakes must be designed to have low-velocity intakes placed subsurface in relatively deep pool in the center of the stream in order to minimize entrainment of larval or post-larval stream animals. Also, as a potential in-stream use, any microhydropower system should be integrated with a public trust use such as the taro lo'i production should it be pursued. Should any new or increased diversion of water from Limahuli Stream be desired, the appropriate permits will be required from the State Commission of Water Resource Management.

Other mitigation measures under consideration to ensure that the park elements do not contribute to the degradation of surface water resources include the installation of bioswales around the parking lot to filter stormwater before it is conveyed to drainages and the use of rain barrels to collect roof runoff for nonpotable water uses, such as irrigation and toilet flushing. The Master Plan also recommends the use of non-chemical disinfectants and

cleaning products and as noted, environmentally-safe soaps that contain plant nutrients and biocompatible cleaners as well as the elimination of chemical pesticides and herbicides. All discharges related to the construction and operation of the proposed project will comply with the State's Water Quality requirements contained in Chapters 11-54 and 11-55, HAR.

Pedestrian paths throughout the parking lot and drop-off/pick-up areas should be surfaced with permeable pavers or pavements or natural soil hardeners to increase rainwater infiltration while providing a stable, ADA-accessible surface. This will stabilize the area while allowing rainwater to infiltrate into the ground to prevent ponding and soil erosion.

Further investigation will be necessary prior to detailed design of the parking lot to see if the 'auwai can be restored to serve the lo'i without extreme requirements or cost. If it is found that it can be restored, the grading and landscaping of this area should be done so that stormwater runoff from the parking lot is diverted away from the 'auwai and directed to flow across the grassed areas of the parking lot or towards the bioswales and adjacent landscaped areas, which could be designed as rain gardens. In addition, the design of the restored 'auwai should be carefully done so as not to hydraulically connect it to Limahuli Stream since Limahuli Stream is currently free of the invasive apple snail and the park's lo'i are known to have them.

During construction, best management practices to control sediment, erosion, dust, or polluting runoff from flowing into waterways will be employed to the maximum extent practicable. Certain construction activities within the park may trigger the need for a National Pollutant Discharge Elimination System permit.

**Wetlands** – No new facilities are proposed within known wetlands. However, the ~~Interpretive~~ Pedestrian Path may cross over potential wetland areas and the footings for this ~~elevated~~ walkway will need to be installed in those areas. The NWI maps are non-regulatory and do not represent a precise delineation of wetlands. Therefore, State Parks will need to carefully design the proposed improvements to ensure that wetlands are avoided or can be appropriately mitigated.

Some members of the MPAC expressed a desire to restore the loko and wetland areas for endangered native birds and possible agricultural uses. Geometrician Associates believe it might be possible to restore the small wetlands on the property for the purpose of creating a native bird habitat. However, they do not recommend modifying these areas specifically to attract endangered birds or any federally listed species for practical and legal reasons. The proposed restoration of the loko and wetlands is expected to be beneficial to the environment, thus, no mitigation measures are anticipated at this time. In particular, wetland restoration could also help protect the park against the impacts of climate change and prepare it for sea level rise. If the loko are restored for agricultural uses, the Master Plan recommends against pesticide or herbicide use.

**Marine Environment and Biological Resources** – In general, the Master Plan is not anticipated to have any impact on the natural marine processes, such as waves and currents.

All of the proposed facilities are located outside of FEMA's delineated 100-year special flood areas subject to wave action. However, because the Master Plan proposes a limit on the average number of visitors to the park per day, the improvements and management strategies seek to have a net positive impact on the park's marine environment, including marine water quality and health of the coral reef. In addition, the reduction, detainment, and filtration of stormwater runoff, restoration and protection of the dune system and reefs, increased treatment and reuse of wastewater effluent and rainwater runoff, removal of the majority of cars along the highway near Kē'ē, reduction of soil erosion, and instruction on ocean-friendly visitor behavior are anticipated to have beneficial impacts on the marine environments and biota. Lighting plans and management plans will be carefully designed and implemented so that no light from the park is visible from the beach to minimize impacts to nesting sea turtles or their hatchlings seeking the ocean. In August 2015, the National Marine Fisheries Service (NMFS) issued a final rule revising the critical habitat for the Hawaiian monk seals to include the marine habitat fronting Hā'ena State Park from the 200-meter depth contour line, including the seafloor, through the water's edge and 5 meters into the terrestrial environment from the shoreline (50 Code of Federal Regulations Part 226). Therefore, any changes in these areas will require consultation with the NMFS.

**Terrestrial and Freshwater Flora and Fauna** – The Master Plan proposes to improve the park's terrestrial flora by clearing invasive species and restoring native vegetation and native ecosystems throughout the park. The areas recommended, in order of priority, are the coastal strand, the ironwood and false kamani forest, the Limahuli riparian zone, and talus slopes. Restoration of the native flora would increase native plant conservation and opportunities to educate the public. This may also indirectly support native birds including endangered and threatened species without a formal effort to create an endangered species habitat. State Parks is also recommending a reduction in the number of daily visitors and requiring attendance at an educational session that would provide a brief overview of the park's extensive but sensitive natural and cultural resources and instruct visitors of the appropriate activities and behaviors allowed at the park. Such a significant reduction in visitor use and better education on the park's resources will have a net positive impact for the park's flora and fauna.

Seabirds are attracted to artificial lights and can be downed after circling the light source and tiring or colliding with the pole or other objects. Once grounded, they can be struck by motor vehicles or are easy prey for cats, dogs or other animals. Therefore, all exterior lights will be fully-shielded (completely opaque) and downward facing full-cut off fixtures with the lowest light level (lumens) possible, sufficiently large, and positioned so that the bulb is only visible from below to minimize distraction and disorientation of wildlife flying over the park. The use of artificial lights should be minimized or reduced as much as possible during the seabird fledging season of September to December, and during the sea turtle hatching period July to September, and yellow lighting invisible to honu should be used near the shoreline. Night time construction also should be avoided during this period. The lighting design plan will also ensure that no lights are visible from the beach to minimize impacts to nesting honu and their hatchlings seeking the ocean.

Endangered waterbirds and Hawaiian Nēnē are attracted to standing water, including the former loko and restored lo‘i. In order to minimize predation of these birds by feral animals, measures to reduce the feral cat and rat population are proposed in the park. These measures include installation of animal-proof garbage receptacles and maintaining cooperation with the Humane Society, which at times had placed traps in the park for removal of feral cats. Additionally, the Master Plan recommends that, before any wetland restoration activities proceed, that an analysis of the costs, benefits, and liabilities associated with intentionally creating habitat for endangered waterbirds be conducted. However, if the loko and wetlands are restored, they may still attract native birds and other wildlife. Perimeter fencing shielded by landscaping can help protect these areas from predatory animals and care will be taken not to disturb nesting sites during construction.

The ‘Ōpe‘ape‘a, endangered Hawaiian Hoary Bat, roosts in woody vegetation. If large trees or woody shrubs over 15-feet in height are trimmed or removed during the breeding, birthing and pupping season, in the months of June 1 through September 15, there is the risk of young bats being harmed or killed. In order to minimize impacts to ‘Ōpe‘ape‘a, it is proposed that State Parks restrict any cutting of large shrubs or trees over 15-feet in height to periods outside of these months.

In order to preserve the native aquatic species present in Limahuli Stream, the Master Plan avoids making any alterations to the stream bed or banks except for the proposed restoration of the riparian resources and clearing of alien vegetation. None of the proposed facilities or activities are proximate to the stream. No changes to the existing stream crossing at the park entry are proposed. However, control measures to prevent the spread of apple snails from the park’s lo‘i to Limahuli Stream should be included in any design or implementation of the ‘auwai and irrigation systems for the Agricultural Complex. State Parks should also continue to cooperate with DLNR, Division of Aquatic Resources (DAR) to keep new alien fish out of the ‘auwai and stream and in ridding the stream of periodic invasions of swordtails, guppies, and other alien fish. To minimize the impacts of microhydropower systems on native Hawai‘i amphidromous biota, the diversion intakes must be designed to have low-velocity intakes placed subsurface in relatively deep pool in the center of the stream in order to minimize entrainment of larval or post-larval stream animals.

**Natural Hazards** – The following summarizes the potential impacts and mitigation measures related to various natural hazards that may impact the park.

- **Flood Hazards** – All of the proposed facilities are recommended to be built outside of the special flood hazard areas Zones VE, AE, and A to minimize any potential impact from flood hazards. Evacuation routes should also be located outside of the special flood hazard areas.
- **Tropical Storms and Hurricanes** – While it is difficult to predict such natural occurrences, it is reasonable to assume that future incidents are likely, given historical events and the FEMA Special Flood Hazard Areas along the coastline. Because of the nature of these events, there will typically be advanced warning of severe weather

conditions and tropical cyclones. Therefore, the park can also be closed during these events and the public can be notified in advance of the approaching storms to avoid the area. State Parks can notify news and media outlets of park closures and utilize social media and email or text announcements to provide up-to-the-minute information to the public.

- Tsunami** – The land makai of the highway within Hā‘ena State Park is located within the tsunami evacuation zone. An "extreme tsunami evacuation zone" has been added to all state civil defense maps and also includes the entire park and portions mauka of the highway up to the pali. There are two different types of tsunami events for which State Parks will plan; locally generated tsunami give very little time to evacuate coastal areas while distantly generated tsunami can take hours to make landfall. Evacuation plans and readiness plans should be developed by State Parks for both scenarios and all visitors should be educated on what to do during the required orientation session upon entering the park. Tsunami evacuation signs should be posted appropriately on paths and evacuation routes. Park staff will be trained and assist visitors in the evacuation. As recommended by State Civil Defense, a new siren should be installed in the park, potentially in the main parking lot. A subsequent letter from the Office of State Emergency Management/Civil Defense noted that siren coverage exists for the project site, but requested the existing siren to be upgraded to a 121db(c) omni-directional siren. State Parks will work with the Hawai‘i Emergency Management Agency to ensure adequate siren coverage at the park. A grassed helipad will be retained and cleared areas within the park may be used in case people need to be airlifted out of the area.
- Shoreline Erosion** – One of the first priorities identified in the Master Plan by both community members and biologists is dune restoration. The restoration of a native dune ecosystem would involve the removal of alien species and the planting of natives and Polynesian-introduced plants such as pōhuehue, naupaka, nanea, pōhinahina, nehe, pa‘u-o-Hi‘iaka, ‘aki‘aki grass, milo, hala and kou. Not only would they provide improved and more authentic vegetation but they could also be used to help reduce coastal erosion if carefully planted. Shoreline protection structures would be prohibited in favor of allowing the natural shore building processes to occur. Drainage improvements along the highway are also recommended in the Master Plan to prevent ponding, soil erosion, and beach washouts as has happened at Kē‘ē during heavy rainfall events. State Parks will also consider resurfacing the former highway pavement with historically appropriate materials and implement creative design solutions that can improve drainage and minimize erosion in the surrounding areas.
- Rockfall Hazard** – The health and safety impacts of potential rockfalls are proposed to be mitigated by siting all of the major facilities and paths, including the ~~Interpretive~~ Pedestrian Path to Kē‘ē, outside of the potential rockfall hazard zones. In addition, warning signs will be installed at appropriate locations along the highway between the turnaround and Kē‘ē. Safety instructions and rockfall hazard warnings should be included in the visitor orientation prior to park entry. A dense native tree

screen is also recommended along Kūhiō Highway, especially near the main parking lot, as trees may serve to catch or slow smaller rockfall events. Thus, tree removal north of the highway is also not proposed. The Master Plan elements also include features to restrict the public from standing immediately in front of the wet cave, Wai a Kanaloa, where the cliffs above are identified as Class A hazards should they choose to traverse the highway despite the rockfall warnings. Native and Polynesian-introduced landscaping are recommended as aesthetic and culturally appropriate screens for the safety devices or barriers.

For all potential natural hazards, to facilitate evacuations in the event they are necessary, the helicopter landing pad is proposed to be retained with the Master Plan improvements. Emergency evacuation routes should also be planned and indicated on visitor brochures and materials. They can also be described and shown on maps ~~during the included in the~~ visitor orientation ~~sessions-materials~~ within the proposed Welcome Pavilion/Education and Cultural Center (ECC) Hale. ~~The loop paths through the lo'i can be used as an emergency route between Kē'ē and the proposed Welcome Pavilion/ECC.~~ Ocean safety and evacuation signs should be posted appropriately on paths and evacuation routes. ~~An emergency phone is expected to be retained. Additionally, the presence of an on-site caretaker is expected to improve emergency warning communications and evacuation coordination within the park when necessary. The hardline phone at Kē'ē should be retained for emergencies and an additional emergency phone could be located at the Welcome Hale.~~ If a shuttle system is developed as the main point of entry, an emergency evacuation plan will need to be developed specifically for the shuttle passengers. Staff training and visitor education sessions, as well as ongoing coordination, communication, and annual park evacuation drills with the County Fire and Police Departments are recommended management strategies proposed in the Master Plan to help improve emergency readiness and public safety.

**Archaeological and Historic Resources** – There are significant archaeological and historical resources located at the park. Human use and development has the potential to disturb and damage archaeological and historic resources. At the forefront of the proposed Master Plan are preservation, restoration, and cultural use and reactivation of the park's historic and archaeological resources while providing quality opportunities for outdoor recreation. The entire western portion of the park surrounding Ka Ulu a Paoa Heiau has been designated as the Hula Complex and the restoration of the heiau based on historic information and surveys such as Henry Kekahuna's 1959 drawing of the heiau are recommended in the plan. Similarly, the continued restoration of the Agricultural Complex, which spans the majority of the park's land, and historic structures such as the Allerton Caretaker's Cottage and Montgomery House are recommended along with the restoration of the other historic and archaeological sites scattered throughout the park such as Lohi'au's House Platform, the coastal dunes, and the loko. An archaeological sensitivity map was prepared at the outset of the project so that all new facilities proposed in the Master Plan could be located in previously disturbed areas to minimize impacts to archaeologically sensitive areas.



The plan also recommends that State Parks involve its archaeologists and staff whenever siting, designing, or installing any new park facility, especially when ground disturbance is required. Additional archaeological surveys and tests should be performed as necessary prior to undertaking projects requiring ground alteration or excavation. Ongoing efforts to identify and prioritize historic properties including archaeological resources in need of maintenance, restoration, and monitoring should be continued. The plan also recommends that alien plants and trees that undermine the archaeological sites be removed, as appropriate. State Parks archaeologists and staff should also conduct archaeological monitoring during any earth moving or ground disturbing activities in case there are inadvertent discoveries.

The primary programmatic action to mitigate impacts to archaeological resources will be to establish a Cultural Advisory Group (CAG) to help guide implementation of the Master Plan and management of all aspects of the park. Specifically, the Master Plan recommends that the CAG be consulted on management actions and construction projects as well as interpretive materials, and visitor programs. In addition, the reduction in the number of daily visitors and the required visitor education session information materials provided prior to park entry will educate visitors about the park's archaeological and historic resources and the appropriate behavior and protocols around these sensitive resources.

**Cultural Resources** – Construction, outdoor recreation, and visitor activities have the potential to undermine the cultural significance of a place if not mitigated. Development and recreational activities can also impact the cultural environment by limiting a cultural practitioner's ability to access sites of cultural importance. The Master Plan, therefore, takes the proactive approach of protecting and restoring the varied natural, cultural, and historic resources as they are all integral to the cultural values of this place. Visitor education of the cultural practices at the park and the appropriate behavior and protocols when encountering active cultural use will increase visitor sensitivity to these activities and mitigate potential conflicts. It also recommends the reduction in the number of visitors at the park so that an appropriate ambiance and space can be maintained for these cultural practices to take place. The Master Plan also includes the key recommendation that a Cultural Advisory Group be formed to advise State Parks and the potential future park management entity on all matters regarding the park including management actions, construction projects, behavior and access protocols, and interpretive signage and programs.

**Transportation and Parking** – Access to Hā'ena State Park is dominated by the personal vehicle, whether rented or privately owned. The reduction in the number of daily visitors is anticipated to reduce the traffic and congestion currently occurring at the park as well as the demand for parking especially during peak hours. The parking lot is proposed to be divided into spaces for fee-paying visitors and non-fee paying visitors, and these areas can be adjusted with movable bollards and cordons depending on the number of cars for each user group. The division between the two can be adaptively managed weekly, daily, or even hourly throughout the day depending on demand. This design gives State Parks the flexibility to provide enough parking until the shuttle/transit system is operational and to adjust as needed the number of parking stalls that are available for the different user groups while also encouraging multimodal access to the park.~~The preferred scenario is to implement a shuttle~~

depending on the stop locations, frequency, cost, and quality of the service. Green vehicles such as electric vehicles that can be charged with renewable energy sources such as solar PV or vehicles that use alternative fuels and have low or no emissions are recommended to reduce the impact to air quality and consumption of fossil fuels.

Vehicle access beyond the main parking area to Kēʻē beach is proposed to be reduced from the currently unrestricted conditions to special access only (ADA, lifeguards, and cultural practitioners). Restricting general vehicular access from the main parking area to Kēʻē Beach will effectively eliminate illegal parking along the highway's shoulder, reduce the wear on the historic roadway's macadam surface, and reduce the number of visitors traveling in a potential rockfall hazard area. It will also reduce the potential conflicts between vehicles and pedestrians ~~and bicyclists~~ as the Interpretive Pedestrian Path becomes the main visitor trail to Kēʻē and it will reduce roadway maintenance costs for the State.

The Master Plan also includes a combination of physical improvements and programmatic options that will have a positive impact on pedestrian and bicycle facilities. The new Interpretive Pedestrian Path will provide increased educational opportunities via interpretive displays and greater visual access to the Agricultural Complex, Makana, wetlands, and loko for visitors. Bicycle racks are proposed near the Welcome Hale and at Kēʻē Beach.

There are both beneficial and negative impacts anticipated with respect to construction. Construction of the Interpretive Pedestrian Path will involve setting footings for the ~~elevated~~ path in the loʻi. Due to the proximity of archaeological resources and loʻi walls and the potential of unearthing subsurface materials during construction care must be taken. Archaeological surveying prior to path construction and archaeological monitoring during construction are recommended.

Other potential negative impacts include the possible disruption of community gardening activities in the loʻi and the physical bifurcation of the loʻi, complicating maintenance and operations. Proposed mitigation measures include expanding restoration of the agricultural complex to other phases (Phases II and III) and allowing the loʻi between the highway and Interpretive Pedestrian Path to be used as an outdoor classroom for educational purposes and hands-on activities for visitor tours and school groups.

**Noise** – It is expected that the proposed reduction in the number of visitors and the removal of through traffic on the highway will have a positive impact on noise levels in the park. During construction, there will be temporary noise impacts associated with construction equipment. Similarly, restoration work and ongoing maintenance may require the use of motorized equipment, but these impacts are expected to be temporary and can be scheduled during park closures. To help mitigate temporary construction noise, State Parks will work with contractors to ensure adherence to Department of Health (DOH) regulations as required under Chapter 11-46, HAR, including obtaining noise permits as required and the use of proper equipment and regular vehicle maintenance. Equipment mufflers or other noise attenuating equipment may also be employed as additional mitigation. All construction activities will be limited to daylight work hours.

**Air Quality** – As with automobile noise, it is expected that the reduction in the number of vehicles driving along the highway to Kē‘ē will result in less automobile emissions and dust. Emissions from operation of construction equipment and other vehicles involved in construction, restoration, and maintenance activities may temporarily affect the ambient air quality in the immediate vicinity. However, these effects will be minimized through proper maintenance of construction equipment and vehicles and scheduling of such activity during park closures or in areas away from visitor activity whenever possible. In addition, there may be a temporary adverse impact on air quality attributable to dust generated during project construction, maintenance, and removal of invasive plant species particularly during earthmoving activity. Best management practices that meet DOH’s standards are anticipated to be employed as needed to mitigate dust during these activities. Construction activities will comply with the provisions of Section 11-60.1-33, Hawai‘i Administrative Rules (HAR) related to Fugitive Dust. Adequate measures to control dust during various phases of construction will be required to be implemented by any contractor employed by the DLNR to effect the project’s development. Example measures to control fugitive dust include: providing adequate water sources at the site prior to start-up of construction activities; minimizing dust from shoulders and access roads; providing adequate dust control measures during non-work hours and prior to daily start-up of construction activities; and controlling dust from debris being hauled to and from the project site.

**Scenic Resources** – Beneficial impacts to the park’s scenic resources are anticipated due to various measures proposed in the Master Plan. Limited vehicle access beyond the main parking area will reduce the number of cars along the highway at the base of the pali and thereby improve the views. Visitors will access the park by foot ~~or bicycle~~ along the Interpretive Pedestrian Path, allowing views to the lo‘i and Wai a Kanaloa without interruption by parked vehicles. Makana also will be visible from the Interpretive Pedestrian Path; it is currently not visible from the highway. New view corridors and lookouts are also proposed in the Master Plan (see Figure 28).

**Infrastructure** – The following describes the potential impacts and mitigation measures related to park infrastructure. The overall reduction in the number of daily visitors is expected to have beneficial impacts to the infrastructure services required at the park. Further discussion follows with regards to each system.

- **Water** – The existing 3-inch water main within the park is expected to be sufficient for the proposed Master Plan improvements since the number of daily visitors will be reduced compared to current conditions. The new facilities will be designed to be as efficient as possible and may utilize collected rainwater and recycled water for nonpotable water uses such as toilet flushing, dust control, and irrigation. The proposed integrated water system will involve dual water systems, which will be carefully designed and operated to prevent the cross-connection of the two systems including backflow prevention. Both systems including any non-potable spigots and irrigated areas will be clearly labeled. The two systems must be physically separated by air gaps or reduced-pressure backflow prevention devices to avoid contaminating the potable water supply. Backflow devices must be tested periodically and will comply with Chapter 11-21, HAR, Cross-Connection and Backflow Control. More efficient use of the site’s historic ‘auwai, may help capture and divert precipitation to desired locations. The Master Plan suggests redesigning the Kūhiō Highway culverts so that rainwater that passes beneath it flows more naturally and can be filtered and used in the ‘auwai system. Although continued restoration of the Agricultural Complex could also increase water demands, another alternative voiced by the Hui is to plant culturally appropriate crops that are less water intensive as was done historically in dry periods.
- **Wastewater** – Due to the remoteness of the park, no connection to any public sanitary sewer systems will be made and all wastewater will be treated and disposed of on-site. The Master Plan proposes that any new wastewater system include an aerobic treatment system that brings wastewater to an R-2 water quality level at a minimum and to reuse the effluent to minimize impacts to the sensitive natural and cultural resources at the park. The recycled water can then be used for nonpotable uses such as subsurface irrigation, dust control, and toilet flushing. As noted by the DOH, the project is located in a critical wastewater disposal area as determined by the Kaua’i County Wastewater Advisory Committee and no new cesspools are permitted. All individual wastewater systems proposed for the park will be set back as required from State surface waters such as wetlands. All wastewater plans must conform to applicable provisions of the DOH Administrative Rules Chapter 11-62, “Wastewater Systems” and that the DOH reserves the right to review the detailed wastewater plans for conformance to applicable rules.
- **Drainage** – The addition of impervious surfaces to a site can result in a decrease in water quality and an increase in surface water volume during rain events. To mitigate the increase in impervious surfaces and related impacts, the Master Plan proposes to develop an integrated water/wastewater/drainage system to maximize the efficiencies of the use of water resources available on-site and to minimize surface runoff while

improving water quality to the greatest extent practicable. This includes the installation of rainwater catchment cisterns on all the major facilities, which will help reduce the quantity of runoff. The collected water is recommended to be used for nonpotable water uses such as irrigation or toilet flushing. In addition, bioswales will be installed downslope of the parking areas to allow runoff to be detained and filtered naturally by native and/or Polynesian-introduced landscaping before percolating into the ground and serving the dual purpose of creating an aesthetically pleasing environment while managing site drainage. If the 'auwai are able to be restored, this will further divert rainwater runoff to the lo'i, reducing the total amount of water draining from the site. To prevent further washouts of Kē'ē Beach, drainage improvements should also be made along the highway to filter and redirect runoff. All discharges related to the construction and operation of the proposed project will comply with the State's Water Quality requirements contained in Chapters 11-54 and 11-55, HAR.

- Electrical and Communication Systems** – Due to the park's limited access to infrastructure and the dispersed locations of some of the proposed facilities, all facilities requiring power are recommended to be designed to be energy efficient and to use renewable energy resources to fill the remaining demand. This includes solar hot water heating and photovoltaic as well as microwind and microhydropower sources. As a potential in-stream use, any microhydropower system should be integrated with a public trust use such as the taro lo'i production should it be pursued. To minimize the impacts of microhydropower systems on native Hawai'i amphidromous biota, the diversion intakes must be designed to have low-velocity intakes placed subsurface in relatively deep pool in the center of the stream in order to minimize entrainment of larval or post-larval stream animals. In order to maintain communications and provide for public safety during emergencies, the existing hardline pay phone and emergency phone at Kē'ē Beach ~~is proposed to~~ should be maintained. For similar reasons, hardline telephone service ~~is proposed to be provided~~ should be considered at the turnaround and Welcome Hale if desired. ~~Caretaker's Cottage and Welcome Pavilion/ECC. A second pay phone or at least a closed-circuit phone which connects to the Caretaker is also proposed to be provided on the outside of the Welcome Pavilion/ECC so that emergency calls can be made when the ECC is closed and hikers who need assistance can contact the Caretaker.~~ The remote and mountainous location limits wireless communications but wireless services should also be considered for visitor convenience and may be required for certain parking management technologies.
- Solid Waste** – Although fewer users to the park will likely result in less trash generated at the park, State Parks will recommend that all visitors carry in what they carry out. In addition, new trash receptacles will be provided at key locations so that waste disposal is convenient to park users. Recycle bins are recommended to be installed along with trash receptacles and all receptacles are proposed to have animal-proof lids to minimize foraging by feral cats, dogs, rats and chickens and reduce the potential for windblown debris. Daily maintenance and removal of trash and

recyclables is recommended to be continued at the park to minimize the amount of solid waste at the park that may be windblown or washed into ocean, stream, and other sensitive natural and cultural environments. There may be hazardous substances, pollutants, or contaminants to be present in the soils in the areas where there were abandoned vehicles. However, no work is anticipated in these areas at this time. State Parks will work with the State HEER Office to determine the appropriate actions to comply with the relevant environmental laws if applicable should any work occur in those areas.

**Community Character and Population** – Because the Master Plan is not recommending a change in the use of the park, the proposed Master Plan is not anticipated to have any effect on the rural community character of the area nor impact the population characteristics of Hā‘ena ~~except for the singular increase of an on-site caretaker and his/her family if permitted to live on-site with the caretaker, if they are not from Hā‘ena.~~ No mitigation measures are planned as the potential impacts are anticipated to be minimal due to the overall reduction in the number of people at the park on a daily basis.

**Economy** – The proposed limit on the number of people entering the park may reduce the number of people who visit the North Shore and may therefore negatively impact the local economy and North Shore businesses. However, the economic impact could be mitigated by visitors who plan their visit to the North Shore in advance and potentially take greater advantage of other North Shore attractions when the park is at capacity. They may also shift their time to other areas on Kaua‘i which will benefit businesses in other parts of the island.

The proposed new fees for visitor entry, parking, and shuttle tickets may generate enough new income to support an increase in interpretive and caretaking activities. Construction of facilities will stimulate purchase of materials (generating excise tax revenues) and employment for labor (generating income tax revenues). The reduction in the number of daily visitors at the park may also reduce the number of lifeguards required at Kē‘ē Beach. However, as noted, the overall employment at the park is recommended to be increased in other areas, or may shift the requirements for lifeguards to the County beach park, which will help offset the loss.

**Police and Fire Protection** – The Master Plan will reduce the number of park users who may require police, fire and emergency rescue resources including the number of day hikers on the Kalalau Trail (hikers without permits). State Parks will work with the County Police and Fire Departments to comply with requirements of the Kaua‘i County Fire Code including emergency access by fire apparatus, ambulance, and other emergency vehicles as required. Due to the remote location of the park and the potential for hazardous conditions, emergency evacuation plans and rescue plans for various natural hazards should be developed as discussed in Sections 2.5.2 and 3.10 to help improve coordination of public safety and park staff response efforts in times of emergencies.

The Master Plan calls for the lifeguard stand to be moved north of its current location, but this will be a positive impact as it will allow better visibility of the entire Kē‘ē Lagoon for

lifeguards. A helicopter landing area will be maintained at the park and can be used for emergency landings. The emergency evacuation drills should be performed with State Civil Defense, Kaua'i fire and police departments annually, at a minimum, to ensure readiness.

**Schools** – ~~Because of the minimal increase of a single Caretaker on site at the park who may or may not have a family permitted to stay on site,~~ The proposed Master Plan is not anticipated to add a ~~significant~~ demand on public school facilities. However, many of the proposed educational and interpretive programs are expected to support the area's educational resources by providing opportunities for hands-on activities covering a range of topics spanning the natural, cultural, and archaeologic realms of study.

**Health Care Services** – The Master Plan developments and management measures are not anticipated to create any greater demand on regional health care services. It is anticipated that the reduced number of visitors as well as improved visitor education, improved signage, and location of facilities away from the rockfall hazard area will result in beneficial impacts to public health and potentially required health care services.

**Recreational Facilities** – An objective of the Master Plan is to balance outdoor recreational uses with the protection and preservation of the park's natural and cultural features, enriching the experience for all. Existing outdoor recreational opportunities such as swimming, sunbathing and snorkeling along with access to the Kalalau Trail are proposed to continue. In addition, a picnic area is proposed to be added ~~near the Welcome Pavilion/ECC and~~ at the end of the highway pavement at Kē'ē. The ~~Interpretive Pedestrian~~ Path will facilitate walking and sightseeing and possibly bicycling in the park. Table 9 provides a list of the existing and proposed recreational activities anticipated to be permitted at the park.

The probable reduction in total number of visitors per day will create both positive and potentially negative impacts if not mitigated. Limiting the number of visitors may have the positive effect of enhancing the recreational experiences within the park. However, negative effects may be the distribution of recreational demand to other facilities on the North Shore and island-wide, especially the nearby Hā'ena Beach Park. State Parks should monitor use of Hā'ena County Park to judge if the recreational demand is shifted from one facility to the other. If so, an adjustment to the number of visitors allowed per day to Hā'ena State Park might be considered as a mitigating measure. If a shuttle is employed, a mitigation measure may be to include a stop at Hā'ena Beach Park to alleviate traffic and congestion at the County park as well.

### 1.9.3 RELATIONSHIP TO LAND USE PLANS AND POLICIES

**Federal** – The following provides brief discussions on compliance with federal laws and regulations as related to the proposed Master Plan. The full discussion is provided in Section 5.1.

- **Accessibility** – State Parks will design the new facilities to meet the requirements of the Americans with Disabilities Act of 1990, as amended, including access to

archaeological and cultural sites, historic properties, and wilderness areas, to the maximum extent feasible, while preserving each site's significant features. In such instances where outdoor facilities cannot be made accessible, efforts will be made to provide an "equivalent experience." Equivalent experience may be in the form of an alternate facility that provides a similar environment, view, or interpretive encounter.

- **Endangered Species** – There is no federally-designated critical habitat within the terrestrial areas of the park. However, the National Marine Fisheries Service (NMFS) issued a final rule revising the critical habitat for the Hawaiian monk seals to include the marine habitat fronting Hā'ena State Park from the 200-meter depth contour line, including the seafloor, through the water's edge and 5 meters into the terrestrial environment from the shoreline (50 Code of Federal Regulations Part 226). Therefore, any changes in these areas will require consultation with the NMFS. Other endangered and threatened species are known to either frequent or to exist within the park. A variety of mitigating measures will be taken to protect them as discussed above and in more detail in Sections 3.5-3.9.
- **Land and Water Conservation Fund** – The proposed Master Plan and management strategies have been reviewed by the NPS and found to be in compliance with LWCF requirements as set forth by U.S. Code of Federal Regulations, Title 36, Part 59, Section 6(f) as well as with the original intent of park acquisition, which included the state's commitment to develop opportunities for "swimming, fishing, picnicking, camping, and other beach-oriented recreation opportunities" (LWCF Agreement, 1972).

**National and State Registers of Historic Places** – The park includes three registered sites: the Hā'ena Archaeological Complex, which stretches from Limahuli Stream to Kē'ē (site number 30-02-1600), Kūhiō Highway (Kaua'i Belt Road, North Shore Section) between Princeville and Kē'ē (site number 30-02-9396), and the Nāpali Coast Archaeological District (site number 30-02-3200), which overlaps the park within TMK: 5-9-01:22 in the areas mauka of the highway. Consultation with SHPD has been initiated and is ongoing. The location, layout, and design of the proposed park elements have been planned to highlight the importance of – while minimizing the impacts to – those archaeological and cultural sites that contribute to the significance of the historic sites.

**State** – The following provides a brief overview of the compliance with various State regulations and policy documents.

- **Environmental Review** – this EIS is prepared to be in compliance with Chapter 343, HRS, and Chapter 11-200, HAR, for the proposed Hā'ena State Park Master Plan.
- **Land Use Law** – The State Land Use Law (Chapter 205, HRS), establishes the State Land Use Commission and authorizes this body to designate all lands in the State into one of four districts: Urban, Rural, Agricultural, or Conservation. The park is located within the Conservation District, the majority of which is the within the Resource



Subzone. This subzone includes state parklands as well as lands suitable for outdoor recreational uses, both of which are consistent with the proposed Master Plan. A small portion of the mauka area south of the highway near the entrance is in the Limited Subzone and offshore areas of the park are within the Protective Subzone. Section 5.3.2 contains the full discussion.

- **Coastal Zone Management** – Section 205A-1, HRS, defines the entire state as being within the coastal zone management (CZM) area including the area extending seaward from the shoreline to the limit of the State's police power and management authority, including the United States territorial sea. Therefore the proposed project lies within the CZM Area. The project's conformity to CZM objectives and policies is discussed in detail in Section 0.
- **Hawai'i State Plan** – The Hawai'i State Plan, Chapter 226, HRS, sets forth the goals, objectives, policies, and priority guidelines for growth, development, and allocation of limited resources throughout the State. It contains diverse policies and objectives on topics of state interest, including, but not limited to, the economy, agriculture, the visitor industry, federal expenditure, the physical environment, facility systems, socio-cultural advancement, and sustainability. Conformity with applicable provisions of the State Plan are discussed in detail in Section 5.3.4.
- **State Functional Plans** - The Hawai'i State Plan directs State agencies to prepare functional plans for their respective program areas. There are 14 state functional plans that serve as the primary implementing vehicle for the goals, objectives, and policies of the Hawai'i State Plan. The functional plans applicability to the proposed Master Plan, along with each plan's applicable objectives, policies, and actions, are discussed in detail in Section 5.3.5.

**County of Kaua'i** – The following provides a brief overview of the compliance with various County regulations and policy documents.

- **General Plan** – The General Plan (GP) of the County of Kaua'i is a policy document that is intended to help guide long-range development for the enhancement and improvement of life on Kaua'i, advancement of the County's vision for Kaua'i, and the establishment of strategies to help achieve that vision, including recommended land uses. The GP is currently undergoing another update was recently adopted in March 2018. However, it was last adopted in 2000 and It designates the park as "Parks and Recreation" on the North Shore Land Use Map. The GP North Shore Planning District Heritage Resources Map identifies the park as a ~~conservation area~~ "State & County Park" and notes that heiau cultural sites and traditional cultivation areas are located within the park and a regulated fishing area and coral reefs are located offshore fronting the park. A full discussion of compliance with this County policy document is provided in Section 5.4.1.

- **North Shore Development Plan** – The North Shore Development Plan (DP) designates Hā‘ena State Park and surrounding lands as “Open,” with which the park is consistent. A full discussion of compliance with this County policy document is provided in Section 5.4.2.
- **County Zoning** – Because the park is located in the State Conservation District, applicable land use regulations are those associated with the State Conservation District, as discussed in Section 5.3.2.
- **Special Management Area (SMA)** - The SMA was established to protect coastal resources in areas extending inland of the shoreline. The park is within the SMA and will comply with all permit requirements for the proposed facilities.
- **Shoreline Setback** - A Shoreline Setback Determination will be required by the County of Kaua‘i for implementation of the plan. However, with the exception of the relocated lifeguard tower and dune restoration activities, State Parks will locate any proposed permanent structures described in the Master Plan outside of the shoreline setback area wherever practical.
- **Flood Plain Management** – The majority of the park elements are proposed to be outside mapped flood and tsunami hazard areas. The lifeguard stand is proposed to be moved to within the coastal high hazard area. Thus, this action should be coordinated with the County’s Flood Plain Coordinator to ensure that it is done in compliance with County regulations.

#### 1.9.4 REQUIRED PERMITS AND APPROVALS

The following is a list of required permits and approvals that are anticipated by the proposed action:

PERMIT/APPROVAL	AUTHORITY	STATUS
Compliance with Chapter 343, HRS	Office of Environmental Quality Control	In process
Compliance with Chapter 6E, HRS (Historic Preservation)	State Historic Preservation Division	Required for construction
Site Plan Approval, Conservation District Use Permit	State DLNR, Office of Conservation and Coastal Lands	Required for implementation
Special Management Area Permit	County of Kaua‘i, Planning Commission	Required for implementation
Shoreline Setback Determination	County of Kaua‘i, Planning Department/State of Hawai‘i, Department of Accounting and General Services, State Survey Office	Required for construction

PERMIT/APPROVAL	AUTHORITY	STATUS
Wetland Delineation Study and Determination	US Army Corps of Engineers	May be required if wetland areas are near proposed improvements. <u>Other Department of the Army permits may be required based on determination.</u>
<u>Form 7480-1 Notice of Landing Area Proposal</u>	<u>Federal Aviation Administration</u>	<u>Required for the helipad</u>
National Pollution Discharge Elimination System (NPDES) Permit	State Department of Health, Clean Water Branch	Required for construction
<u>Noise Permit</u>	<u>State Department of Health, Indoor and Radiological Health Branch</u>	<u>May be required for construction</u>
Stream Channel Alteration Permit; Stream Diversion Works Permit; and/or Petition to Amend Interim Instream Flow Standards	DLNR, Commission on Water Resource Management	May be required for micro-hydropower system; riparian restoration (depending on extent of instream activities)
<u>Permit to Perform Work within a State Right-of-Way</u>	<u>State of Hawai‘i Department of Transportation (DOT)</u>	<u>Required for work with the State Highway</u>
<u>Land Transfer of State Highway from DOT to State Parks</u>	<u>State of Hawai‘i Department of Transportation</u>	<u>Required for road closure from park entry to Kē‘ē Beach</u>
Grading and Grubbing Permits	County of Kaua‘i, Department of Public Works	Required for construction
Building Permits	County of Kaua‘i, Department of Public Works	Required for construction

## 1.9.5 ALTERNATIVES

The following alternatives to the preferred plan were vetted during the planning process and are discussed in Chapter 6.0.

- No action
- 2001 draft plan alternatives (four alternatives)
- 2015 master plan alternatives
  - July 2010 alternative – Interpretive Corridor on highway alignment
  - Transportation and Parking alternatives (three scenarios)
  - July 2015 master plan presented in the Draft EIS

## 1.9.6 CUMULATIVE AND SECONDARY IMPACTS

Cumulative impacts are those that result from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions. Because the proposed Master Plan is for an existing state park and does not recommend a change in its use, the plan does not compound or change the mix of uses in this rural and remote corner of Kaua‘i. The

proposed reduction in the number of visitors and restoration of the park's natural, cultural, historic, and scenic resources are anticipated to build upon similar restoration efforts initiated at nearby Limahuli Gardens by NTBG, further improving the condition of those resources and expanding the areas along the North Shore where native ecological and Native Hawaiian cultural environments are reestablished and activated again.

Secondary impacts, or indirect impacts, include those that are caused by the action and are later in time or are farther removed in distance, but are still reasonably foreseeable. They could include increased pressure at and use of surrounding recreational and shoreline areas, especially Hā'ena Beach Park and Makua due to the proposed visitor limits and reduced parking at the park; improvements to water quality of ocean and surface waters; encouraged use of the park by native wildlife; better protection of sensitive natural, cultural, and historic resources; reduced user conflicts; and improved educational opportunities. A full discussion of the potential secondary impacts are discussed in Section 7.3.

### **1.9.7 RATIONALE FOR PROCEEDING WITH THE HĀ'ENA STATE PARK MASTER PLAN NOTWITHSTANDING UNAVOIDABLE EFFECTS**

Given the potential impacts, the main reasons for proceeding with the proposed Master Plan include protection and restoration of the park's sensitive and unique natural, cultural, historic, and scenic resources; improvement of the environmental conditions such as surface and marine water quality; removal of alien species and restoration of native ecosystems; improving public safety; increasing knowledge and sensitivity of the cultural values and activities that occur within the park; providing outdoor ~~and indoor~~ educational opportunities as well as recreational opportunities for residents and visitors alike; reducing negative impacts to native flora and fauna; and reducing illegal parking and traffic congestion compared to current conditions.

### **1.9.8 UNRESOLVED ISSUES**

The main unresolved issues involve the shuttle service and the timing of implementation. For the preferred shuttle service described in Section 6.4.2.4, it is not clear whether ~~the~~ a third-party operator currently providing service to the park will continue provide the service or if ~~State Parks or some other~~ a government agency or combination of public agencies such as the County or USFWS will solicit a concession agreement or ~~will~~ start a similar service to serve the North Shore areas between the park and Princeville as has been requested by many community members in response to this project. ~~that can serve the park from the remote Princeville parking area.~~ There may also be multiple shuttle providers if it proves to be successful. ~~There is currently some momentum from the County's efforts was some effort by the County to establish this service~~ and there may be a way for multiple agencies to cooperate on a transit system to serve the North Shore. Because of the uncertainty of the shuttle service, the ultimate parking requirements and shuttle stop design for the park are not known at this time. However, this can be mitigated through implementation of various operational strategies and adjusting those operations over time if they fail as discussed in

more detail in Sections 4.3.3 and 6.4.2. The Master Plan provides for that flexibility and different alternatives in design and implementation of the parking and shuttle facilities.

The timing of implementation of the proposed Master Plan is also unknown at this time as they are subject to CIP budget requests submitted by State Parks and approved by the State Legislature. Therefore, it is not clear exactly when the proposed improvements will be made. ~~The Near Term Plan described in Section 2.5.1 will help State Parks implement some of the key management strategies with less funding, while funding is sought for the more extensive long term improvements.~~

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## 2.0 PROJECT DESCRIPTION

This section provides background information, identifies the project’s goals and objectives, and describes the proposed improvements.

### 2.1 BACKGROUND INFORMATION

#### 2.1.1 LOCATION AND PROPERTY DESCRIPTION

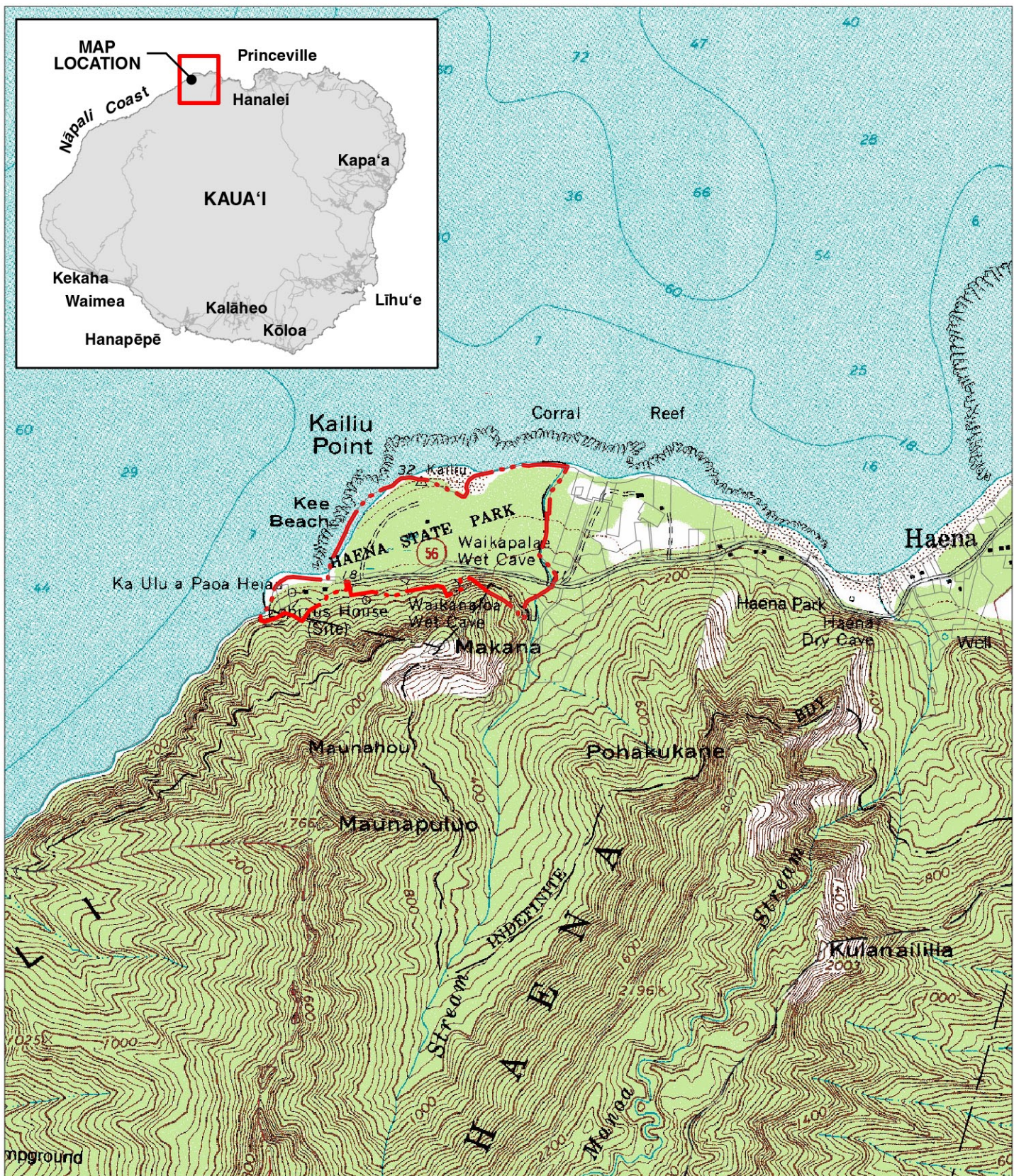
Hā’ena State Park is located in the ahupua’a of Hā’ena, Halele’a Moku, on the north shore of the island of Kaua’i. Figure 3 is a regional location map.

A summary of the research conducted by Silva (1995) reveals that control of the lands within and surrounding Hā’ena State Park transferred from Kaua’i ali’i to those of O’ahu and Maui soon after the 1824 rebellion. The Hā’ena Ahupua’a was awarded to Abner Kuho’oheliheipahu Pākī. In approximately 1837, Kekela’akalaniwahikapa’a (Kekela) was appointed konohiki (land manager) of Hā’ena. During the Great Mahele in 1848, ten kuleana awards comprising 13 parcels within what is now the park boundaries were awarded. Those kuleana parcels awarded to native tenants were then excluded from Pākī’s award. Of the ten claimants, only three trace their claims to the lands before 1824, and there are no clear records of the dispossessed chiefs of this area prior to this date. Pākī’s daughter, Bernice Pauahi Bishop, inherited their lands but soon after sold Hā’ena to W. H. Pease, a surveyor, in 1858. Kekela had one claim of her own within what are now the park boundaries.

After Pease’s death in 1871, the administrators of his estate conveyed Hā’ena to William Kinney in 1872 who then sold Hā’ena to Kenoi Kaukaha and 37 other individuals, referred to as the Hā’ena Hui (Hui Ku’ai’ainana o Hā’ena), as tenants in common in 1875. In 1955, Hā’ena Hui members John Gregg Allerton and Paul G. Rice filed a petition for partition and dissolution of the Hui. As a result of the partition, the County of Kaua’i received parcels within the current park site, which included Wai a Kanaloa and Waiakapala’e (wet caves) and Lohi’au’s house site. Title to another parcel was given to Allerton with the condition that he maintain and preserve a five-foot wide path for public access to the heiau and hula site. Forty acres were also given to the State at that time for a park. Four un-awarded lots were auctioned to cover the legal costs of the partition. Also during the late 1960s through the early 1970s, Howard Taylor, actress Elizabeth Taylor’s brother, purchased a large parcel along the Hā’ena coast. A transient community arose at the area called “Taylor Camp,” which was condemned by the State in 1975 due to unsanitary conditions and added to the park’s inventory. There are no known ceded lands within the park boundaries.

~~The current 65.7 acres comprising~~ Hā’ena State Park consists of ~~three~~ two State-owned parcels, ~~two of which were set aside to the Division of State Parks—~~ a 15.23-acre portion of a total of 180.23 acres, identified by TMKs: 5-9-01: 022, and 5-9-08: 001 with 50.38 acres.





## LEGEND

 Hā'ena State Park Project Boundary

## FIGURE 3

### Regional Location Map

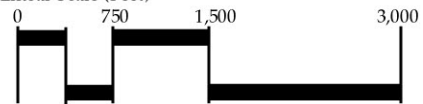
## HĀ'ENA STATE PARK

Department of Land and Natural Resources

Island of Kaua'i

North

Linear Scale (Feet)



Source: U.S. Geological Survey (2009)

Disclaimer: This graphic has been prepared for general planning purposes only.  
Incorrect or outdated Hawaiian spellings on source maps have not been corrected.





A small 0.68-acre parcel is also located within the park and is owned by the County of Kauaʻi. It contains Ka Ulu a Paoa Heiau and Ke Ahu a Laka and is identified as TMK: 5-9-01: 025. See Figure 4. The last half-mile Kūhiō Highway also runs through the park and is incorporated in the master plan.

There is an existing Conservation District Use Permit (CDUP) KA-1010 for Public Recreation Use, which was approved on April 28, 1978. Executive Order 3391, effective September 13, 1988, designated the subject area as Hāʻena State Park.

Current land use designations for the park are:

- State Land Use District: Conservation (Figure 30)
  - Resource and Limited Subzones within the park; Protective Subzone, offshore (Figure 31)
- Kauaʻi General Plan: Park (Figure 32)
- North Shore Development Plan: Open (Figure 34)
- County Zoning: None
- Special Management Area (SMA): Within the SMA (Figure 35)

### **2.1.2 PROJECT PURPOSE AND NEED**

Hāʻena State Park is culturally and ecologically significant and its beaches and scenic resources make it a popular visitor attraction. A recent rockfall hazard study identified a high-risk area along the highway which is the main visitor corridor to Kēʻē Beach. This mix of recreational, cultural and environmental resources gives rise to the need to develop a conscientious and comprehensive master plan in order to balance conservation, preservation, recreation, cultural integrity, and public safety. The master plan and EIS are also required in order for State Parks to move forward with the proposed improvements at the park.

The purpose of the current effort is to refine the draft plan that was developed in 2001 and to process the EIS. The 2001 draft plan was developed with extensive public input and four master plan alternatives (including a no change alternative) were carefully vetted by the community and the community selected a preferred version of the master plan. These alternatives are discussed in Section 6.0 along with key alternatives developed during the current master plan process.

The ~~updated draft revised~~ Master Plan for Hāʻena State Park includes ~~management and development strategies~~ minimal improvements that bring the significant historic, cultural, and ecological resources of the park to the forefront and balance the protection of those resources with recreational and community uses. The current Master Plan utilizes new and previously prepared data, including updated historic, cultural and ecological information where necessary, along with continued community input. Collaboration with the community was a critical and vital element throughout the planning process and will continue to be required to help ensure the success of and support for implementation of the plan and ongoing management of the park. The master plan ~~and~~ report helps document the effort and purpose of the proposed improvements and management strategies.

### 2.1.3 STATEMENT OF GOALS AND OBJECTIVES

The goals and vision for the Hā‘ena State Park Master Plan were developed with State Parks staff and the MPAC during the initial meetings held in April and May 2010. There are five main goals that have guided the development of the Master Plan and the proposed management strategies. They are:

- Recognize that the entire park is culturally significant.
- Restore Hā‘ena State Park as a living place... cleanse, restore and revive cultural practices again.
- Involve the original families and reconnect the local community to the place.
- Uphold State Parks’ responsibility for the public’s safety, access, and welfare.
- Balance the provision of recreational opportunities with the preservation of the significant natural and cultural resources.

The following section describes the more detailed objectives and policies that have been developed with the project team and MPAC to help bring the above goals to fruition. They are organized by topic area and relate directly to the recommended capital improvement projects, management strategies, interpretive concepts, park organization, and operational needs.

#### **Overall Park Objectives and Policies:**

- Consider creative management, maintenance and operational structures in operating the park.
- Build relationships and partnerships with other public agencies and organizations to help enrich and improve the overall experience for those visiting the park.

#### **Master Plan Improvements Objectives and Policies:**

- Develop park facilities and infrastructure with deference to Hā‘ena’s significant cultural and natural resources balanced with fiscal reality.
- Coordinate with appropriate public agencies on the proposed changes to the section of Kūhiō Highway within the park.
- Reduce use of the comfort station at Kē‘ē by providing additional facilities elsewhere ~~such as a new visitor facility.~~

#### **Access, Transportation, and Parking Objectives and Policies:**

- Encourage the local community and residents to return to the park. Park access policies should not discourage them or diminish their experience. Adjust access policies if issues or complaints arise.
- Balance public access to the park with the protection of natural, cultural and scenic resources.
- Encourage pedestrian and bicycle access to the park to minimize the number of vehicles driven to the park.
- Minimize potential conflicts between pedestrians and vehicle traffic by providing safe places for people to walk ~~and ride their bicycles.~~
- Coordinate with the State DOT on any proposed changes to the section of Kūhiō Highway within the park.

- Manage parking to minimize conflicts with pedestrians and improve overall experience. Consider a variety of management strategies and adjust as needed.
- Ensure that parking and traffic impacts do not spill out from the park into the neighboring residential communities.

**Cultural and Historic Resources Objectives and Policies:**

- Establish a Cultural Advisory Group (CAG) to advise State Parks on cultural matters regarding the park.
- Preserve significant historic properties (including archaeological resources) within the Hā'ena Archaeological Complex.
- Place management and restoration of the Hula Complex as a high priority. Work with cultural practitioners to restore it as a living resource.
- Continue to actively preserve, maintain, restore, and cultivate the agricultural complex with the participation of the community-based curators. Continue to restore the complex based on the existing restoration plans.

**Natural Resources Objectives and Policies:**

- Preserve and restore Hā'ena State Park's unique natural resources in order to improve the health of the mauka to makai ecosystems.
- Replace invasive alien species with native and Polynesian-introduced species.
- Restore the park's natural resources based on cultural values and practices.
- Recognize that many of the park's natural resources are culturally significant and contribute to high quality recreational opportunities.
- Involve the community and volunteers in restoration efforts to provide high quality recreational opportunities.

**Scenic Resources Objectives and Policies:**

- Enhance scenic resources by clearing invasive plant species.
- Provide safe viewing opportunities and information on the cultural and natural values of the park's key features to enrich the visitor experience.

**Recreational Resources Objectives and Policies:**

- Provide opportunities for quality outdoor recreation, with sensitivity to significant natural, scenic and cultural resources. Locate trails and recreational destinations in appropriate places that do not negatively impact those resources.
- Designate a safe swim area within view of the lifeguards, particularly for beginning swimmers. Inform and instruct visitors of the boundaries and the skill level required for various ocean recreation activities during orientation.
- Facilitate safe and high quality access to Nāpali Coast State Wilderness Park.

**Public Education and Interpretive Objectives and Policies:**

- Require visitor orientation for all visitors prior to entering the park. ~~For frequent visitors to the park, orientation may be required only once a year.~~
- Develop programs that increase visitor knowledge of the park's natural, scenic, cultural, historic and archaeological resources and enhance and enrich visitor experience.

- Implement interpretive programs and install interpretive devices that do not interfere with the scenic and cultural aspects of the features.
- Inform visitors of sensitive areas and teach them how they can help to better protect the resources. Include instruction on appropriate behavior and protocols in culturally sensitive areas.

#### **Public Safety Objectives and Policies:**

- Inform visitors of potential hazards in the park and how to safely recreate and visit the park.
- Develop pedestrian and bicycle paths to avoid natural hazards.
- Install safety signage in appropriate locations throughout the park.
- Maintain public telephones (until cellular phone service improves) and the emergency helipad.
- Develop emergency evacuation plans and routes.

## **2.2 EXISTING USES**

Hā'ena State Park is accessed from Kūhiō Highway, which serves as the park's only road right-of-way. One of the park's main features is Kē'ē Beach, a popular place for swimming, snorkeling and sunbathing. Fishermen/women also utilize the nearshore waters at Hā'ena. A lifeguard stand is located at the terminus of the highway, overlooking Kē'ē Beach and Lagoon. The park contains extensive historical, archaeological and cultural features, such as the Ka Ulu a Paoa Heiau, Ke Ahu a Laka, Lohi'au's house platform, known burials and cemeteries, a historic house site, wet caves, restored taro lo'i, as well as unrestored Agricultural Complex walls and 'auwai. Ka Ulu a Paoa and Ke Ahu a Laka are significant sites to the hula community and frequented by cultural practitioners. Community members, organized through Hui Maka'āinana o Makana (hereafter "the Hui"), work in the restored lo'i to plant, tend and harvest taro. Descendants and community members also care for the known burials and cemeteries within the park.

Additionally, within the park is the trailhead to the Kalalau Trail, which is part of the Nāpali Coast State Wilderness Park. Hā'ena State Park facilities such as parking, the comfort station, and showers service both State Park areas. Day hikers utilize the trail from the trailhead to Hanakāpī'ai Falls without need of a permit. Overnight hiking and hunting beyond Hanakāpī'ai are allowed by permits issued by State Parks and DOFAW-Kaua'i, respectively, which is currently limited to 60 campers and 30 hunters per day. Total park visitor counts, however, can reach over 2,000 people per day. According to the lifeguards stationed at Kē'ē, there are roughly 250 to 300 people on the beach at any one time during the summer months. In the winter, the beach is still busy with 100-150 people at any one time.

Currently the park is open 365 days of the year and open from sunrise to sunset. However, there is no entry gate at the park since the entry road is a State Highway. Therefore, people are able to access the park 24 hours a day, which has often lead to inappropriate use of the park during late night hours, including rave parties, illegal camping, and vandalism.

Park support facilities include two parking areas, a comfort station with potable water, a payphone, grassed helipad, garbage cans and signage. The parking areas include a gravel lot approximately 750 feet from the entry which can accommodate approximately 100 vehicles. The second parking area is the off-street parking along the highway near Kēʻē Beach. Based on a rough count, between 50 and 70 cars park along the highway, both legally and illegally. Neither parking area is paved nor are any of the parking stalls striped except for the four accessible Americans with Disabilities Act (ADA) parking spaces located at the Kēʻē Beach parking area. “No parking” signs are located along Kūhiō Highway within the park and are routinely ignored on busy days when the parking areas are full. The helipad is grassed and located adjacent to the gravel parking area near the park entrance and is used by DLNR for maintenance and emergencies.

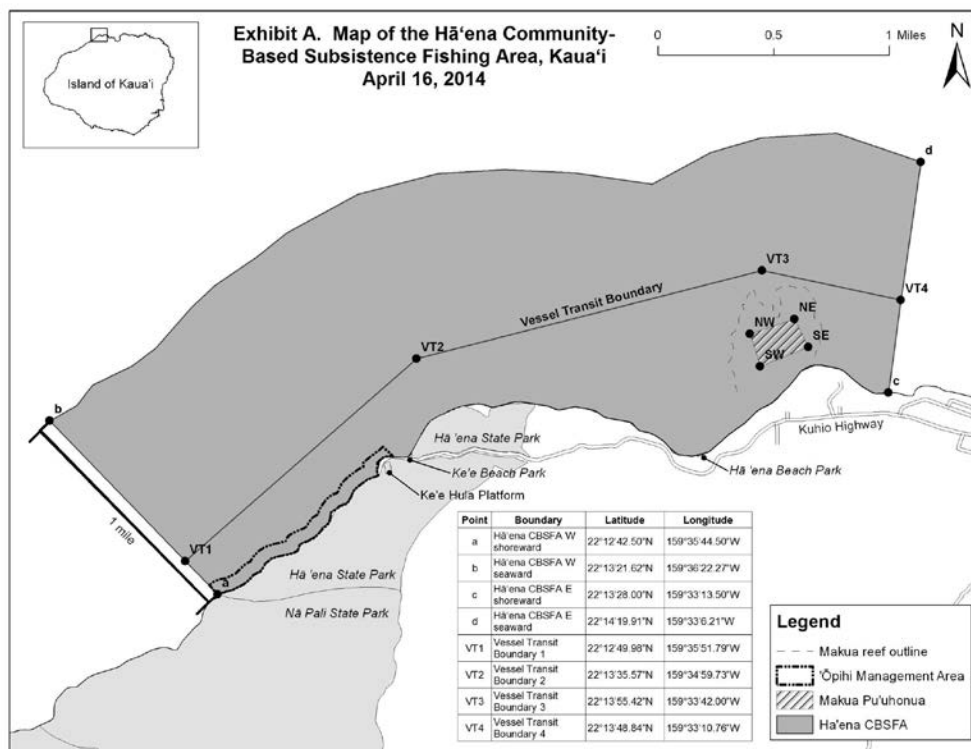
The park’s comfort station was reconstructed in 2008-2009, in compliance with the ADA of 1990, as amended. A constructed wetland was installed to treat wastewater from this facility in 2010. An interpretive sign is located near the trailhead and ocean safety signs are posted at Kēʻē.

Figure 6 is a plan showing the existing park features. Figure 7 contains site photos.

## 2.3 EXISTING PARK MANAGEMENT

State Parks is responsible for the management of Hāʻena State Park. Curatorship of the park’s Agricultural Complex and Ka Ulu a Paoa Heiau is currently provided by Hui

Makaʻāinana o Makana under respective agreements with the State and County.



**FIGURE 5:  
HĀʻENA  
COMMUNITY-  
BASED  
SUBSISTENCE  
FISHING AREA**

Nearshore waters (see map) are managed through the Hāʻena Community-based Subsistence

Fishery (HCBSF), which was established through the State’s rulemaking process, and is a separate effort from this Master Plan.



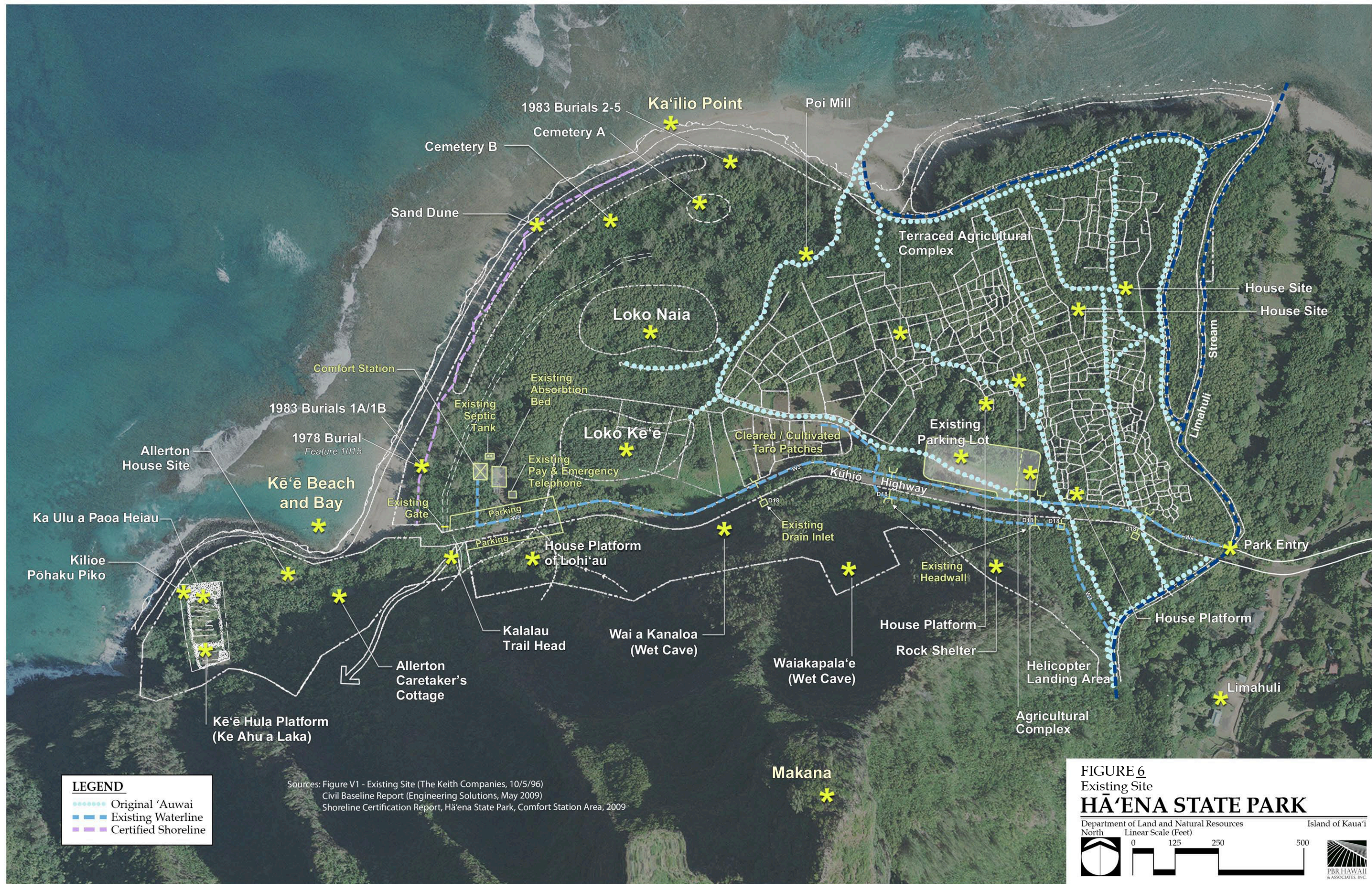
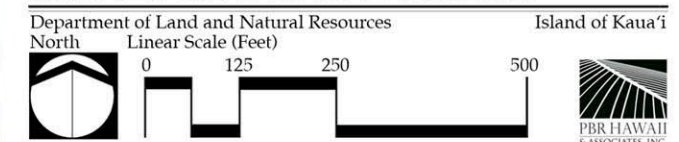


FIGURE 6  
Existing Site  
**HĀ'ENA STATE PARK**







Park Entrance & Limahuli Stream



Makana



Kē'ē Beach looking toward Ka'ilio Point



Waiakanaloa wet cave



Kē'ē Beach looking toward Nāpali



Kē'ē Beach from trail to Allerton Caretaker Cottage



Vehicles at Kē'ē Beach



Parking pattern



Lo'i



Lohi'au's House Site



Kalalau Trailhead Signage



Laua'e at Ke Ahu A Laka



Allerton Caretaker Cottage



Ke Ahu A Laka

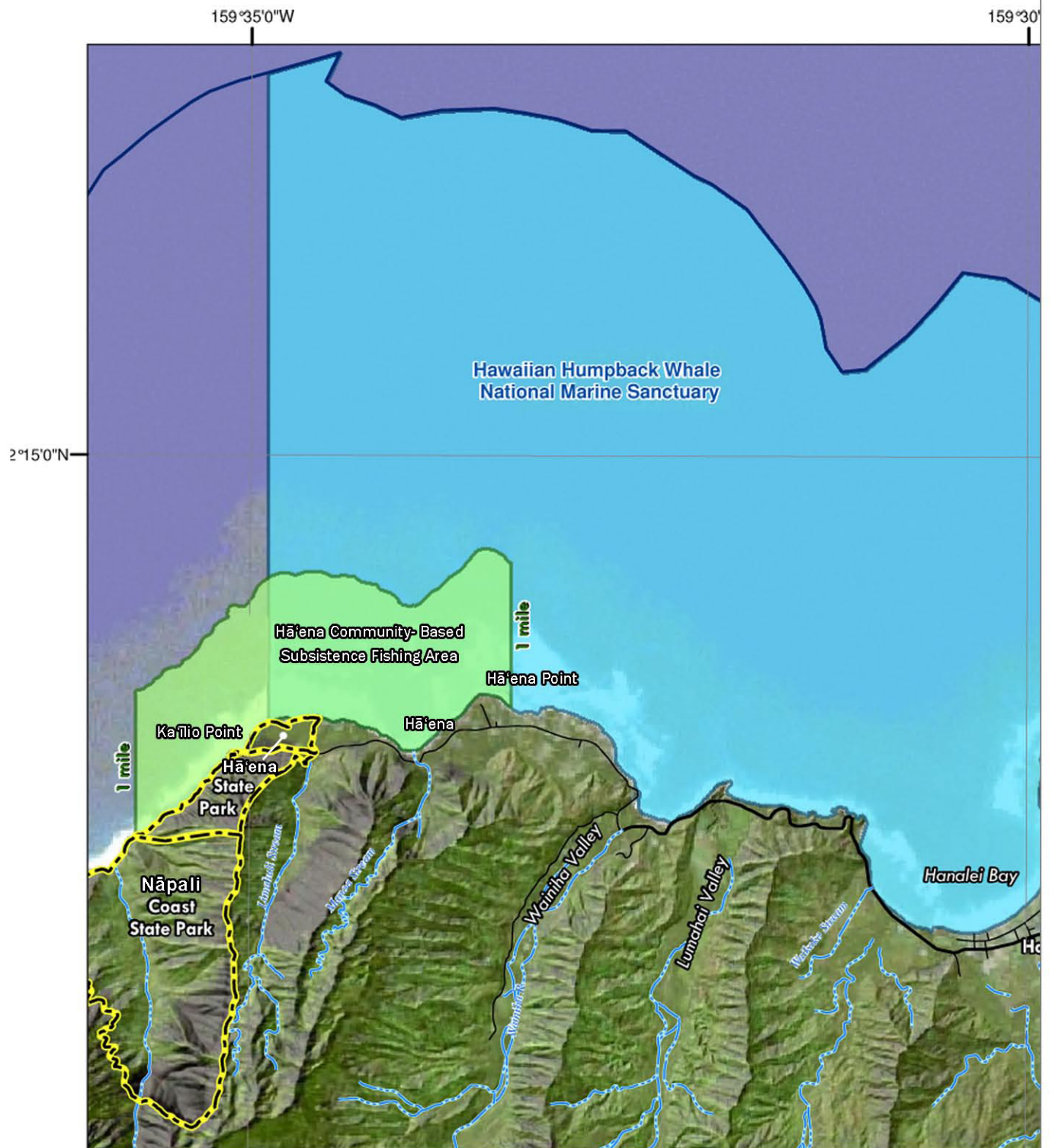


At Ke Ahu A Laka



Coastal dunes covered by non-native ironwood & false kamani forests





Source: State of Hawaii GIS; NOAA; PDC  
 Whale Sanctuary: 15 CFR 992.41  
 Subsistence Fishing Area: S.B. 2501 Act 241 June 26, 2006 revising HRS 188 Part II

## LEGEND

- Hā'ena Community-Based Subsistence Fishing Area
- Hawaiian Humpback Whale National Marine Sanctuary Boundary
- State Parks
- 600' Bathymetric Contour

FIGURE 8

Marine Management Areas

## HĀ'ENA STATE PARK

Department of Land and Natural Resources

Island of Kaua'i

NORTH

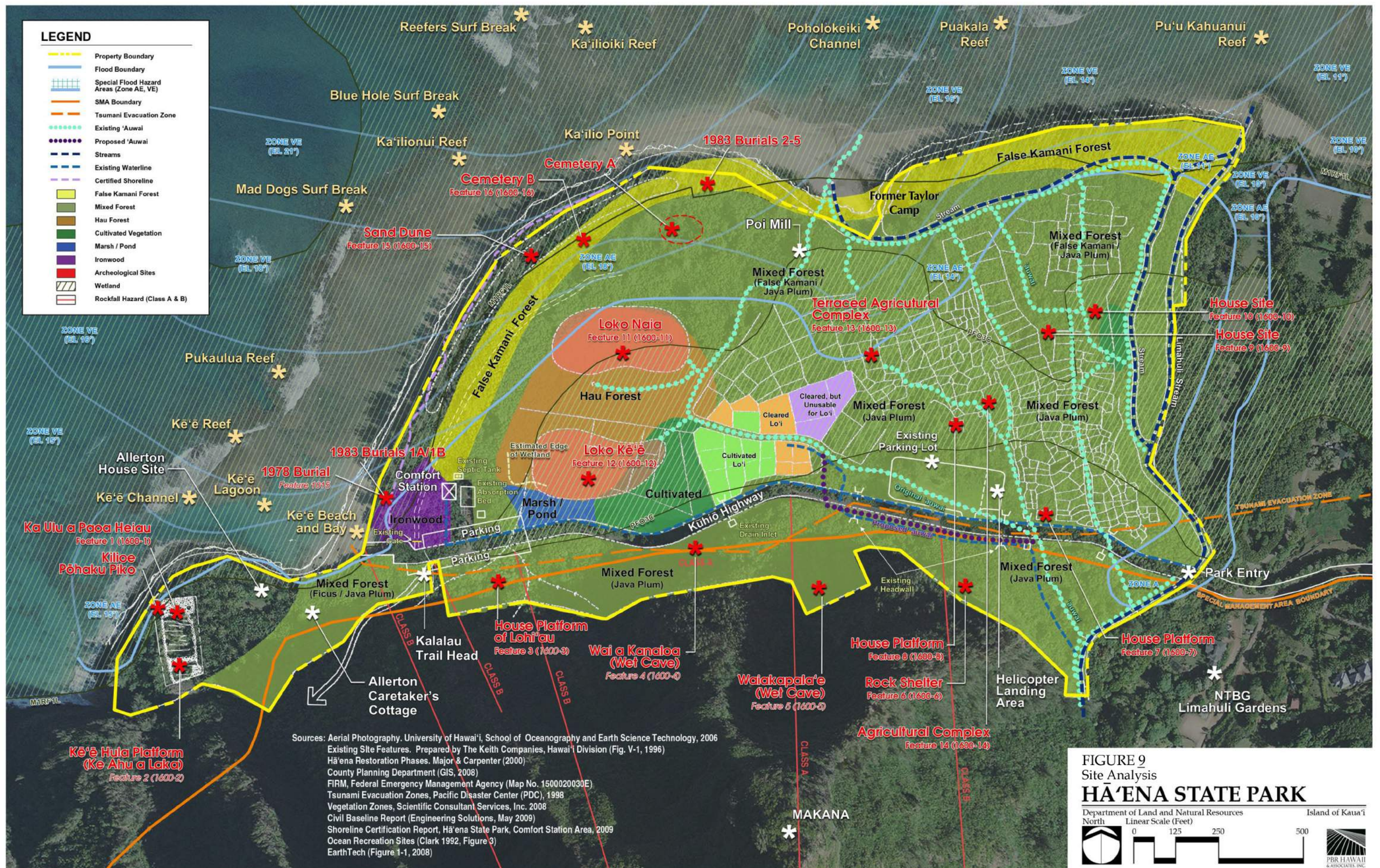


LINEAR SCALE (Miles)



Source: SWCA Environmental Consultants (2009)  
 Disclaimer: This graphic has been prepared for general planning purpose only. Diacriticals have also been added for Hawaiian spelling.







The rules of the HCBSF were adopted by the BLNR on October 24, 2014 as Chapter 13-60.8, HAR. Surrounding and overlapping the HCBSF on the eastern portion is the Hawaiian Humpback Whale National Marine Sanctuary, which is managed jointly by the National Oceanic and Atmospheric Administration (NOAA) and the State of Hawai‘i (Figure 8). Proposed recommendations for future park management are summarized in Section 2.5.5.

## 2.4 SURROUNDING USES

Hā‘ena State Park is surrounded by lands in the Conservation District. It serves as the pedestrian entrance to Nāpali Coast State Wilderness Park, which occupies the lands south and west of Hā‘ena State Park. East of the park, land is developed at very low densities with single family dwellings. These residences include wood-frame cottages and large dwellings that serve as permanent and part-time residences. Southeast of the park is the National Tropical Botanical Garden’s Limahuli Garden and Preserve.

## 2.5 DESCRIPTION OF THE MASTER PLAN

A site analysis was prepared to map the existing resources and to guide the appropriate location of Master Plan park elements (see Figure 8). The Master Plan presented in Figure 1 shows the full build out of the plan and is the preferred alternative. Key components of the plan include new visitor and caretaker facilities, pedestrian and bicycle paths, a Hula Complex surrounding Ka Ulu a Paoa Heiau, a Cultural Gathering Area with Hālau Wa‘a and open hale, and changes to the park entry, vehicle circulation, and parking. To facilitate the initiation of the controlled entry and access changes at the park, a near-term plan for the entry complex was developed and is described in Section 2.5.1 (Near-Term Plan). It is also illustrated in Figure 2. Subsequent sections describe elements of the full build out of the Master Plan.

### 2.5.1 NEAR-TERM PLAN FOR THE ENTRY COMPLEX

The Near-Term Plan for the entry complex presented in Figure 2 offers an interim plan to help initiate the managed access concepts and safety improvements within the park which are based on an updated rockfall hazard study prepared by AECOM (Appendix B). AECOM prepared a map showing the location beyond which the potential for simulated rockfalls diminishes to a 0% chance based on computer modeling. This line is shown on all the Master Plan graphics for reference and labeled as such. The Near-Term Plan as well as the Master Plan locates all the proposed visitor facilities makai of this line. The following sections are brief descriptions of the proposed features of the Near-Term Plan.

#### 2.5.1.1 Welcome Pavilion

A Welcome Pavilion is proposed where the main entry to the park can be managed prior to the construction of the Education and Cultural Center (described in Section 2.5.2.1). The primary function of the Welcome Pavilion is to provide orientation for all visitors prior to park entry. Public restroom facilities and an information desk are also included in the structure. Areas for interpretive displays, exhibits, picnic tables, and bicycle parking are

~~provided outside of the pavilion. The leach field for the comfort station will be located beneath the parking lot. Dual waterlines will be installed for the comfort station and the lo‘i.~~

### ***2.5.1.2 Interpretive Path***

~~Due to the potential for rockfall hazards along the highway, an Interpretive Path will be provided makai of the highway, connecting the Welcome Pavilion to Kē‘ē Beach. It will traverse the lo‘i as an elevated boardwalk running along the first berm separating the first two rows of lo‘i and then turn north to avoid the wetlands. It will cross an ‘auwai over a footbridge and connect to a path through the hau tree tunnel. This path will then connect to the trail behind the dunes and turn south, leading visitors past the lifeguard tower to Kē‘ē.~~

~~Interpretive displays and wayside exhibits will be installed along this path, including directional signage and educational information for the varied sights along this trail. The portion of the path which traverses the lo‘i will be elevated with handrails and a viewing platform where the path turns. From here, distant views of Wai a Kanaloa can be seen as well as spectacular views of Makana, the lo‘i, loko, and the wetlands. The path is proposed to be a minimum of eight to ten feet wide to accommodate bicycles without being overly intrusive upon the lo‘i. Pathway footings are proposed to avoid structural impacts to lo‘i walls. The path will be designed to be ADA accessible and made with lightweight, durable, easy-to-maintain, and vandal-proof or vandal-resistant materials. Directional and ocean safety signs are proposed to be posted appropriately along the path.~~

~~The exact alignment and materials used to construct the path will be determined when construction plans are prepared based on input from rockfall engineers, State Parks archaeologists and staff, the Cultural Advisory Group, and the Hui.~~

### ***2.5.1.3 Parking***

~~In the Near-Term Plan, most of the visitor parking is consolidated into the main visitor parking lot as much of the highway will be closed to general traffic. In addition, a small ADA/special access parking area will be established at Kē‘ē. The main parking lot is proposed to be re-graded, resurfaced, and landscaped with striped parking stalls. The preferred medium for surfacing the parking lot is a permeable pavement or structural grass over the entire parking lot or at least half of the parking lot so it can be used for multiple purposes. The exact surface will be determined when construction plans are prepared based on soil drainage and material availability. The parking lot as shown in the plan is large enough to park roughly 100 vehicles. However, to encourage use of the shuttle or transit system being planned for the North Shore, the number of available stalls may be reduced and the grassed areas of the lot can be used for outdoor activities, staging areas, lo‘i, or educational purposes. The area shaded in a darker green in the plans shows how the parking lot could be partitioned for the different uses. If the shuttle system proves successful, the area may no longer be needed for parking and could permanently be converted into other park uses such as additional educational gardens and picnic areas, event space with a grand entry lawn, or expanded staging areas. The Welcome Pavilion/ECC could also be located further east to open up more garden spaces to the west.~~

The Master Plan also shows an ‘auwai running along the mauka edge of the main parking lot that is in roughly the same alignment as the original ‘auwai that used to traverse this area before it was cleared for the dirt parking lot. There have been requests by some members of the MPAC to determine whether it can be restored and made functional again, connecting to the rest of the ‘auwai system. If restoration is pursued, further investigation will be necessary prior to detailed design of the parking lot to see if the ‘auwai can be restored without extreme construction requirements or costs and if there is sufficient water quality and quantity. If the ‘auwai can be restored, the grading and landscaping of this area should be done so that stormwater runoff from the parking lot is diverted away from the ‘auwai and directed to flow across the grassed areas of the parking lot or towards bioswales and the adjacent landscaped areas could be designed as rain gardens to filter and contain the runoff. In addition, overflow drainage swales could be designed to help mitigate larger rainfall flows that may overtop the ‘auwai. If it cannot be restored, another alternative is to aesthetically integrate its design into the drainage system and to see if it has potential for microhydropower generation.

This area can double as a catchment ditch for rockfall events with hala trees could also be planted in a thick screen along the highway and parking lot as an added rockfall mitigation measure and to soften the view of the highway from the ECC and Interpretive Path.

Pedestrian paths are proposed to be provided throughout the parking lot and drop-off/pick-up areas to clearly delineate where people should walk. The pedestrian path itself could be curbed or edged for easier maintenance and may be surfaced with permeable pavers or pavements or natural soil hardeners to increase rainwater infiltration while providing a stable, ADA-accessible surface. The exact surface will be determined when construction plans are prepared based on soil drainage and material availability.

The subterranean area of the parking lot will serve as an absorption bed for the proposed restroom facilities minimizing the amount of disturbed area required to service the proposed facilities.

The smaller 13-space ADA/special access parking lot will be located at Kē‘ē for ADA accessibility, as well as to provide parking for the lifeguards, family members tending to the cemeteries, lawai‘a, hunters, and cultural practitioners visiting the Hula Complex. The two existing ADA stalls will be maintained and directly opposite the highway from them will be an 11-stall parking area. Bicycle racks should be installed here if bicycles are permitted on the Interpretive Path.

Drainage improvements to prevent ponding, soil erosion, and beach washouts during heavy rainfall events are recommended. Access to this parking area will be managed by special permit or controlled by parking staff to minimize vehicle access along the limited access corridor.

#### ***2.5.1.4 Park Entry and Turnaround***

Initial discussions with State DOT have indicated they are willing to transfer the section of highway within the park to State Parks. Therefore the proposed plan recommends closing the

highway to through traffic just past the park entry and includes a large vehicle turnaround with separate, gated accesses to and from the main parking lot, as well as to the ADA/special access parking area at Kēʻē and the separate staging area that could be used by State Parks or the Hui. A kiosk will be installed to control the gates either mechanically or manually by an operator. The gate will limit access along the highway to minimize visitor exposure to the rockfall hazards. Only those needing ADA vehicular access to Kēʻē, or special access to the cemeteries, hunting area within the Nāpali Coast State Wilderness Park, fishing grounds, and the Hula Complex will be allowed along the limited access portion of the highway. Warning signs will be installed at the gate. The gate across the highway could have a swing gate over the mauka half of the right-of-way that could be automated to open for exiting traffic only. Gate design will be included in construction drawings.

The central island of the turnaround will be landscaped, highlighted by a large hala tree or other native tree of significance to Hāʻena. An alternative for the centerpiece could be a sculpture depicting something of significance to Hāʻena or created by a Hāʻena artist. The turnaround also would include sheltered seating areas to accommodate visitor drop-offs and pickups and shuttles/transit stops, as appropriate. The shade structures could also be designed with photovoltaic (PV) panels to help power the nearby facilities. Shade structure design is conceptual at this time.

#### ***2.5.1.5 Safety Signage***

Rockfall hazard warning signs should be installed as appropriate along the highway to discourage the general public from accessing the highway between the park entry and Kēʻē, including the area around Wai a Kanaloa. In addition, directional and ocean safety signs should be posted at appropriate locations along the Interpretive Path, trails, and shoreline.

### **2.5.2 LONG-TERM MASTER PLAN**

Descriptions of the remaining elements of the full buildout of the Master Plan are provided in the following sections. Elements that remain from the Near Term Plan are not repeated here. Figure 1 illustrates the full buildout of the Master Plan and Figure 9 provides a detailed view of the entry area.

#### ***2.5.2.1 Education and Cultural Center***

The Education and Cultural Center (ECC) is envisioned as the main gathering place for all who visit the park. The ECC is anticipated to house administrative staff offices, comfort station facilities, auditorium/classroom space, meeting rooms, interpretive displays, storage rooms and other related spaces to support the park's operations and activities. The ECC is proposed to be designed with covered outdoor lanai-type spaces to encourage indoor-outdoor experiences and learning spaces. The footprint as shown is roughly 2,000 square feet (s.f.). It incorporates the 1,200 s.f. footprint of the Welcome Pavilion from the Near Term Plan and adds two 400 s.f. wings at the back of the structure. However, the final architectural program, design, and facility size will be determined during the detailed design stage of the ECC. Its exact location may also be moved further east into the graded area of the parking lot based on the size of the final parking lot needed at the park. This shift would open up more

park/event space makai of the facility and allow the smaller entry pavilion to operate while the ECC is constructed.

Because of Hā'ena's remote location and limited access to infrastructure, all aspects of green design is proposed for consideration whenever feasible to help the ECC operate self-sufficiently. To collect, filter, and reuse rainwater from the roof for irrigation, toilet flushing, and other possible uses, a rainwater catchment cistern is proposed. Renewable energy will be investigated during the building design process to help support the electrical demand of the facility with solar, microwind, and microhydropower<sup>†</sup> as potential alternatives.

#### ***2.5.2.2 Traditional Hale, Demonstration Gardens, Picnic Areas and Outdoor Event Space***

On the grounds surrounding the ECC are various outdoor spaces that are proposed for use as demonstration gardens and lo'i, tour staging areas, picnic areas, and outdoor event space. These areas are envisioned as flexible teaching spaces where outdoor demonstrations or classes could be held. They could also be landscaped with cultural and native plants, including kalo and Polynesian-introduced plants, to aid in educational programs and may be used as staging areas for tours, school groups and community work days. A traditional hale is proposed to be constructed as a shelter for these activities. Its proposed location is in an existing cleared area which cannot be put back into lo'i production due to that area having previously abandoned cars and debris.

#### ***2.5.2.3 Reconstructed Hale and Lo'i Interpretive Site***

A traditional house foundation (Feature 8, Site 1600-8) is located on the northern side of the main parking lot. According to the State Parks archaeologists, it likely has been modified by the addition of a lanai in historic times. Recent reconnaissance of the site shows it to be in relatively good condition and provides an opportunity for a reconstructed hale pili and lo'i interpretive site at the entrance to the park. Final design of this area will be done once a more detailed condition analysis of the site is conducted and the feasibility of reconstruction is determined. The layout shown in the Master Plan is purely conceptual and subject to revision based on the condition analysis.

#### ***2.5.2.4 Caretaker's Cottage and Baseyard***

The Caretaker's Cottage is a feature from the 2001 draft park plan that some members of the MPAC felt was absolutely critical to preserve in the 2015 Master Plan. Having a caretaker at the park would provide a 24-hour presence at the park for security as well as provide someone to unlock the gates for hikers who wish to exit when the park is closed if the exit gate is not automated or is locked after hours.

The footprint of the Caretaker's Cottage as shown on the Master Plan is roughly 1,200 s.f. under the main roof with about 500 s.f. of covered lanai space. There are two potential baseyard areas, one of which is the area immediately surrounding the Caretaker's Cottage

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<sup>†</sup> The U.S. Department of Energy defines a microhydropower system as a renewable energy system that typically generates up to 100 kilowatts of electricity. For reference, "a 10 kilowatt microhydropower system generally can provide enough power for a large home, a small resort, or a hobby farm." (USDOE 2012)

~~and measures over 6,400 s.f., but should include a protected buffer between the baseyard uses and the lo‘i walls. The second area, which could also be used as a staging area or flexible space, measures roughly 4,800 s.f. and should similarly be buffered from the lo‘i and ‘auwai to the north and east, respectively.~~

~~These areas comprise previously disturbed land adjacent to the main parking lot. The final layout, location and sizing of the Caretaker’s Cottage and baseyard will be dependent on the condition and exact locations of the lo‘i walls, ‘auwai, and traditional house site discussed in Section 2.5.2.3. Tall hedges or landscaping should be installed along the fences to secure the facility and to screen the facilities from public view. Similar to the ECC, green design and renewable energy are recommended. For hikers who need help after hours, and for any emergencies, an intercom or hardline emergency phone should be provided at the gate fronting the Caretaker’s Cottage.~~

#### ***2.5.2.5 DLNR Helipad and Baseyard/Staging Area***

~~The helipad and baseyard/staging area will be used by DLNR for maintenance of their facilities including the Nāpali trails and sites. Since it is infrequently used, the helicopter landing area can be designed as a level, grassed site. The parking lot, entry complex, and helipad staging area will undergo a detailed design process prior to finalization to appropriately locate and size the facilities.~~

~~For emergency helicopter landings, the Fire Department tends to utilize the open grassy area near the Hui’s current shelter. This area may continue to be used as an emergency landing zone as it is unsuitable for lo‘i restoration and is proposed to remain as an open grassy field for educational and special events makai of the Welcome Pavilion/ECC. However, it is noted that the Fire Department will land wherever they need to as appropriate for the emergency situation.~~

#### ***2.5.2.6 Limited Access Corridor***

~~The highway between the turnaround and Kē‘ē will be closed to general vehicle traffic and used only for special vehicle access due to the potential rockfall hazard (Appendix B). The only vehicles that will be permitted beyond the gate will be special access vehicles such as the lifeguards, hula practitioners, family caretakers of the cemeteries, and vehicles with valid ADA placards or license plates. Because the road is currently owned by the State Department of Transportation (DOT), it will either need to be transferred to State Parks or an agreement must be made between the two state agencies for the proposed closure.~~

#### ***2.5.2.7 Hula Complex***

~~The entire area makai of the Kalalau Trailhead and south of the highway has been designated as the Hula Complex. It is the first priority of the MPAC to restore the area and to develop a culturally appropriate management plan. The complex includes Ka Ulu a Paoa Heiau and Ke Ahu a Laka, the former Allerton property, and the State lands surrounding them. Restoration of the heiau and Ke Ahu a Laka based on Henry Kekahuna’s 1959 map (Figure 10) and all other available historical maps for the area is recommended.~~



The County has entered into an agreement with the Hui to care for the hula sites and is working with State Parks on access and coordination. It is recommended that appropriate cultural protocols be established as part of the management, access, and use of the area. Review by both the Kauaʻi Historic Preservation Review Commission and the State Historic Preservation Division (SHPD) are required for any improvements and proposed management plans.

The Hui is also working on the rehabilitation of the historic Allerton Caretaker's Cottage and the Master Plan recommends reusing the structure to support park use, including the Hula Complex. The former Allerton house site and existing foundation is proposed in the Master Plan to be maintained as an open, grassed platform. State Parks notes that recent changes at the site may require short term improvements to preserve it in place. If restroom facilities are provided within the area, potable water and an individual wastewater treatment system will be needed due to the remoteness of this facility. Sustainable design elements are proposed for consideration to make it as self sufficient as possible including high efficiency fixtures, renewable energy, rainwater catchment, and wastewater treatment and reuse.

#### ***2.5.2.8 Dune Restoration***

The dunes and beach strand were identified by both the MPAC and biologists at Geometric Associates (Appendix C) as priority sites for restoration. For the MPAC, it would be an opportunity to take care of the kūpuna who are interred there. According to the biologists, the restoration of a native dune ecosystem would involve the removal of alien species and the planting of natives and Polynesian introduced plants such as Pōhuehue, Naupaka, Nanea, Pōhinahina, Nehe, Paʻu-o-Hiʻiaka, ʻAkiʻaki grass, Milo, Hala and Kou. Not only would they provide improved and more authentic vegetation but they could also be used to help reduce coastal erosion if carefully planted. Restoration of the dune system would also improve the habitat for common native shorebirds, including the Kōlea or Pacific Golden Plover, ʻŪlili or Wandering Tattler, ʻAkekeke or Ruddy Turnstone, Kioea or Bristle-thighed Curlew, Hunakai or Sanderling, and various other sandpipers (Terry and Hart 2009).

Because the beach is one of the primary recreational resources at the park, visitors should clearly be instructed to be careful as they walk along the shoreline, especially east of the proposed lifeguard station since erosion is unearthing iwi and other cultural resources. The formal picnic areas that were shown on the dunes with picnic tables in the 2001 draft park plan have been removed and new picnic areas will be located on previously disturbed areas next to the Welcome Pavilion/ECC and on the paved areas at the end of the highway at Kēʻē (Section 2.5.2.10). Visitors will still be permitted to picnic on the beach, but not on the dunes, and they will be encouraged to carry out all trash. The Master Plan further recommends that, to support dune restoration, recreational activities that impact the beach and dunes, such as driving on the sand (except for emergencies), be prohibited.

#### ***2.5.2.9 Lifeguard Tower***

A new permanent location for the lifeguard tower has been identified in the Master Plan with input from the MPAC and the Kēʻē lifeguards (Listman, 2008). As shown in Figure 1, it is roughly 50 feet north of the highway pavement and 50 feet mauka of the 2009 certified

shoreline to allow views from the end of the path to open up to the ocean and improve visibility for the lifeguards. The site is located outside any known flood hazard zone or wetland. To avoid potential impact to subsurface resources, the foundation should be built up rather than excavated down into the sand, if possible. Also, some of the existing ironwood trees may have to be cut.

#### ***2.5.2.10 Picnic Area at Kēʻē***

Picnic tables will be located on the old highway pavement at the entrance to Kēʻē Beach to provide ADA accessibility. The area is shaded by trees and overlooks the beach and lagoon.

#### ***2.5.2.11 Loko and Wetland Restoration***

Some members of the MPAC expressed a desire to restore the loko and wetland areas for endangered native birds and possible agricultural uses. Loko Naia is believed to have been a loko kalo and Loko Kēʻē either a fishpond or loko kalo.

Restoration of the small wetlands on the property for the purpose of creating a native bird habitat is a possibility according to Geometrician Associates. However, they do not recommend modifying these areas specifically to attract endangered birds for practical and legal reasons. In order to do so, there are several binding agreements and permits that must be obtained with the U.S. Fish and Wildlife Service (USFWS), such as a Safe Harbor Agreement and associated enhancement of survival permit as well as increased responsibility to protect the native birds once they are established at the park. Additionally, its location near the main public corridor would increase the potential for endangered birds to be harassed, injured or killed directly or indirectly by people or their pets and may be difficult to manage.

They do, however, recommend restoring the native flora which would increase native plant conservation and opportunities to educate the public. This may also indirectly support native birds including endangered and threatened species without a formal effort to create an endangered species habitat. A third party agreement with a local organization that may want to take on the responsibility of creating and maintaining such a habitat if a formal endangered species habitat may be another option. If pursued, the wetlands should be protected through fencing hidden with landscaping or fringing vegetation that encourages viewing but discourages direct entry to help minimize access by predators (Appendix C).

#### ***2.5.2.12 Limahuli Stream Restoration***

Based on recommendations from Geometrician Associates in Appendix C, a natural area with potential for beneficial impact is restoration of the riparian areas around Limahuli Stream. The alien tree species that form a dense, closed canopy around the stream are especially problematic since they effectively prevent sunlight from reaching the ground and prevent the mid-canopy and ground cover layers in the forest from developing. This in turn increases sediment loading in the stream due to erosion and tree litter. Reduced sunlight also limits the growth of benthic algae in streams. The algae are a major food source for many rare and federally endangered native fish and invertebrates. A reduction in this important food source, coupled with increased sediment loading, could ultimately result in decreased quality of streams.

Careful clearing of the alien trees along Limahuli Stream and the planting of appropriate native and Polynesian-introduced plants to stabilize slopes are recommended. In order to prevent impacts to ‘Ōpe‘ape‘a, the Hawaiian Hoary Bat, State Parks should restrict any cutting of large shrubs or trees over fifteen feet tall to periods outside of the June 1 through September 15 breeding and pupping season. Continued cooperation with the Division of Aquatic Resources (DAR) to keep new alien fish out of the ‘auwai and stream and in ridding the stream of periodic invasions of swordtails, guppies, and other alien fish is recommended. Details of stream and riparian restoration will be deferred until a restoration plan can be prepared.

#### ***2.5.2.13 Agricultural Complex***

In order to create a living cultural Agricultural Complex, community gardening practices restoring the lo‘i should be continued (Carpenter, 1996). The restoration phases as recommended in the Major and Carpenter (2000) restoration plan are labeled in parentheses on Figure 1. The MPAC would like to allow for other cultural crops to be planted in addition to kalo. Historically, the complex was known to be flexible, allowing dryland cultivation to be done by simply redirecting water through different paths. ‘Uala, or sweet potatoes, were known to be grown in sandy areas and mai‘a (bananas), kō (sugar cane), and ‘awa (*Piper methysticum*) were grown in the valleys.

Restoration of the ‘auwai is also recommended wherever feasible, particularly in actively cultivated areas of the lo‘i. Special care, however, needs to be taken not to make a hydraulic connection between the lo‘i and ‘auwai back to Limahuli Stream to prevent the spread of apple snails. Limahuli Stream is one of the few places in the State that does not have apple snails and the snails are currently in the park’s lo‘i.

The 2001 draft park plan also included pedestrian and bicycle pathways throughout the lo‘i, primarily along and sometimes through the ‘auwai. This is no longer recommended since the goal is to reestablish the ‘auwai as the primary means of irrigating the lo‘i. The plan currently locates the Interpretive Path over the first berm within the lo‘i and will provide visitors an up-close view of the lo‘i on their way to Kē‘ē.

In addition, access to and/or through certain areas of the lo‘i is required for both people and equipment as a part of ongoing maintenance and harvesting. For safety reasons, access within the working lo‘i should therefore be managed and primarily reserved for those restoring the lo‘i as well as for educational and work groups tending to the lo‘i. Special tours for the public and educational groups guided by knowledgeable staff may also be arranged. These access ways shall be designed and constructed as the restoration of the lo‘i progresses in order to appropriately locate them within the complex.

#### ***2.5.2.14 Montgomery House***

Rehabilitation of the historic Montgomery House/Cottage situated within the Agricultural Complex is proposed to support agricultural activities or other park uses/operations. Similar to the Allerton Caretaker’s Cottage, if restroom facilities are provided, potable water and an

individual wastewater treatment system will be needed. Sustainable design elements should be considered to make it as self-sufficient as possible including high efficiency fixtures, renewable energy, rainwater catchment, and wastewater treatment and reuse.

#### ***2.5.2.15 Cultural Gathering Place and Hālau Wa‘a***

Tucked between the lo‘i, Loko Naia and former coastal road, and up on higher ground, the Cultural Gathering Place is envisioned in the Master Plan as an outdoor gathering place to support community/educational groups and where overnight stays would be permitted. The Cultural Gathering Place is in an area of recent 20th century modification and encompasses the site of the historic poi mill.

An open hālau-type structure and Hālau Wa‘a, or canoe house, is also proposed to the east of the Cultural Gathering Place. Approximate locations of these facilities are shown in the Master Plan. However, because this area is located near potentially sensitive cultural sites, the exact extent of the area and location of the structures should be determined with input from State archaeologists and staff, the community, and kūpuna. In addition, the Hālau Wa‘a should be located as makai as possible without impacting sensitive sites and the dune system or being within areas of special flood and wave hazards. For infrastructure, potable water will be needed. Composting toilets should be considered as an option for restroom facilities or temporary restrooms could be brought in and removed as necessary to serve the campers. Alien plant species are proposed to be removed from the area and replanted with native and Polynesian-introduced plants.

#### ***2.5.2.16 Poi Mill***

In the 2001 draft plan, interpretation of the historic poi mill is recommended. However, no cost estimates were included for any reconstruction work. As remnants of the concrete foundation still remain, the MPAC discussed whether the poi mill could be rebuilt in order to process harvests from the lo‘i. However, the site is located in an area of potential flood hazard due to wave action, according to the Flood Insurance Rate Map (FIRM) and if State Parks or another entity wishes to reestablish a poi mill on-site or within the park, additional studies are recommended to determine the most suitable location, design, and size for such a facility. Therefore, the site itself is recommended to be interpreted with signage or displays and included on guided tours.

#### ***2.5.2.17 Cemetery Areas***

The two historic cemeteries that are just north of the loko are currently maintained by family members. In the 1996 Burial Treatment Plan (Carpenter, 1996), there are recommendations to install signage and fence or wall off and gate the cemetery areas, with access provided to lineal descendants and State personnel. However, during the MPAC meetings a request was made to eliminate the fencing and gates. Rather than using fences or walls, landscaping and the use of native and Polynesian-introduced plants should be considered as more natural buffers for the area. Any signage that is installed should be designed with input from the families of those interred there.

### ***2.5.2.18 Pedestrian Trails***

As discussed in the Near Term Plan, the Interpretive Path will serve as the main pedestrian route between the ECC and Kēʻē. It will be located outside the area of the known rockfall hazard and will also serve as the primary ADA-accessible route. The proposed alignment was developed with Hui leadership and the final design is subject to refinement including input from the Hui, State archaeologists, Cultural Advisory Group, and rockfall engineers.

The old coastal road behind the dune, which will be used for restricted vehicle access to the loʻi, cemetery and Cultural Gathering Place, is also proposed as a potential new pedestrian trail. Its location behind the dunes provides shelter from the winds and provides an alternate route to Poholoikeiki Channel, the Hālau Waʻa, and the historic poi mill site and passes by Loko Naia. In the Master Plan, this pathway is not envisioned as a paved, improved trail. Ocean safety signage, interpretive displays and wayside exhibits should be installed as appropriate. Bicycles should not be permitted on this portion of the trail due to the sensitivity of the area.

Another potential pedestrian trail could be developed to connect the ECC directly to the Hālau Waʻa site through the proposed native plant and loʻi demonstration gardens along an existing path at the edge of the Phase I loʻi restoration. These trails together will provide a pedestrian loop trail through the most active areas of the Park as well as opportunities for diverse interpretive experiences. Signage, landscaping and trail markings may be installed to direct visitors towards appropriate areas and away from sensitive or hazardous areas. This loop trail serves as an alternate route back to the ECC and main parking lot. The exact alignment of all trails should be developed with input from State archaeologists, the Hui leadership, and the Cultural Advisory Group.

Additional pedestrian loop trails on the eastern side of the park should also be considered and designed in conjunction with the surveying and restoration of the loʻi (Phases III and IV). All trails will need to be designed based on more detailed survey of the archaeological sites and to loop back to the ECC if access to these areas is to be managed.

### ***2.5.2.19 Bicycle Facilities***

Bicycle racks will be provided at the ECC (and the Welcome Pavilion in the Near Term Plan) and if bicycling is permitted on the Interpretive Path, racks may be installed at Kēʻē near the special access parking lot. However, riders will be required to travel at low speeds since the path is also the main pedestrian and ADA-accessible route. They will also be required to walk their bicycles between the large viewing platform on the Interpretive Path and Kēʻē due to the sensitivities along the sand dune and potential for pedestrian-bicycle conflicts in the Hau Tunnel and at the viewing platform. If conflicts between pedestrians and bicyclists arise, bicycle riding on the Interpretive Path may be discontinued.

As an alternative, bicyclists could be allowed on the limited access portion of the former highway but they would be permitted at their own risk of rockfalls. If permitted, bicycle racks should be installed at Kēʻē. To encourage bicycle access to the park, bicycle parking, according to the Pedestrian and Bicycling Information Center, should include sturdy racks

~~that are visible (for security), accessible, easy to use, and convenient. Ideally, bicycle racks should support the whole bicycle and not just one wheel, and enable the user to lock the frame and wheels.~~

## **2.5.1 VISION FOR HĀ'ENA MASTER PLAN**

The following section provides conceptual descriptions of the key features of the master plan. It starts at the park entrance and continues toward Kē'ē. The exact locations and designs of the proposed features are subject to change and refinement during the detailed design and construction phases based on conditions at the time of implementation.

### **2.5.1.1 Park Entry, Turnaround, and New Main Gate**

A new vehicle gate is recommended to be installed at the park entry when the highway is transferred to State Parks. Only those with special access to Kē'ē, such as the lifeguards and rescue personnel, those with valid ADA parking placards or plates, park staff, the Hula Complex and other cultural practitioners, will be allowed to drive along the former highway as needed to reduce visitor exposure to the rockfall hazards. It will have a separate entry off the turnaround. Rockfall hazard warning signs will be installed on the gate across the highway and a swing gate on the mauka half of the right-of-way could be automated to open for exiting traffic only. The design of the gate will be open and remain low in height to minimize the visual impact towards Kē'ē.

A vehicle turnaround is provided just past the park entry and provides separate accesses to and from the main parking lot, as well as the special access parking at Kē'ē, and a separate staging area that could be used for various park purposes. The turnaround is designed to include the shuttle stop and/or bus stop if/when such services become available and allow those dropping off visitors to pull over at the curb without blocking traffic. Shade structures are also provided to shelter those waiting at the visitor drop-off and pick-up areas. Shuttle and bus schedules should be posted at the stop if they are established. Should shuttle or transit service to the park become successful enough to eliminate or reduce the need for the parking lot, the shuttle stop area can be enlarged to accommodate the required passenger drop offs and pick-ups. The shade structures could also be designed with photovoltaic panels to help power the nearby facilities.

### **2.5.1.2 Parking**

Most of the visitor parking will be consolidated into one main visitor parking lot near the park entry as much of the highway will be closed to general traffic. Only a small special access parking area will remain at Kē'ē as noted earlier for ADA accessibility, the lifeguards, park staff, the Hula Complex and other cultural practices. It will also be accessible for emergencies as well as safety and rescue operations.

The preferred medium for the parking lot is permeable pavement or structural grass over the entire parking lot or at least half of the parking lot so it can be used for multiple purposes. The parking lot as shown in the plan is large enough to accommodate roughly 100 vehicles. However, to encourage the use of a shuttle or transit system being planned for the North Shore, the number of available stalls may be reduced as appropriate and the grassed areas

around the parking lot can be used for outdoor activities, staging areas, or educational purposes related to the adjacent traditional house site and lo'i. Eventually, if the shuttle or transit system proves successful, the areas no longer needed for parking could permanently be converted into an expanded shuttle stop area or other park uses. In the interim, the areas shown in different shades of green in Figure 1 show how the parking lot could be partitioned for different users, whether they are fee-paying visitors or non-fee paying visitors, and can be adjusted with movable bollards and cordons depending on the number of cars for each user group. The division between the two can be adaptively managed weekly, daily, or even hourly throughout the day depending on demand. This design gives State Parks the flexibility to provide enough parking until the shuttle/transit system is operational and to adjust as needed the number of parking stalls that are available for the different user groups while also encouraging multimodal access to the park.

Pedestrian paths should be provided throughout the parking lot and drop-off/pick up areas to clearly delineate safe places where people should walk and direct visitors towards the park entry. The pedestrian paths could be curbed or edged for easier maintenance and should be surfaced with permeable pavers or pavements or natural soil hardeners to increase rainwater infiltration while providing a stable, weatherproof surface. If electric vehicle parking and charging stations are provided, they must comply with the State Disability and Communications Access Board (DCAB) Interpretive Opinion 2012-01, which states, 'Where EV charging stations are provided, 5%, but not less than one of each type of EV station shall be accessible.

At the special access parking area, bicycle racks should also be installed and drainage improvements should be made in the area to prevent ponding, soil erosion, and beach washouts as has happened at Kē'ē during heavy rainfall events. It is also recommended that access to this special access parking area be managed by special permit or access codes at a controlled entry off the turnaround. Access should also be coordinated with safety and rescue personnel during emergencies and rescue operations.

### **2.5.1.3 Welcome Hale and Restrooms**

The Welcome Hale is envisioned as an open pavilion without walls where information about the park can be posted. The displays should include a park map and orientation information, park rules and cultural protocols. Daily weather, ocean and hazard conditions could also be posted at the Welcome Hale.

New public restrooms and bicycle parking are provided outside of the hale near the main parking lot. This second set of restrooms will help reduce the use of the Kē'ē comfort station, which is located near sensitive archaeological sites. Technological advances in individual wastewater treatment systems are providing higher-quality effluents and should be considered when designing the new restrooms. If possible, the effluent should be reused and the leach field for the new restrooms could be located beneath the parking lot. Dual waterlines and rainwater catchment systems can also be installed for the restrooms and the lo'i to minimize potable water use. Solar photovoltaic systems can also be installed to support electrical needs.

#### **2.5.1.4 Pedestrian Path**

Due to the potential for rockfall hazards along the highway, a pedestrian path will be provided makai of the highway, connecting the Welcome Hale to Kē‘ē Beach. It will traverse the lo‘i along the first berm separating the first two rows of lo‘i and then turn north to avoid the wetlands. It will cross an ‘auwai over a footbridge and connect to a path through the hau tunnel. This path will then connect to the trail behind the dunes and turn south, leading visitors past the comfort stations and lifeguard tower to Kē‘ē. The path will remain low to the ground but just above the berm, with structural supports located to avoid any archaeological sites. Handrails or path edging will be provided for safety if needed. It should also be designed with lightweight, durable, and easy-to-maintain materials that are resistant to vandalism and weathering.

Interpretive displays and wayside exhibits will be installed along this path, including directional signage and educational information for the varied sights along this trail. From here, distant views of Wai a Kanaloa can be seen as well as spectacular views of Makana, the lo‘i, loko and the wetlands.

#### **2.5.1.5 Restored ‘Auwai**

The master plan shows an ‘auwai running along the mauka edge of the parking lot. It is in roughly the same alignment as the original ‘auwai that used to cut through this area before it was cleared for the dirt parking lot. There have been requests by some members of the MPAC to determine whether it can be restored and made functional again, connecting to the rest of the ‘auwai system. Further investigation to see if the ‘auwai can be restored to serve the lo‘i without extreme requirements or costs should be done prior to detailed design of the parking lot. If it is found that it can be restored, the grading and landscaping of this area should be done so that stormwater runoff from the parking lot is diverted away from the ‘auwai and directed to flow across the grassed areas of the parking lot or bioswales and adjacent landscaped areas which could be designed as rain gardens. In addition, overflow drainage swales could be designed in this area to help mitigate larger rainfall flows that may overtop the ‘auwai. If it cannot be restored as an ‘auwai, another alternative is to aesthetically integrate its design into the drainage system and to see if it has potential for microhydro power generation. This area can also double as a catchment ditch for rockfall events. Native or Polynesian-introduced trees could also be planted in a thick screen along the highway and parking lot as an added rockfall mitigation measure and to soften the view of the highway from the pedestrian path.

#### **2.5.1.6 Reconstructed Hale and Lo‘i Interpretive Site**

A traditional house site (Feature 8, Site 1600-8) is located on the northern side of the main parking lot. According to the State Parks archaeologists, it likely has been modified by the addition of a lanai in historic times. Recent reconnaissance of the site shows it to be in relatively good condition and provides an opportunity for a reconstructed hale pili and lo‘i interpretive site at the entrance to the park. Final design of this area will be done once a more detailed condition analysis of the site is conducted and the feasibility of reconstruction is determined. The layout shown in the master plan is purely conceptual and subject to revision



based on the condition analysis. Access to the site should be designed to be ADA accessible from the parking lot if possible.

#### **2.5.1.7 DLNR Helipad and Staging Area**

The helipad and staging area will be used only by DLNR for maintenance of their facilities including the Nāpali trails and sites. One potential location is makai of the entry turnaround and will need to be designed with the new turnaround so the area is large enough and does not impact archaeological sites. Since it is infrequently used, the helicopter landing area can be designed as a level, grassed site. The final design and location, however, will be decided upon as part of the detailed design process for the main parking lot and entry complex.

For emergency helicopter landings, the Fire Department prefers the open grassy area near the Hui's current shelter, which is marked on the master plan as an alternate landing area. This area may continue to be used as an emergency landing zone as it is unsuitable for lo'i restoration and proposed to remain as an open grassy field for educational and special events makai of the Welcome Hale. However, the Fire Department noted they will land wherever they need to as appropriate for the emergency situation.

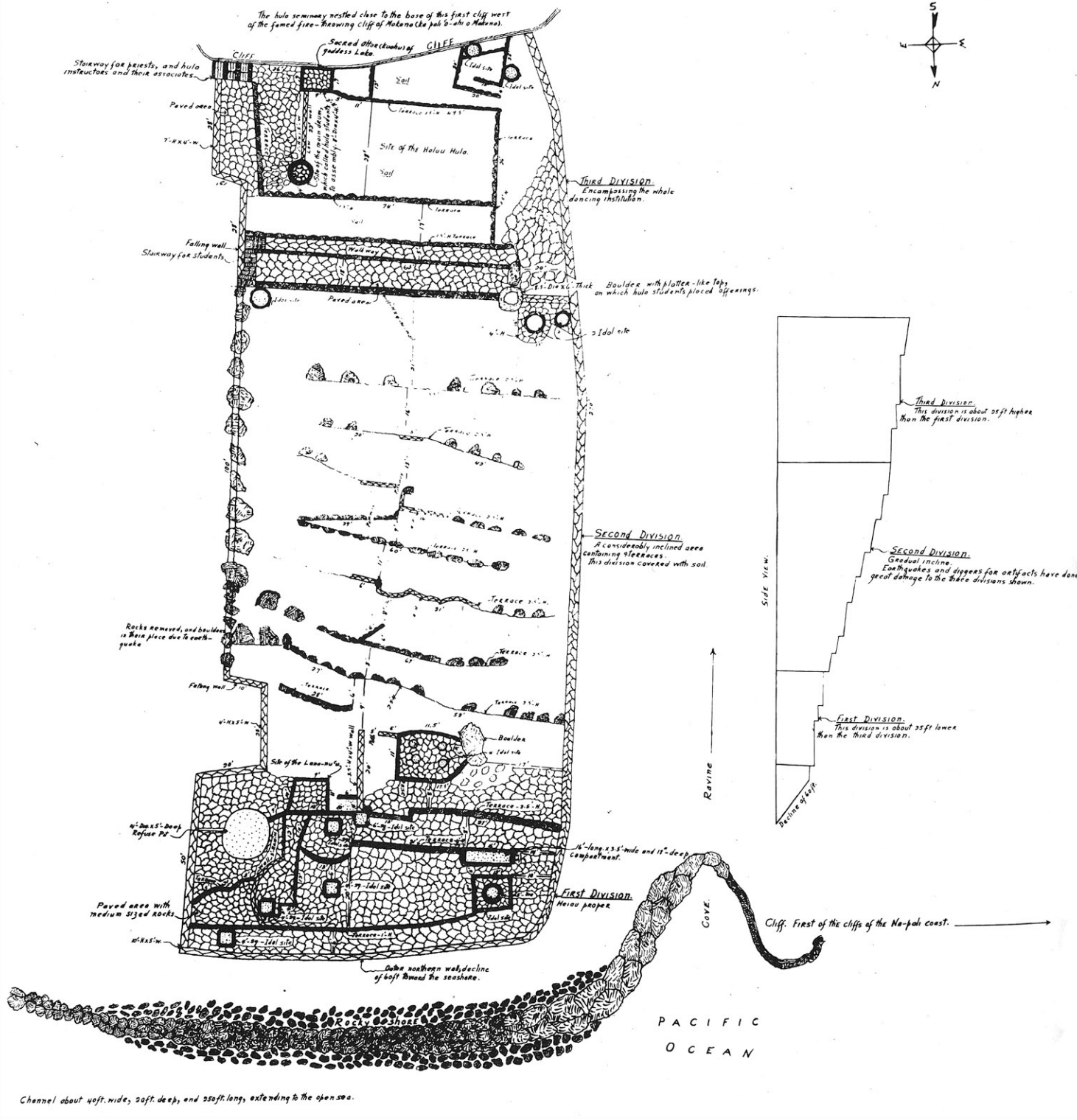
#### **2.5.1.8 Limited Access Corridor**

The highway between the turnaround and Kē'e will be closed to general vehicle traffic and used only for special vehicle access due to the potential rockfall hazard. The only vehicles that will be permitted beyond the gate will be special access vehicles such as the lifeguards and emergency and rescue teams, park staff, hula and other cultural practitioners, and ADA vehicles. Because this segment of the highway is currently owned by the State Department of Transportation, it will need to be transferred to State Parks or an agreement must be made between the two state agencies for State Parks to take over management of it. In emergency situations such as tsunami warnings, visitors will be able to evacuate along this corridor to escape to higher ground and out of the park if it is deemed safe.

#### **2.5.1.9 Hula Complex**

Given the extreme importance of the ancient Ka Ulu a Paoa Heiau and Ke Ahu a Laka and their worldwide recognition as a wahi kapu, the entire area makai of the Kalalau Trailhead and encompassing the area around the heiau and former Allerton Estate is designated as the Hula Complex. It is the first priority of the MPAC to restore the area and to develop a culturally appropriate management plan. Restoration of the heiau and Ke Ahu a Laka utilizing Kekahuna's map (Figure 10) and all available maps is recommended.

The County has established a stewardship agreement with Hui Maka'āinana o Makana to care for the sites within its parcel and is working with State Parks on access and coordination. It is recommended that appropriate cultural protocols be established as part of the management, access, and use of the area. Review by both KHPRC and SHPD will be required for any improvements and proposed management plans.



**FIGURE 10**  
**Kekahuna's 1959 Drawing**  
**of Ka Ulu A Paoa Heiau**  
**HĀ'ENA STATE PARK**

Department of Land and Natural Resources

Island of Kaua'i

NOT TO SCALE



Rehabilitation of the historic Allerton Caretaker's Cottage is currently underway for reuse to support park use, including the Hula Complex. The Allerton house site and existing foundation should be maintained as an open, grassed platform as hula hālau often use that area. State Parks notes that recent changes at the site may require emergency improvements to preserve it in place. If restroom facilities are provided, potable water and an individual wastewater treatment system will be needed due to the remoteness of this facility. Sustainable design elements should be considered to make it as self-sufficient as possible including high efficiency fixtures, renewable energy, rainwater catchment, and wastewater treatment and reuse.

#### **2.5.1.10 Dune Restoration**

The dunes and beach strand were identified by both the MPAC and biologists at Geometrician Associates as priority sites for restoration. For the MPAC, it would be an opportunity to take care of the iwi kūpuna interred there. According to the biologists, the restoration of a native dune ecosystem would involve the removal of alien species and the planting of natives and Polynesian-introduced plants such as pōhuehue, naupaka, nanea, pōhinahina, nehe, pa'u-o-Hi'iaka, 'aki'aki grass, milo, hala and kou. Not only would they provide improved and more authentic vegetation but they could also be used to help reduce coastal erosion if carefully planted. Restoration of the dune system would also improve habitat for common native shorebirds, including kōlea, 'ūlili, 'akekeke or ruddy turnstone, kioea or bristle-thighed curlew, hunakai or sanderling, and sandpiper.

Also, because the beach is one of the primary recreational resources at the park, visitors should clearly be instructed to be careful as they walk along the coast, especially east of the proposed lifeguard station since shoreline erosion is unearthing iwi and other cultural resources. The formal picnic areas that were shown on the dunes with tables in the 2001 Draft Park Plan have been removed and a new picnic area will be located at the end of the existing highway pavement at Kē'ē. Visitors, however, will still be permitted to picnic on the beach, but not on the dunes, and all trash will be encouraged to be carried out with them. Recreational activities that negatively impact the beach and dunes should be prohibited.

#### **2.5.1.11 Lifeguard Tower**

A new permanent location for the lifeguard tower has been identified with input from the MPAC and the Kē'ē lifeguards. It is roughly 50 feet north of the highway pavement and 50 feet mauka of the 2009 certified shoreline to allow views from the end of the path to open up to the ocean and improve visibility for the lifeguards. The site is located outside any known flood hazard zone or wetland. To avoid potential impact to subsurface resources, the foundation should be built up rather than excavating down into the dunes, if possible. Also, some of the existing ironwood trees may have to be cut. When asked, the lifeguards agreed the proposed site will improve their ability to see key areas of the lagoon and Kē'ē Channel compared to their current temporary location at the end of the highway pavement.

#### **2.5.1.12 Picnic Area at Kēʻē**

Picnicking is permitted at Kēʻē Beach. However, a formal picnic area with picnic tables will be located at the end of the former highway pavement at the entrance to Kēʻē Beach. The area is shaded by trees and overlooks the beach and lagoon. The tables can be placed on the old highway pavement to provide ADA accessibility.

#### **2.5.1.13 Loko and Wetland Restoration**

Some members of the MPAC expressed a desire to restore the loko and wetland areas for endangered native birds and possible agricultural uses. Loko Naia is believed to have been a loko kalo and Loko Kēʻē either a fishpond or loko kalo. However, Geometrician Associates do not recommend modifying these areas specifically to attract endangered birds for practical and legal reasons. There are several binding agreements and permits that must be obtained with the U.S. Fish and Wildlife Service in order to do so, such as a Safe Harbor Agreement and associated enhancement of survival permit as well as increased responsibility to protect the native birds once they are established at the park. They also caution its location near the main public corridor would also increase the potential for endangered birds to be harassed, injured or killed directly or indirectly by people or their pets and may be difficult to manage.

They do, however, recommend restoring the native flora which would increase native plant conservation and opportunities to educate the public. This may also indirectly support native birds including endangered and threatened species without a formal effort to create an endangered species habitat. The State could also consider a third-party agreement with a local organization that may want to take on the responsibility of creating and maintaining such a habitat if a formal endangered species habitat is desired. If pursued, the wetlands should be protected through fringing vegetation that encourages viewing but discourages direct entry and possibly fencing shielded by landscaping to help minimize access by predators.

#### **2.5.1.14 Limahuli Stream Restoration**

Based on recommendations from Geometrician Associates, the restoration of the riparian areas around Limahuli Stream is another natural area with the potential for multiple beneficial impacts. The alien tree species that form a dense, closed canopy around the stream are especially problematic since they effectively prevent sunlight from reaching the ground and prevent the mid-canopy and ground cover layers in the forest from developing. This in turn increases sediment loading in the stream due to erosion and tree litter. Reduced sunlight also limits the growth of benthic algae in streams. The algae are a major food source for many rare and federally endangered native fish and invertebrates. A reduction in this important food source, coupled with increased sediment loading, could ultimately result in decreased habitat quality of streams. They recommend careful clearing of the alien trees along Limahuli Stream and the planting of appropriate native and Polynesian-introduced plants to stabilize the slopes.

In order to prevent potential impacts to ʻōpeʻapeʻa, the native Hawaiian hoary bats, State Parks will restrict any cutting of large shrubs or trees taller than fifteen feet in height to periods outside the June 1 through September 15 breeding season for the ʻōpeʻapeʻa. State

Parks will continue to cooperate with the State Division of Aquatic Resources to keep new alien fish out of the ‘auwai and stream and in ridding the stream of periodic invasions of swordtails, guppies, and other alien fish. Additional consideration should be given to working with neighboring landowners as well as those ma uka up Limahuli Valley if restoration is pursued.

#### **2.5.1.15 Agricultural Complex**

In order to create a living cultural agricultural complex, it is recommended that community gardening practices continue the restoration of the lo‘i as recommended in the restoration plans already in place. One request of the MPAC was to allow for other cultural crops to be planted in addition to kalo. Historically, the complex was known to be flexible; water was redirected to allow certain areas to be used for dryland cultivation. ‘Uala, or sweet potatoes, were known to be grown in sandy areas and mai‘a (bananas), kō (sugar cane), and ‘awa (*Piper methysticum*) were grown in the valleys.

Restoration of the ‘auwai is also recommended wherever feasible, particularly in actively cultivated areas of the lo‘i. Special care, however, needs to be taken not to hydraulically connect the lo‘i and ‘auwai back to Limahuli Stream to prevent the spread of apple snails. Limahuli Stream is one of the few places in the state that does not have apple snails and the snails are currently in the park’s lo‘i.

The 2001 Draft Park Plan also included pedestrian and bicycle pathways throughout the lo‘i, primarily along and sometimes through the ‘auwai. This is no longer recommended since the goal is to reestablish the ‘auwai as the primary means of irrigating the lo‘i. The plan currently locates the main pedestrian path over the first berm within the lo‘i and will provide visitors a close-up view of the lo‘i on their way to Kē‘ē. There may also be opportunities for interactive educational activities within the first row of lo‘i for visitors, away from the Hui's restoration work, which will continue makai and east.

Access to and/or through certain areas of the lo‘i is required for both people and equipment as a part of ongoing maintenance and harvesting. For safety reasons, access within the working lo‘i should therefore be managed and primarily reserved for those restoring the lo‘i as well as for educational and work groups tending to the lo‘i.

#### **2.5.1.16 Montgomery House**

The historic Montgomery House situated within the Agricultural Complex is recommended for rehabilitation to support park uses. The facility could be used to support the agricultural activities or other park uses and operations. Similar to the Allerton Caretaker’s Cottage, if restroom facilities are provided, potable water and an individual wastewater treatment system will be needed. Sustainable design elements should be considered to make it as self-sufficient as possible including high efficiency fixtures, renewable energy, rainwater catchment, and wastewater treatment and reuse.

**2.5.1.17 Cultural Gathering Place and Hālau Wa‘a**

Tucked between the lo‘i, Loko Naia and former coastal road, and up on higher ground, the Cultural Gathering Place (CGP) is envisioned as an outdoor gathering place to support community and educational groups and where overnight stays would be permitted. The CGP is in an area of recent 20th century modification and encompasses the site of the historic poi mill.

An open hālau-type structure and Hālau Wa‘a, or canoe house, is also proposed on the makai side of the CGP. Approximate locations of these structures are shown in the master plan. However, because this area is located near potentially sensitive cultural sites, the exact extent of the area and location of the structures should be determined with input from State Parks archaeologists and staff, the community and cultural advisory groups, and kūpuna. In addition, the Hālau Wa‘a should be located as makai as possible without impacting sensitive sites and the dune system. For infrastructure, potable water will be needed. Composting toilets or other innovative wastewater treatment technologies should be considered for restroom facilities. Alien plant species should be removed and replaced with native and Polynesian-introduced plants.

**2.5.1.18 Poi Mill**

Interpretation of the historic poi mill is recommended. Remnants of the concrete foundation still remain and the MPAC discussed whether the poi mill could be rebuilt in order to process harvests from the lo‘i. However, the site is located in an area of potential flood hazard due to wave action (Figure 20), and if State Parks or another entity wishes to reestablish a poi mill on site or within the park, additional studies are recommended to determine the most suitable location, design, and size for such a facility. The historic site, however, can be interpreted with signage or displays and could be included on guided tours.

**2.5.1.19 Cemetery Areas**

The two modern cemeteries that are just north of the loko are currently maintained by descendent family members. In the 1996 Burial Treatment Plan, there are recommendations to install signage and fence or wall off and gate the cemetery areas, with access provided to lineal descendants and State personnel. However, during the MPAC meetings a request was made to eliminate the fencing and gates. Rather than using fences or walls, landscaping and the use of native and Polynesian-introduced plants should be considered as more natural buffers for the area. Any signage that is installed should be designed with input from the families of those buried there.

**2.5.2 HAZARD MITIGATION MEASURES**

Due to the potential for rockfalls along the highway, all of the major facilities including the ~~Interpretive Path~~ pedestrian path to Kē‘ē will be located outside of the projected high rockfall hazard zones as described by AECOM in their Rockfall Hazard Assessment report (Appendix B). These improvements should be considered part of the rockfall mitigation and prioritized in capital improvement project funding. In addition, warning signs should be installed at appropriate locations along the highway, ~~and~~ Safety instructions should be made



available online and in ~~during~~ visitor orientation materials distributed prior to park entry, and posted at the Welcome Hale.

Ocean safety signs should ~~also~~ be posted at both the main entry points by the Welcome ~~Pavilion/ECC~~Hale as well as along the major pathways leading to shoreline areas such as at Kēʻē Beach, near the Hālau Waʻa, and at the Cultural Gathering Place. Additional safety signage should be installed as necessary throughout the park in appropriate areas.

Emergency evacuation routes will be planned and ~~shown~~ provided on maps and directional signage located at key locations at the park ~~during the visitor orientation sessions~~ as well as indicated on visitor brochures and materials provided on the website and prior to park entry and park signage. ~~The loop paths through the loʻi can be used as an emergency route between Kēʻē and the Welcome Pavilion/ECC.~~ If people need to be airlifted out of the park, the emergency helipad and landing zones shown on the plan can be accessed from multiple locations.

Additional discussion about the natural hazards and mitigation measures are discussed in Section 3.10.

### 2.5.3 INFRASTRUCTURE IMPROVEMENTS

The following recommendations for infrastructure improvements were developed by Kennedy/Jenks Consultants to support the goals of the proposed Master Plan and preferences of the MPAC. See Section 4.7 and Appendix G and Appendix H.

#### 2.5.3.1 Integrated Water/Wastewater/Drainage System

The proposed Master Plan recommends installing an integrated water/wastewater/drainage system to maximize the efficiency and use of on-site water resources. It includes collecting rainwater and using treated wastewater for nonpotable water uses to minimize demand for potable water, as well as restoring the ʻauwai wherever possible and improving the drainage of surface runoff to irrigate surrounding garden areas or the loʻi if it can be appropriately filtered.

Specific design considerations for the integrated water/wastewater/drainage systems include:

- Using treated wastewater effluent and collected rainwater for irrigating the landscaping around the facilities such as the ~~ECC, picnic area, Caretaker's Cottage and baseyard~~ Montgomery House, Allerton Caretaker's Cottage, Welcome Hale, parking lot, and new restrooms. There are three levels of treated wastewater recognized by the State Department of Health (DOH) as recycled water. R-1 has the highest level of treatment and R-3 the lowest (Kennedy/Jenks 2010). The Master Plan recommends aerobic wastewater treatment to at least R-2. If the treated water quality is R-2, irrigation systems must be subsurface with no over-ground sprays. If the effluent is treated to R-1, over-ground spray and drip systems can be installed.
- Using recycled water and collected rainwater for toilet flushing at the ~~ECC, Caretaker's Cottage~~ new restrooms, Allerton Caretaker's Cottage, and Montgomery House to conserve potable water.

- Reducing the need for stream diversions by restoring the ‘auwai and collecting, storing and using rainwater.
- Using non-potable water for fire protection. Collected rainwater or even ocean water can be used for fire protection in emergencies.
- Directing rainwater runoff from the main parking to landscaped areas and rain gardens. Where possible, collecting and storing rainwater for reuse such as irrigation and possibly toilet flushing.
- Redesigning Kūhiō Highway culverts so that rainwater that passes beneath it flows more naturally and can be filtered and used in the ‘auwai system.

Control measures to prevent the spread of apple snails from the park’s lo‘i to Limahuli Stream should be included in any design or implementation of the ‘auwai and irrigation systems for the Agricultural Complex. Some suggestions include but are not limited to:

- Elevating and extending the outfall pipes from the Limahuli Stream diversions above the receiving ‘auwai so that the snails cannot crawl directly into the stream. The snails are known to dislike cold, fast-moving water, which is what flows from Limahuli Stream, and so the risk is minimized.
- Grading the ‘auwai to flow makai and away from Limahuli Stream.

For items specific to wastewater treatment:

- Treatment for wastewater should be with aerobic systems to a minimum R-2 water quality, with aeration and non-chlorine treatment such as ultraviolet (UV) disinfection to improve effluent quality. Consider using renewable energy sources to provide power.
- Locate effluent absorption beds under parking lots and driveways if permitted. DOH requires the use of aerobic treatment units certified by NSF/ANSI 245 for systems that discharge directly into the groundwater.
- Provide aeration to the existing constructed wetlands primary treatment tanks, powered by a PV system and replace the plants at the constructed wetlands to high-nutrient removing plants to improve water quality.
- For remote, low use facilities, consider composting toilets or ~~temporary/portable facilities as needed~~ innovative wastewater technologies.
- Use non-chemical disinfectants and cleaning products for maintenance, particularly in composting toilets, to minimize impacts to wastewater treatment processes and effluent quality. Use environmentally-safe soaps that contain plant nutrients and biocompatible cleaners.
- Since the proposed wastewater facilities are currently not standard according to the State Department of Health (DOH), include maintenance manuals and provide instruction to ensure proper upkeep of all wastewater systems at the park.
- As an alternative, vault systems, which are fully contained and can be pumped and treated at an off-site facility are also being considered should effluent reuse not be possible onsite.

### 2.5.3.2 Electrical Power

Many of the proposed facilities will require electrical power. There is currently no electrical power service at the park. Kaua'i Island Utility Cooperative (KIUC) service stops at the entrance to the park and should be extended to the turnaround for emergency lighting if desired at the shuttle stop, Welcome Pavilion/ECC and the Caretaker's Cottage. Renewable energy should be used to service the remaining electrical demand and as much as possible. ~~Renewable energy is encouraged with~~ Potential renewable energy resources ~~such as include~~ solar hot water heating and solar ~~electric~~ photovoltaics (PV), wind and hydro power.

Solar hot water heaters and PV electric systems are well-established technologies that have been installed widely throughout the islands. According to data from the Hawai'i Sugar Planters Association collected in 1985, an estimated 350 solar calories per square centimeter fall on the area per day (cal/cm<sup>2</sup>/day). The higher the intensity, the better the resource is. The average for the island is 350 cal/cm<sup>2</sup>/day, with ranges from 0 to 500 cal/cm<sup>2</sup>/day. A solar hot water heater can be installed at the ~~Caretaker's Cottage, the ECC, and any of the other~~ facilities that may require hot water, such as the Montgomery House and Allerton Caretaker's Cottage, once they are renovated. PV panels installed as shade structures at the shuttle stop, turnaround, restrooms, and comfort station at Kē'ē is recommended to power any new equipment needed for an upgraded wastewater treatment system.

Micro wind and micro hydropower are other sources of renewable energy that should be considered in addition to solar. There are smaller wind turbines that can be installed on rooftops at the park or those that rotate on a vertical instead of horizontal axis to minimize any impact to birds. There are also evolving wind technologies, such as the Humdinger Windbelt, developed by a Hawai'i-based company, that do not have rotating airfoils but capture energy from aeroelastic flutter (<http://www.humdingerwind.com>). As technology evolves, State Parks and DLNR should continue to look into viable alternatives as improvements are phased in and developed.

A microhydropower system needs a consistently running source of water (as little as two gallons per minute) and a relatively small elevation change (as little as two to three feet of head) to turn a turbine to create power. However, more of each will increase output. Microhydropower systems are more efficient the closer they are to the energy source and therefore Limahuli Stream, the only perennial stream at the park, could be investigated to provide a source for microhydropower. Neighboring Limahuli Gardens uses a microhydropower system to power their entire visitor center which runs on a 24V system and includes lights, a computer and cash register (Winter, personal communication 2011). Care must be taken, however, to size and locate the microhydropower to minimize impacts to the stream ecosystem and to account for periods of low stream flow. To minimize the impacts of microhydropower systems on native Hawai'i amphidromous biota, the diversion intakes must be designed to have low-velocity intakes placed subsurface in relatively deep pool in the center of the stream in order to minimize entrainment of larval or post-larval stream animals. Also, as a potential in-stream use, any microhydropower system should be integrated with a public trust use such as the taro lo'i production should it be pursued.

### **2.5.3.3 Communications**

In order to maintain communications and provide for public safety during emergencies, the existing hardline pay phone and emergency phone at Kēʻē Beach ~~is proposed to~~ should be maintained. For similar reasons, hardline telephone service ~~is proposed to be provided~~ should be considered at the turnaround and Welcome Hale if desired. ~~Caretaker's Cottage and Welcome Pavilion/ECC. A second pay phone or at least a closed circuit phone which connects to the Caretaker also is proposed to be located on the outside of the Welcome Pavilion/ECC so that emergency calls can be made when the ECC is closed and hikers who need assistance can contact the Caretaker.~~ The remote and mountainous location limits wireless communications. Wireless services should be considered for visitor convenience and may be required for certain parking management technologies.

### **2.5.3.4 Artificial Lighting**

In order to minimize impacts to Hāʻena's wildlife which can become disoriented at night by artificial lighting, the following recommendations will be followed for any lights designed for the park's facilities.

- All exterior lights will be fully-shielded (completely opaque) and downward facing full-cut off fixtures with the lowest light level (lumens) possible, sufficiently large, and positioned so that the bulb is only visible from below to minimize distraction and disorientation of wildlife flying overhead. They can also be installed lower to the ground to minimize light pollution and motion sensors and/or timers can be utilized to activate the lights only when absolutely necessary.
- Lighting plans and management plans will be carefully designed and implemented so that no light from the park is visible from the beach to minimize impacts to nesting sea turtles or their hatchlings seeking the ocean.
- The use of artificial lights should be minimized or reduced as much as possible during the seabird fledging season of September to December, and during the sea turtle hatching period July to September, and yellow lighting invisible to honu should be used near the shoreline. Night time construction should be avoided.

## **2.5.4 KEY MANAGEMENT RECOMMENDATIONS**

The following key management recommendations and principles ~~may help~~ will be followed to balance continued public and recreational use with the protection of the cultural, natural, and historic resources at the park.

### **2.5.4.1 Adaptive Management**

The HSPCAC recommended that adaptive management be the primary management concept adopted at the park given the diverse and passionate feedback received from the community. This will allow State Parks to make adjustments as they implement various management actions and learn what the impacts are. The U.S. Department of the Interior describes adaptive management as "an iterative learning process producing improved understanding and improved management over time. ...It is not a 'trial and error' process, ... but rather a means to more effective decisions and enhanced benefits. Its true measure is in how well it helps meet environmental, social and economic goals, increases scientific knowledge, and reduces tensions among stakeholders" (Williams et al, 2009).

Due to the complexity of the park environment, uncertainty of outcomes given potential changes in management strategies, and the active community, adaptive management provides a methodology State Parks can follow in order to improve resource management decisions while addressing community concerns. As noted in the technical guide,

Often the uncertainty about management impacts is expressed as disagreements among stakeholders who have differing views about the direction and magnitude of resource change in response to management. An adaptive approach explicitly articulates these viewpoints, incorporates them into the decision making process, and uses management itself to help identify the most appropriate view about resource dynamics. In this way, understanding of the resource can be enhanced over time, and management can improve. ... Management of problems like these increasingly involves a systems approach with explicit and agreed-upon objectives, management alternatives, and analytical approaches that can identify the most appropriate management strategies. (Williams et al, 2009)

The technical guide provides the following list of activities that can assist with adaptive management strategies if performed in a structured approach:

- Engaging the relevant stakeholders in the decision making process
- Identifying the problem to be addressed
- Specifying objectives and tradeoffs that capture the values of the stakeholders
- Identifying the range of decision alternatives from which actions are to be selected
- Specifying assumptions about resource structures and functions
- Projecting the consequences of alternative actions
- Identifying key uncertainties
- Measuring risk tolerance for potential consequences of decisions
- Accounting for future impacts of present decisions
- Accounting for legal guidelines and constraints

#### ***2.5.4.2 Cultural and Community Advisory Group***

A Cultural Advisory Group (CAG) ~~should~~will be established to advise State Parks on ongoing improvements, educational and interpretive materials, and cultural matters regarding the park. State Parks may also consult the CAG as needed for proposed management actions and proposed construction projects as well as interpretive programs and ~~devices~~tools. The CAG may be composed of representatives from the original Hā'ena families, as well as those persons who specifically lived in, worked, or cared for the lands within the park boundaries, and those who have relatives buried within the park. It should also include cultural practitioners with knowledge specific to hula, Ke Ahu a Laka and Ka Ulu a Paoa, fishing, and other cultural practices specific to Hā'ena. Draft recommendations for the establishment and responsibilities of the CAG are contained in the Master Plan report. They ~~may~~should be viewed as a starting point for developing the CAG and are subject to change.

~~The MPAC also believes a broader community advisory group comprised of diverse community representatives such as the MPAC can provide ongoing support and consultation on general park issues as the Master Plan is implemented. This group could be created by combining the CAG with additional members from the community. The MPAC recommends the larger group meet regularly, at least once a year, with State Parks and any future park~~



~~management entity if established. Organization and membership of such a group is yet to be determined. Should any current MPAC members be willing to continue assisting State Parks on an advisory basis, they would be welcomed.~~

Separate from the CAG, the broader community advisory group, the Hā'ena State Park Community Advisory Committee, or HSPCAC, has been established and will provide ongoing support and consultation on general park issues including the implementation of the master plan. The group has adopted a charter and plans to meet regularly, particularly when State Parks or the future management entity undertake any improvement projects or changes in park policy.

#### 2.5.4.3 Visitor Limits

Visitor counts at the park have risen significantly over the past twenty years. Table 3 summarizes various visitor counts taken at the park since 1993. The most recent counts were taken in the summer months and show that there are roughly 2,000 people who enter the park on a daily basis.

**TABLE 3: SUMMARY TABLE OF DAILY VISITOR COUNTS**

YEAR	MONTH/ SEASON	DAY OF THE WEEK	VISITORS PER DAY	SOURCE	NOTES
1993	Off-peak		50 (average)	The Keith Companies 2001	
1993	August		353 (average)	The Keith Companies 2001	
1998	September	Friday	1,501	DLNR State Parks	
1999			1,700	DLNR via Stepath 2006	
2008	August	Holiday weekend	1,950 (est.)	ATA 2011	Estimated based on 2.5 persons per vehicle
2010	February	Wednesday	1,247 (est.)	DLNR State Parks	Counts only conducted from 9 a.m.-4 p.m. Estimated based on 2.5 persons per vehicle
2011	July	Monday	2,028 (761 cars)	UH Hawaiian Studies (informal count)	Measured from 6:00 a.m. to 6:30 p.m. Includes 8 on bicycles, 14 hikers, 5 joggers, 20 pedestrians.

Currently, there are no visitor limits at the park. Many on the MPAC and in the community felt the current number of visitors is far too many and a limit should be set on the number of visitors to reduce impacts to the natural, cultural and scenic resources and to improve the overall visitor experience.

~~In response, State Parks plans to institute a daily visitor limit as part of the preferred plan. Initially, the number of people in the park would be limited to 900 people per day, which is less than half the number of daily visitors that typically enter the park during the summer months. State Parks may adjust the number over time depending on future improvements, improved/increased maintenance, and/or other studies such as impact studies, particularly if harmful impacts to the natural, cultural and archaeological resources occur.~~

~~The daily visitor limit does not include cultural practitioners, special user groups such as hālau, lo‘i workgroups, cemetery caretakers, or school groups. It also does not include the 60 hikers who obtain valid camping permits for the Kalalau Trail or the 30 hunters who obtain valid hunting permits for the Nāpali Coast State Wilderness Park Hunting Unit G.~~

In addition to these recommendations, because of the extensive archaeological, natural and cultural resources at the park, State Parks is proposing to limit the number of people in the park to 900 people per day on average during the peak hours of park use. The initial hours over which this limit would be applied are 7:30 AM to 5:30 PM, but are subject to change. This number is an initial visitor limit which State Parks may adjust over time depending on future improvements, improved/increased maintenance, and/or other studies such as impact studies, particularly if harmful impacts to the natural, cultural, and archaeological resources arise. The daily visitor counts will be averaged over the course of a month so adjustments can be made for park closure days and is therefore a soft limit that can be adjusted as needed on a daily basis.

This initial visitor limit is higher than what was recommended by the MPAC because it includes day hikers on the Kalalau Trail who numbered well over 500 in 2009. Because the trailhead is located within the park, visitors venturing on the trail are anticipated to use the park’s restroom facilities, often go swimming, and use the showers when they return from hiking on the trail. However, they are not impacting the park while on the trail. The visitor limit also does not include the hikers with valid camping permits or the hunters with valid hunting permits for the Nāpali Coast State Wilderness Park Hunting Unit G since they are not expected to be in the park using the facilities for very long and additional facilities are available at Hanakoa and Kalalau. The daily visitor limit also would not include cultural practitioners, or special user groups such as hālau, lo‘i workgroups, cemetery caretakers, or school groups.

By instituting a daily visitor limit, this will encourage visitors to plan ahead and an informational system via the internet, text messages, and email could be developed to distribute real-time information on park access, entry ticket availability during managed visitor hours, special events, and weather, ocean and any hazardous conditions at the park. Park managers will also be able to better manage park operation and resource impacts. In addition, they are able to anticipate how busy the park will be on any given day and post notices online or distribute updates to the visitor industry early in the day whether entry tickets will be available during the managed visitor hours. This could also help reduce casual drop-ins and general traffic along the highway through neighboring North Shore communities. Prior to instituting the proposed visitor limits, a public information campaign must be made far in advance so people are able to plan their visit to the park. State Parks acknowledges that park access will be an ever-evolving operational issue and will likely change over time as new policies are implemented. However, the goal is to study the impacts of these proposed policies and to adjust them as appropriate to improve the long-term management of the park and visitor satisfaction.

#### ***2.5.4.4 Required Staff/Volunteer Education***

As representatives for the park, all park staff as well as volunteers should be trained and be knowledgeable on the cultural, historic, scenic and natural resources at the park. They should also be well-versed on park rules, potential hazards, safety training and emergency evacuation processes, and proper protocol at cultural sites.

#### ***2.5.4.5 Required Visitor Orientation Prior to Park Entry***

~~It is also proposed that all visitors attend an educational session upon entering the park similar to the Hanauma Bay Nature Preserve on O‘ahu. The sessions would be held at the Welcome Pavilion in the near term and at the ECC once built. All visitors will be provided with park rules and information prior to entering the park. The visitor orientation could be made available on the State Parks website, sent via text or email, and tied to ticket distribution, particularly if advanced reservations become a requirement in the future. The orientation session could be a short online video that would educate visitors on appropriate recreational activities and behavior, safety precautions as well as sensitivity to natural and cultural resources and to cultural activities that may be occurring in the park. It should also include~~ In addition, texts or emails could be sent to park visitors prior to entry to inform them of safety precautions and updates on any special events or weather conditions. Similar orientation information should be posted at the Welcome Hale. The CAG should be consulted on appropriate cultural information to be included in the orientation session.

~~Once visitors complete the orientation session, they would not need to attend on subsequent visits to the park for a full calendar year as long as they register upon entry. Registration and orientation attendance could also be tracked and tied to annual passes, if administered. These orientation sessions could be held at the proposed Welcome Pavilion/Education and Cultural Center or even a temporary facility at the park entry.~~

## **2.6 PHASING AND TIMING OF ACTIONS**

Table 4 shows the preliminary phasing plan for the major tasks associated with implementing the Master Plan. The table is not meant to be comprehensive but is intended to identify the major implementation milestones to help guide the improvements at the park. It is also subject to the availability of project funding. For all improvements, appropriate permits, agency coordination, infrastructure improvements, landscaping, educational programing, and staff management and training will be required. Consultation with the Cultural Advisory Group and Hā‘ena State Park Community Advisory Committee should also be done on a regular basis throughout implementation.

TABLE 4: ANTICIPATED PHASING PLAN

SHORT TERM (IMMEDIATE - 5 YEARS)		
Capital Improvements	Cultural Environment	Natural Environment
<ol style="list-style-type: none"> <li>1. Rehabilitate Montgomery House.</li> <li><del>2. Mitigate immediate rockfall hazard above highway as mentioned in Section 2.5.3 and described in greater detail in Section 3.10.5.</del></li> <li>2. Work with County and other agencies as appropriate to establish shuttle/transit services <del>from the Princeville property.</del></li> <li>3. Improve main parking lot, sized appropriately based on shuttle/transit service. Include new turnaround and Entry Kiosk. Make provisions for subgrade leach field.</li> <li>4. Construct Welcome Pavilion Hale and new restrooms. <u>Ensure exit gate allows pedestrian and bicycle access even when locked for vehicles.</u></li> <li>5. Install <del>elevated</del> Interpretive Pedestrian Path from <del>ECC Welcome Hale</del> to Kē'ē Beach.</li> <li>6. Determine whether parking and/or entry fees should be collected. <del>If so, Install temporary</del> facilities near the main parking lot to support <del>fee</del> <u>ticket</u> collection and visitor orientation.</li> <li>7. Install safety signage (as appropriate).</li> <li>8. Plan for and make accommodations for future required infrastructure <u>as needed.</u></li> <li>9. Coordinate with the DOT on closure of highway or <del>eliminate vehicle traffic altogether. If decided, formalize transfer of this portion of the highway to State Parks. Install main gate to control vehicle access.</del></li> </ol>	<ol style="list-style-type: none"> <li>1. Establish Cultural Advisory Group early, prior to any design and construction contract awards.</li> <li>2. Complete rehabilitation of the Allerton Caretaker's Cottage.</li> <li><del>3. Work with County on management agreement for Ka Ulu a Paoa and Ke Ahu a Laka site and initiate solicitations for third-party management.</del></li> <li>3. Prior to any improvements within the main parking lot, survey the extent of the traditional house site (Feature 1600-8).</li> <li>4. Continue lo'i restoration, kalo cultivation.</li> <li>5. Update Interpretive Plan. Implement as appropriate.</li> <li>6. Coordinate with Hui on relocation of staging areas prior to construction of new entry facilities.</li> <li>7. <del>Initiate</del> <u>Develop</u> visitor orientation <del>sessions materials and institute proposed visitor limits during managed park hours</del> when new park entry facilities constructed, including appropriate behavioral conduct and protocols and cultural/historic/archaeological resource protection. <u>Initiate public education of new entry policies well-before any proposed visitor limits are instituted.</u></li> </ol>	<ol style="list-style-type: none"> <li>1. Relocate Life Guard Tower. Establish safe swim zones and set up markers.</li> <li>2. Restore and maintain Dune System, starting from Kē'ē.</li> <li>3. Plant dense native hala tree screen for rockfall mitigation along the highway and new parking lot.</li> <li>4. <del>Initiate visitor orientation sessions upon park entry including</del> <u>Include information on ocean and trail safety and natural resource protection information in visitor orientation materials.</u></li> <li>5. Start clearing invasive species in/around the loko. Review loko restoration requirements including water <u>resources.</u> Consider phasing restoration work starting with Loko Kē'ē. Consider whether native bird habitat is feasible to establish at loko in consultation with the U.S. Fish and Wildlife Service (USFWS) and provide ongoing maintenance. Restore with native plants and maintain.</li> <li>6. <u>Replace the plants at the Kē'ē constructed wetlands to high-nutrient removing plants to improve effluent water quality.</u></li> </ol>

<b>MID RANGE (5 - 10 YEARS)</b>		
Capital Improvements	Cultural Environment	Natural Environment
<del>1. Build Caretaker's Cottage and Baseyard.</del> 1. Improve pedestrian trails and install interpretive displays/wayside exhibits. 2. Improve drainage flows and install native plant bioswales to mitigate erosion/runoff problem areas.	1. Continue restoration and maintenance of Hula Complex. 2. Continue restoration and maintenance of lo'i. Design and implement restoration of 'auwai in conjunction with <u>main visitor complex drainage improvements</u> . 3. Establish the Cultural Gathering Area. 4. Build Hālau Wa'a. 5. Evaluate feasibility of/research potential restoration and development of Hale Interpretive Site (Feature 1600-8) located <u>within entry complex near the main parking lot</u> . 6. Restore and maintain other cultural sites such as Lohi'au's House Platform and the Historic Poi Mill.	1. Continue work on the Dune System, continuing eastward. 2. Continue loko restoration. 3. Initiate stream restoration work along Limahuli Stream and maintain. 4. Maintain work <u>initiated in the short-term above</u> .
<b>LONG RANGE (10 – 20 YEARS)</b>		
Capital Improvements	Cultural Environment	Natural Environment
<del>1. Build ECC, Picnic Area, and surrounding grounds. Review visitor parking requirements and adjust parking lot as appropriate. Locate ECC eastward of Welcome Pavilion into graded area if smaller parking lot is needed. Reuse or relocate Welcome Pavilion structure for other park uses.</del> 1. Refresh functionality of constructed wetland system at Kē'ē and install additional aeration component.	<del>1. Formalize visitor orientation sessions at ECC, including education on the cultural environment.</del> 1. Continue restoration and maintenance of Hula Complex and other cultural sites. 2. Continue restoration and maintenance of lo'i and loko. 3. Continue expansion of cultural programs.	<del>1. Formalize visitor orientation sessions at ECC, including education on the natural environment.</del> 1. Clear remaining invasive species. Restore and maintain with natives. 2. Continue and maintain work above. 3. Continue expansion of educational programs.



## 2.7 COST ESTIMATES

Order-of-magnitude cost estimates for the major elements of the proposed Master Plan are provided in Table 5 and should be updated and refined as detailed designs are developed for each. In addition, no topographic surveys were performed for the conceptual master plan so additional costs for site work and grading and related design and planning costs should be added to the estimates below. Public funds are anticipated to be used. However, there may be opportunities that arise during implementation to partner with other organizations on individual projects. Therefore the cost estimates are subject to change depending on the scope of the individual improvements and timing of implementation.

**TABLE 5: ORDER-OF-MAGNITUDE COST ESTIMATES**

	<b>QUANTITY</b>	<b>UNITS</b>	<b>UNIT COST</b>	<b>SUBTOTAL</b>	<b>WITH 15% CONTINGENCY (+15%)</b>	<b>PLANNING AND DESIGN FEES (15%)</b>
<b>NEAR-TERM PLAN</b>						
Welcome Pavilion	1,250		\$200.00	\$250,000.00	\$287,500.00	\$43,125.00
Welcome Hale	600	SF		\$120,000.00	\$138,000.00	\$20,700.00
Clearing and Grassing around the Welcome Pavilion-Hale	15,000	SF	\$1.00	\$15,000.00	\$17,250.00	\$2,587.50
Picnic Tables	4	EA	\$2,500.00	\$10,000.00	\$11,500.00	\$1,725.00
Bicycle Rack	1	EA	\$3,000.00	\$3,000.00	\$3,450.00	\$517.50
Interpretive Pedestrian Path Elevated Boardwalk with Handrails (40' 6' wide)	675	LF	\$625.00 <u>\$1,000.00</u>	\$421,875.00 <u>\$675,000.00</u>	\$485,156.25 <u>\$776,250.00</u>	\$72,773.44 <u>\$116,437.50</u>
Viewing Platform	625 <u>100</u>	SF	\$60.00 <u>\$100.00</u>	\$37,500.00 <u>\$10,000.00</u>	\$43,125.00 <u>\$11,500.00</u>	\$6,468.75 <u>\$1,725.00</u>
Parking Lot (Phase I, structured grass/ permeable surface)	17,500 37,000	SF	\$12.00 <u>\$50.00</u>	\$210,000.00 <u>\$1,850,000.00</u>	\$241,500.00 <u>\$2,127,500.00</u>	\$36,225.00 <u>\$319,125.00</u>
Overflow Parking Lot (structured grass)	19,500	SF	\$12.00	\$234,000.00	\$269,100.00	\$40,365.00
Parking Lot Pedestrian Paths (6' wide, permeable surface/soil hardener)	900	LF	\$100.00	\$90,000.00	\$103,500.00	\$15,525.00
Entry Kiosk	36	SF	\$150.00	\$5,400.00	\$6,210.00	\$931.50
Gates	3	EA	\$2,000.00	\$6,000.00	\$6,900.00	\$1,035.00
Benches and PV Shade Structures (2 kW, 8 panels)	3	EA	\$6,000.00	\$18,000.00	\$20,700.00	\$3,105.00
Turnaround Landscaping	2,000	SF	\$12.00	\$24,000.00	\$27,600.00	\$4,140.00
Driveways (20' wide)	600	LF	\$120.00	\$72,000.00	\$82,800.00	\$12,420.00
Dense Native Hala Screen	1,000	LF	\$30.00	\$30,000.00	\$34,500.00	\$5,175.00
Baseyard/Staging Area/Helipad Clearing and Grassing	9,000	SF	\$1.00	\$9,000.00	\$10,350.00	\$1,552.50

	<i>QUANTITY</i>	<i>UNITS</i>	<i>UNIT COST</i>	<i>SUBTOTAL</i>	<i>WITH 15% CONTINGENCY (15%)</i>	<i>PLANNING AND DESIGN FEES (15%)</i>
Baseyard/Staging Area/Helipad Fencing (6' tall)	450	LF	<del>\$220.00</del> <u>\$250.00</u>	<del>\$99,000.00</del> <u>\$112,500.00</u>	<del>\$113,850.00</del> <u>\$129,375.00</u>	<del>\$17,077.50</del> <u>\$19,406.25</u>
Staging Area Clearing and Grassing	15,000	SF	\$1.00	\$15,000.00	\$17,250.00	\$2,587.50
Staging Area Fencing (6' tall)	550	LF	\$220.00	\$121,000.00	\$139,150.00	\$20,872.50
<b><i>NEAR TERM PLAN SUBTOTALS</i></b>				<b><u>\$1,670,775.00</u></b>	<b><u>\$1,921,391.25</u></b>	<b><u>\$288,208.69</u></b>
<b><i>FULL BUILDOUT MASTER PLAN</i></b>						
Hula Complex	235,000	SF	\$5.50	\$1,292,500.00	\$1,486,375.00	\$222,956.25
Dune Restoration	150,000	SF	\$5.50	\$825,000.00	\$948,750.00	\$142,312.50
Education and Cultural Center (ECC)	2,000	SF	\$350.00	\$700,000.00	\$805,000.00	\$120,750.00
Garden Areas around the ECC	<del>30,000</del>	<del>SF</del>	<del>\$12.00</del>	<del>\$360,000.00</del>	<del>\$414,000.00</del>	<del>\$62,100.00</del>
Caretaker's Cottage	1,700	SF	\$200.00	\$340,000.00	\$391,000.00	\$58,650.00
Cultural Gathering Area Clearing and Native Plantings	30,000	SF	\$5.50	\$165,000.00	\$189,750.00	\$28,462.50
Open Hale*	1,500	SF	\$100.00	\$150,000.00	\$172,500.00	\$25,875.00
Hālau Wa'a	1,800	SF	\$200.00	\$360,000.00	\$414,000.00	\$62,100.00
Picnic Tables	5	EA	\$2,500.00	\$12,500.00	\$14,375.00	\$2,156.25
Loko and Wetland Area Restoration	300,000	SF	\$5.00	\$1,500,000.00	\$1,725,000.00	\$258,750.00
Interpretive Displays**	<del>13</del>	EA	<del>\$4,000.00</del>	<del>\$52,000.00</del>	<del>\$59,800.00</del>	<del>\$8,970.00</del>
	<u>10</u>		<u>\$5,000.00</u>	<u>\$50,000.00</u>	<u>\$57,500.00</u>	<u>\$8,625.00</u>
Other Signage	11	EA	\$1,000.00	\$11,000.00	\$12,650.00	\$1,897.50
Bicycle Racks	2	EA	\$3,000.00	\$6,000.00	\$6,900.00	\$1,035.00
Montgomery House Restoration	572	SF	\$200.00	\$114,400.00	\$131,560.00	\$19,734.00
Hale and Lo'i Restoration (adjacent to parking lot)	8,000	SF	\$8.00	\$64,000.00	\$73,600.00	\$11,040.00
<b><i>FULL BUILDOUT SUBTOTALS</i></b>				<b><u>\$5,952,400.00</u></b>	<b><u>\$6,845,260.00</u></b>	<b><u>\$1,026,789.00</u></b>
<b>TOTALS</b>				<b><u>\$7,623,175.00</u></b> <b><u>\$7,726,300.00</u></b>	<b><u>\$8,766,651.25</u></b> <b><u>\$8,885,245.00</u></b>	<b><u>\$1,314,997.69</u></b> <b><u>\$1,332,786.75</u></b>
Notes: *Costs for materials only. Consider implementing as potential student project. **Costs on average per installation average. May include safety barriers, landscaping, seating, and hardscape at some locations.						
<b><i>OTHER ITEMS</i></b>	<b><i>QUANTITY</i></b>	<b><i>UNITS</i></b>	<b><i>UNIT COST</i></b>			
KIUC Connection (1-phase extension to Park, if desired)	1	EA	\$30,000.00			

Kennedy Jencks also provided ranges for various wastewater treatment options described in their report (Appendix H) which are summarized in Table 6. These estimates are subject to change based on the technologies selected and advancements over time.

**TABLE 6: ESTIMATED INSTALLED COSTS FOR WASTEWATER TREATMENT OPTIONS**

	<b>COST PER 1,000 GAL</b>
Septic System	\$5,000-12,000
Composting Toilets	\$20,000-30,000
Combined Growth Aerobic Treatment System	\$20,000-30,000
Sequencing Batch Reactor	\$20,000-30,000
Packed-Bed Reactor	\$15,000-30,000
UV Disinfection (Additional Treatment)	\$1,000-2,000

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## **3.0 DESCRIPTION OF THE NATURAL ENVIRONMENT, POTENTIAL IMPACTS, AND MITIGATION MEASURES**

This section describes the existing conditions of the physical or natural environment, potential impacts of the Hā'ena State Park Master Plan on the environment, and the proposed mitigation measures to minimize any potentially negative impacts.

### **3.1 CLIMATE**

#### ***Existing Conditions***

In general, northeasterly trade winds, interrupted by the occasional large-scale storm, are present year round at Hā'ena. Hā'ena State Park receives roughly  $97 \pm 2.5$  inches of rain per year on average (Giambelluca et al 2011). Other climatic data is not officially collected for Hā'ena. However, the Western Regional Climate Center<sup>2</sup> collects historic weather data at Wainiha, which can provide some generalities about climatic conditions along this stretch of Kaua'i's coastline. At Wainiha, the average annual temperature ranges between a high of 79.3 degrees to a low of 63.2 degrees Fahrenheit. While December through February are generally the coolest months, June through September are the warmest. Mean annual relative humidity ranges between 61 to 80 percent (NCDC 2009, 2015).

Surface winds are generally around 13 to 24 miles per hour from the northeast. There are some seasonal changes in prevailing wind direction in winter with southerly Kona winds. Strong winds occur at times in connection with storm systems moving through the area. Wind velocities and directions are influenced by the mountainous terrain to the south and west. Daily variations include diurnal effects of winds from the southwest quadrant during the night and morning hours, shifting to the northeast during the day.

#### ***Potential Impacts and Mitigation Measures***

The proposed Master Plan is not expected to have an impact on typical climatic conditions and no mitigation measures are anticipated.

### **3.2 GEOLOGY AND TOPOGRAPHY**

#### ***Existing Conditions***

Approximately five million years in age, the Island of Kaua'i is among the oldest islands of the Hawaiian archipelago. Originally thought to have been built from a single shield volcano, the island may in fact have been built primarily by the initial Nāpali formation of the Waimea (also Wai'ale'ale) shield volcano 4.35-5.1 million years ago with a possible second shield

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<sup>2</sup> a three-partner program with NOAA's National Climatic Data Center, the Regional Climate Centers and State Climate Offices



volcano building upon the eastern portion of the island after a catastrophic collapse of the eastern side of the original volcano. This second volcano, the Līhu‘e shield volcano, was active about a million years later and is believed to have been located in the area of the Līhu‘e Basin. The flows along the coast in the area of Hā‘ena are of the original Nāpali Member and have been dated between 4.27-4.36 million years old (Blay and Siemers 2004).

The Nāpali scarp’s dramatic 1,000-2,000 foot cliffs that stretch for over fourteen miles along the northwestern coastline are generally believed to represent a major structural failure of the original volcanic dome. However, there is a more recent theory that this formation may have been created mainly by wave erosion (Blay and Siemers 2004). According to Blay and Siemers (2004), this remains a geologic controversy but they believe it is probably a combination of both theories.

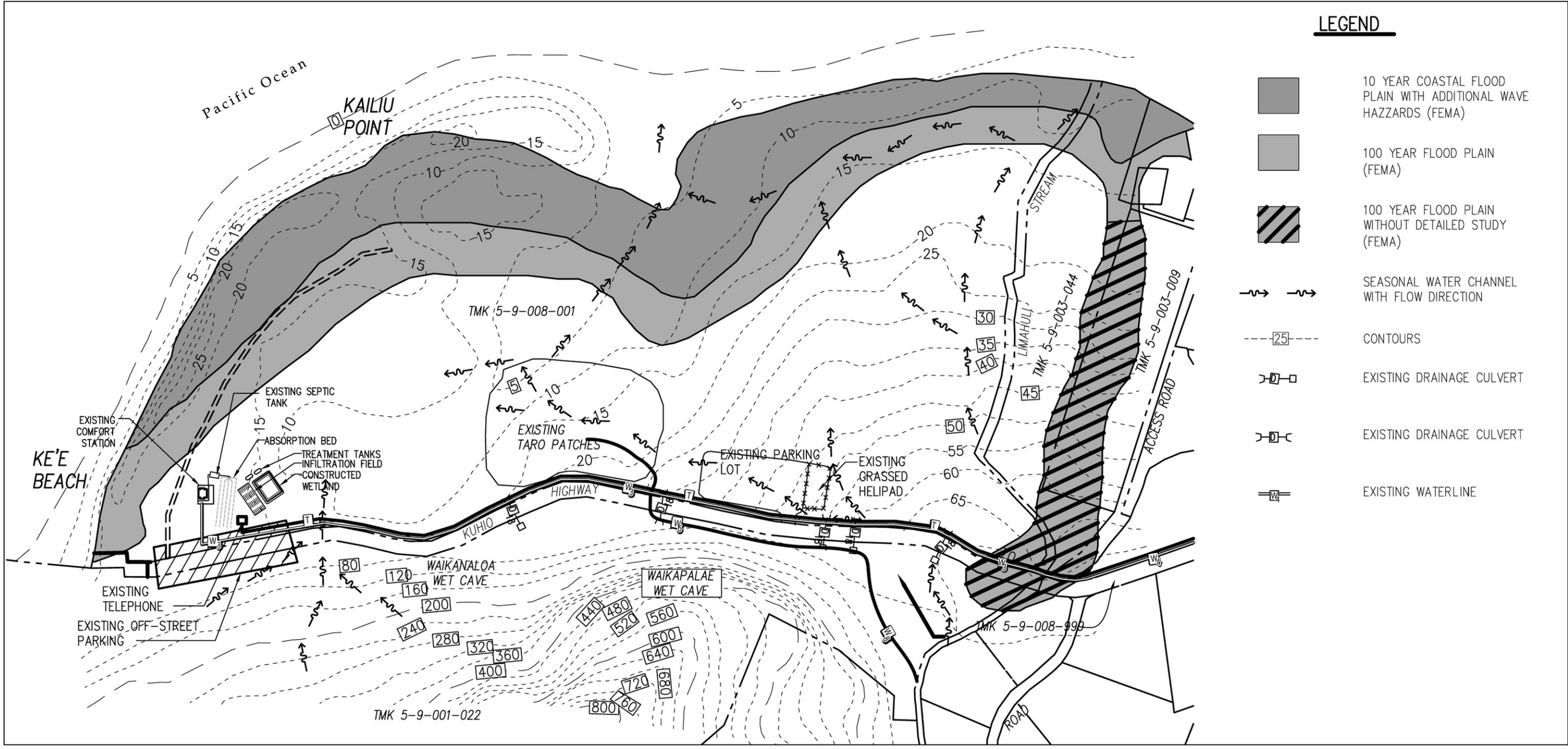
Kaua‘i’s post-erosional volcanic activity has largely been limited to the eastern portion of the island, leaving sedimentary processes as the major geological influence affecting the Hā‘ena State Park and Nāpali Coast.

Hā‘ena State Park sits at the western end of the Hā‘ena Plain, a coastal plain ~~comprised~~ of a basalt substrate covered by alluvial deposits along its mauka reaches and sandy beaches makai. Biogenic reefs, ~~comprised~~ composed mainly of coral and coralline algae, have grown like a “fringe” around the island. These reefs have provided skeletal matter for fragmentation, transport, and deposition at the shoreline to produce sandy beaches (Blay and Siemers 2004).

During the Pleistocene epoch (0.126 to 2.558 million years ago), the Earth experienced large fluctuations in global sea level. Drops in sea level lowered the erosional baseline for streams, carving valleys and cliffs to steep grades. The lower sea level allowed for the deposition of calcareous and alluvial deposits, including calcareous dunes now lithified. These dunes run along the park’s makai boundary and are a prominent feature along the existing beach.

Another geologic feature of note within the park boundary is the variety of sea caves carved into the side of the mountain through natural processes. These caves were carved as a result of a rise in sea level during the Pleistocene, when existing lava tubes were enlarged by wave action. Currently, the valley flats are a result of alluvial fill from stream erosion and a decrease in sea level of five feet from its highest level.

The majority of Hā‘ena State Park lies on coastal plain formed by colluvial and alluvial deposition. The bulk of the park area is at a ground elevation of between 10 and 30 feet above sea level. However, mauka of Kūhiō Highway, the land rises steeply into the Nāpali cliffs. A dune system parallels the shoreline while the area of the park bound by the dunes and Kūhiō Highway is generally flat with hydrology that was altered by a prehistoric (pre-western contact) ‘auwai. Figure 11 provides a topographic map of Hā‘ena State Park.



**LEGEND**

- 10 YEAR COASTAL FLOOD PLAIN WITH ADDITIONAL WAVE HAZARDS (FEMA)
- 100 YEAR FLOOD PLAIN (FEMA)
- 100 YEAR FLOOD PLAIN WITHOUT DETAILED STUDY (FEMA)
- SEASONAL WATER CHANNEL WITH FLOW DIRECTION
- CONTOURS
- EXISTING DRAINAGE CULVERT
- EXISTING DRAINAGE CULVERT
- EXISTING WATERLINE

**FIGURE 11**  
**Topography and Drainage Map**  
**HĀ'ENA STATE PARK**

Department of Land and Natural Resources  
 North

Island of Kaua'i

Linear Scale (Feet)

0

100

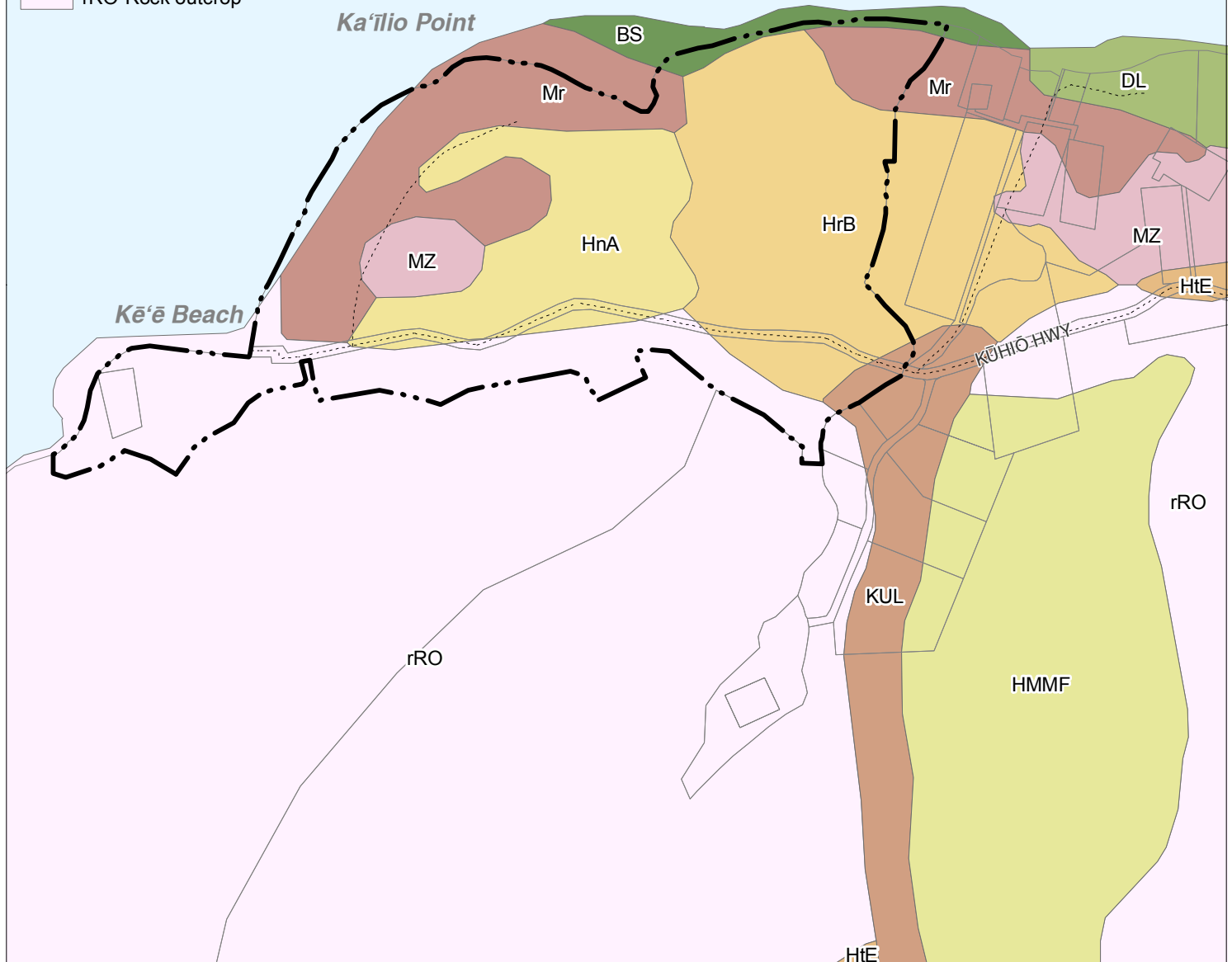
200

400

Source: Kennedy Jenks Engineers (January, 2001) Figure 3  
 Disclaimer: This Graphic has been prepared for general Planning purposes only and should not be used for boundary interpretations or other spatial analysis.

## Legend

- BS-Beaches
- DL-Dune land
- HMMF-Hihimanu silty clay loam, 40 to 70 percent slopes
- HnA-Hanalei silty clay, 0 to 2 percent slopes
- HrB-Hanalei silty clay, deep water table, 0 to 6 percent slopes
- HtE-Hanamaulu stony silty clay, 10 to 35 percent slopes
- KUL-Kolokolo extremely stony clay loam
- MZ-Marsh
- Mr-Mokuleia fine sandy loam
- rRO-Rock outcrop



## LEGEND

- Hā'ena State Park Project Boundary
- Road

**FIGURE 12**

Soil Survey

# HĀ'ENA STATE PARK

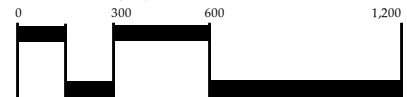
Department of Land and Natural Resources

Island of Kaua'i

NORTH



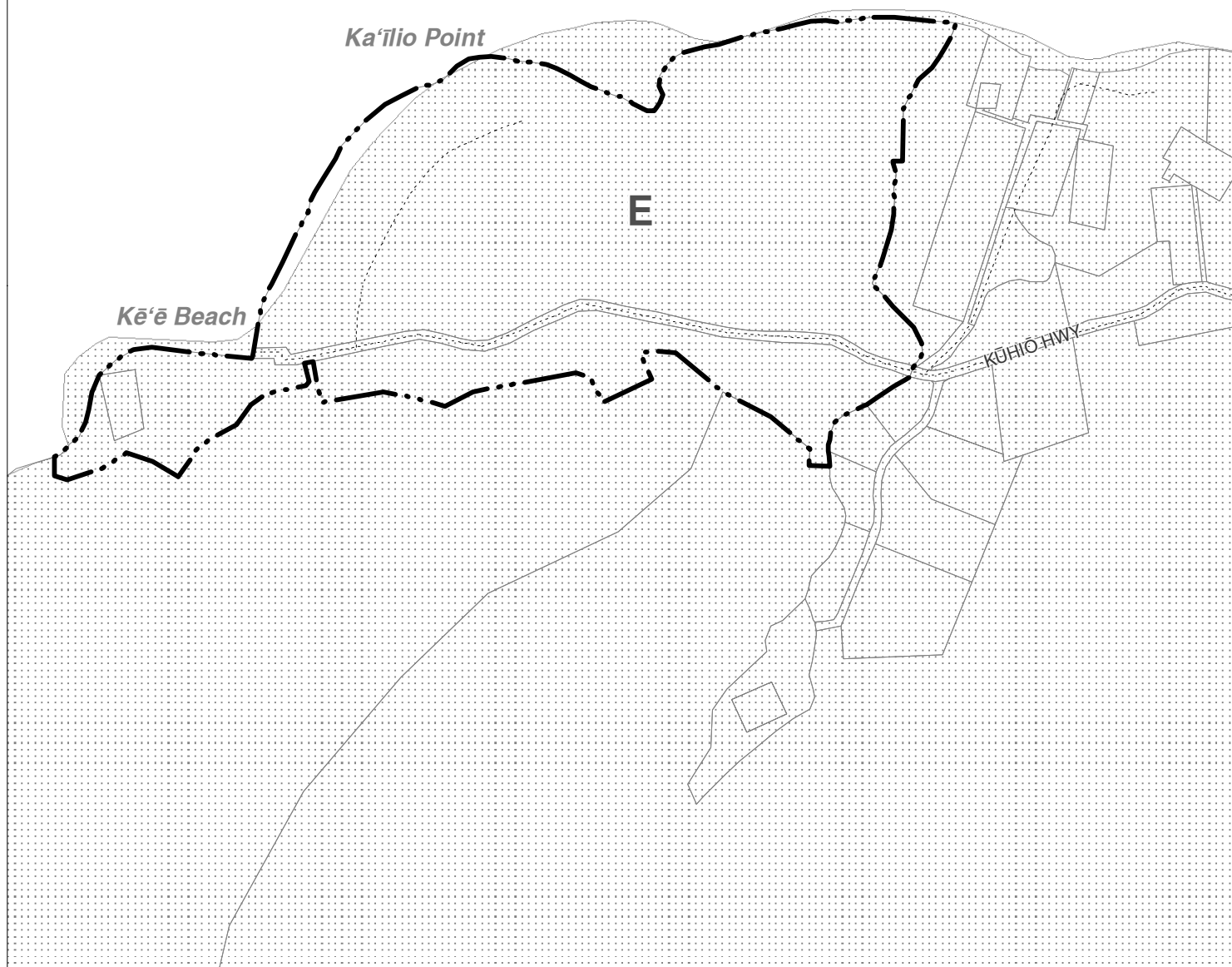
LINEAR SCALE (Feet)



# AG Land Productivity Ratings

-  A - Excellent
-  B - Good
-  C - Fair
-  D - Poor
-  E - Very Poor
-  Not Classified

PACIFIC OCEAN



## LEGEND

-  Hā'ena State Park Project Boundary
-  Road

FIGURE 13

Land Study Bureau Classifications

## HĀ'ENA STATE PARK

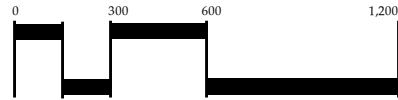
Department of Land and Natural Resources

Island of Kaua'i





NORTH



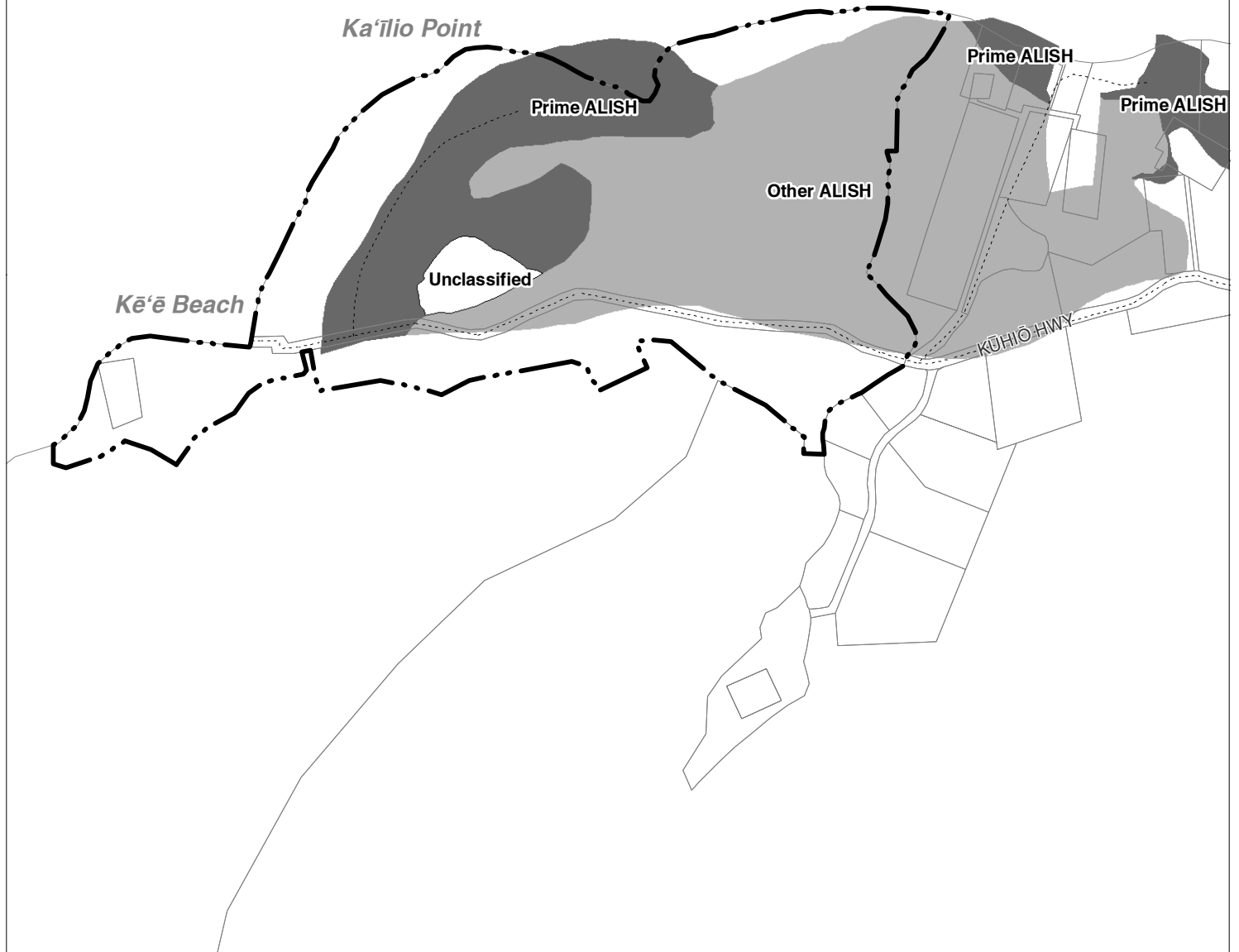
LINEAR SCALE (Feet)



## ALISH Classification

-  Prime ALISH
-  Unique ALISH
-  Other ALISH
-  Unclassified

PACIFIC OCEAN



## LEGEND

-  Hā'ena State Park Project Boundary
-  Road

**FIGURE 14**

Agricultural Lands of Importance to the State of Hawai'i

## HĀ'ENA STATE PARK

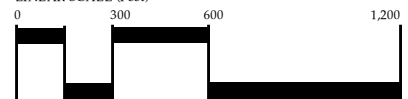
Department of Land and Natural Resources

Island of Kaua'i

NORTH



LINEAR SCALE (Feet)



As the land rises mauka of Kūhiō Highway, weathering has exposed rock formations and talus boulders pile up along the cliffs. Within the boundary of Hāʻena State Park, the cliffs rise nearly 500 feet in elevation. Beyond the park boundaries into the Nāpali Coast State Wilderness Park, the shoreline cliffs are over 1,000 feet in height.

### ***Potential Impacts and Mitigation Measures***

The proposed Master Plan will have no effect on Kauaʻi's geology. Nor will it involve alteration to important geological features, such as the wet or dry caves within Hāʻena State Park. The Master Plan also recommends shifting most of the visitor traffic away from the base of the cliff due to the potential for rockfalls, which will also reduce visitor impacts to Wai a Kanaloa (wet cave) as fewer people will access it.

One of the priority recommendations identified in the Master Plan is the restoration of the coastal dunes (Section ~~2.5.2.8~~–2.5.1.10). Restoration will have multiple benefits including shoreline protection, protection of the iwi kupuna interred within the dunes, removal of alien and invasive species, and the potential return of native wildlife. To avoid impacts to the coastal dunes, visitors will still be permitted to picnic on the beach, but not on the dunes. Other potentially damaging recreational activities such as driving on the sand will also be prohibited. The relocated lifeguard tower is proposed to be built up rather than excavated into the sand to mitigate subsurface impacts. Further, the public will be encouraged to access the beach via marked and cleared trails, rather than crossing over the dunes.

## **3.3 SOILS**

### **3.3.1 SOIL SURVEY**

The U.S. Department of Agriculture's Natural Resource Conservation Service (NRCS, formerly the Soil Conservation Service), *Soil Survey for the Islands of Kauaʻi, Oʻahu, Maui, Molokaʻi, and Lānaʻi, State of Hawaiʻi* (1972) identifies six different soil types within the park (Figure 12). NRCS descriptions of the soil types, which emphasize agricultural uses and productivity, follow below.

**Beaches (BS)** occur as sandy, gravelly, or cobbled areas on all the islands. They are washed and rewashed by ocean waves. The beaches at the park consist mainly of light-colored sands derived from coral and seashells. Where accessible and free of cobblestones and stones, they are highly suitable for recreational uses.

**Hanalei silty clay, 0 to 2 percent slopes (HnA)** is found on stream bottoms and flood plains. In a representative profile, the surface layer, about ten inches thick, is dark gray and very dark gray silty clay that has dark brown and reddish mottles. The subsurface layer is very dark gray and dark gray silty clay about three inches thick. The subsoil, about 13 inches thick, is mottled, dark gray and dark grayish brown silty clay loam that has angular blocky structure. The substratum is stratified alluvium. The soil is strongly acid to very strongly acid in the surface layer and neutral in the subsoil. Permeability is moderate. Runoff is very slow, and the erosion hazard is no more than slight. The available moisture capacity is about 2.1



inches per foot of soil. Roots penetrate to the water table. Flooding is a hazard. This soil is used for taro, pasture, and sugarcane.

**Hanalei silty clay, 0 to 6 percent slopes (HrB)** has a profile like that of HnA (above) except that it has fewer mottles and the water table is at a depth of more than three feet. This soil is used for sugarcane, taro, pasture, and vegetables. The Hanalei silty clay soils, HnA and HrB, comprise the bulk of the park's soils and underlay the Agricultural Complex.

**Marsh (MZ)** consists of wet, periodically flooded areas covered dominantly with grasses and bulrushes or other herbaceous plants. It occurs as small, low-lying areas along the coastal plains. Water stands on the surface, but marsh vegetation thrives. The water is fresh or brackish, depending on proximity to the ocean.

**Mokulē'ia fine sandy loam (Mr)** occurs on the northwestern coastal plains of the park, and is nearly level. Below the surface, the soil has a profile similar to that of Mokulē'ia clay loam, which is characterized by dark-brown and light-gray, single-grain sand and loamy sand. Permeability is moderately rapid in the surface layer and rapid in the subsoil. Runoff is very slow, and the erosion hazard is slight. The available water capacity is about one inch per foot in the surface layer and 0.7 inch per foot in the subsoil.

**Rock outcrop (rRO)** consists of areas where exposed bedrock covers more than 90 percent of the surface. It occurs on all five islands. The rock outcrops are mainly basalt and andesite. This land type is gently sloping to precipitous. This land type is not suited to farming. It is used for water supply, wildlife habitat, and recreation.

### 3.3.2 LAND STUDY BUREAU DETAILED LAND CLASSIFICATION

The *Detailed Land Classification, Island of Kaua'i* by the University of Hawai'i Land Study Bureau (LSB) document classifies non-urban land by a five-class agricultural productivity rating system, using the letters A, B, C, D and E, where "A" represents the highest class of productivity and "E" the lowest. The entire Hā'ena State Park is classified as "E," or "Very Poor," according to this soil rating system (Figure 13).

### 3.3.3 AGRICULTURAL LANDS OF IMPORTANCE TO THE STATE OF HAWAII

The State of Hawai'i Department of Agriculture's Agricultural Lands of Importance to the State of Hawai'i (ALISH) system rates agricultural land as "Prime," "Unique," or "Other." The remaining land is not classified.

"Prime" agricultural land is best suited for production of food, feed, forage and fiber crops. The land has the soil quality, growing season and moisture supply necessary to economically sustain high yields of crops when treated and managed including water management, according to modern farming methods.

"Unique" agricultural land can be used for specific high-value food crops. The land has a special combination of soil quality, growing season, temperature, humidity, sunlight, air drainage, elevations, aspect, moisture supply, or other conditions that favor the production of

a specific crop of high quality and/or high yield when the land is treated and managed according to modern farm methods.

“Other” agricultural land is vital to production of food, feed, fiber and forage crops, yet they exhibit properties that are not ideal, such as seasonal wetness, erosion, limited rooting zone, slope, flooding, or drought. The land can be farmed satisfactorily through greater fertilization and other soil amendment, drainage improvement, erosion control practices, and flood protection and can produce fair to good crop yields when properly managed.

Figure 14 shows that the lands behind the coastal dunes are classified as “Prime” and the majority of the remaining park land is classified as “Other.” The soils associated with Loko Kē‘ē and Kē‘ē Beach are “Unclassified.”

### ***Potential Impacts and Mitigation Measures***

Impacts to soils, such as soil erosion can occur during construction and during the life of a development. Sediment from soil erosion can negatively impact freshwater habitat in streams and can smother coral reefs. New facilities are proposed in previously disturbed areas to minimize the possibility of encountering subsurface archaeology and opening new areas to erosion. During construction, best management practices for soil and erosion control will be implemented to contain and/or filter any runoff and to control sedimentation, erosion, and dust. Efforts will be made to minimize all large-scale grading, grubbing, and stockpiling of soil and limit such activity to the dry season whenever possible. Long-term soil and erosion control measures have also been designed into the Master Plan including the installation of an integrated water/wastewater/drainage system, bioswales and rain gardens, and rainwater catchment cisterns, which will capture and filter stormwater runoff and create the opportunity to use collected rainwater for on-site nonpotable water uses such as irrigation and toilet flushing. Restoration of the loko, wetlands and the ‘auwai system or at least the redirection of rainwater to the restored Agricultural Complex and the proposed drainage area adjacent to the main parking area will also help reduce the amount of water sheet flowing through the park and causing erosion and runoff problems. Subject to available funding, State Parks is also currently considering an interim drainage study to see if there are improvements that can be made at the park immediately to help prevent washouts at Kē‘ē as has happened recently.

## **3.4 GROUND AND SURFACE WATER**

### **3.4.1 GROUND WATER**

#### ***Existing Conditions***

The dominant water resources on each of the Hawaiian Islands are volcanic rock aquifers. There are four general types of groundwater, dike, perched, unconfined basal and confined basal. Especially on Kaua‘i, perennial streams fed by groundwater springs are common. The groundwater resource beneath Hā‘ena State Park is basal water floating on salt water (UH Department of Geography 1983).

However, due to the presence of a discontinuous, unmapped confining layer, the nature and extent of the basal ground water lens is not well understood (Wilson Okamoto 2008). Further mauka, beneath the Nāpali mountains, the water is confined by dikes and not floating on salt water (UH Department of Geography 1983). According to the DLNR Commission on Water Resource Management's (CWRM) Water Resource Protection Plan, Hā'ena State Park is located within the Wainiha System (Hanalei Sector), which has an estimated sustainable yield of 24 million gallons per day (gpd) (Wilson Okamoto 2008).

#### ***Potential Impacts and Mitigation Measures***

On-site wastewater disposal can potentially impact groundwater resources if not treated properly. The Master Plan recommends that all wastewater be treated with an aerobic system to a minimum R-2 water quality with aeration and non-chlorine treatment such as UV disinfection to improve effluent water quality and minimize potential impacts. Replace the plants at the constructed wetlands to high-nutrient removing plants to also improve water quality. Treatment to R-1 water quality would further improve effluent water quality and allow additional uses of the recycled water such as overground and drip irrigation.

The Master Plan also recommends the use of non-chemical disinfectants and cleaning products for maintenance, particularly in composting toilets if utilized, and environmentally safe soaps that contain plant nutrients and biocompatible cleaners to minimize impacts to wastewater treatment processes and effluent quality. No withdrawals of groundwater are proposed at the park and potable water use from the County's water system is anticipated to be reduced due to the reduction in the number of visitors. Therefore, no mitigation measures to off-set groundwater quantity are proposed.

### **3.4.2 SURFACE WATER**

#### ***Existing Conditions***

Surface water resources in Hā'ena State Park include Limahuli Stream, which flows mauka to makai along the eastern border of the park, and standing water in the two wet caves, Wai a Kanaloa and Waiakalapa'e, and Loko Kē'e. There is also an extensive 'auwai system that irrigated the lo'i up until the mid-twentieth century and still exists in parts. There is interest among community members to see if it can be restored and made active again along with the restoration of the lo'i.

The *Hawai'i Stream Assessment* (1990) lists Limahuli Stream as a perennial stream that flows to the sea year-round and identifies it as an "outstanding aquatic resource" due to the presence of native 'o'opu. The source of freshwater within Hā'ena State Park begins at the top of the valley at 3,300 feet above sea level and reaches the valley floor after plummeting down an 800-foot waterfall. Only the lower 1,500 feet of the stream courses through Hā'ena State Park.

The *Atlas of Hawaiian Watersheds and their Aquatic Resources* (Parnham, James E., Higashi, Glenn R., et al., 2008) acknowledges the protection Limahuli Stream enjoys due to its Conservation designation and location primarily within Limahuli Preserve, managed by the

National Tropical Botanical Garden (NTBG). The Atlas also documents that previous studies have identified the presence of native species and confirmed few introduced genera.

In October 2001, Mike Kido with the University of Hawai‘i’s Hawai‘i Stream Research Center produced an overview of the existing conditions, flora, and fauna in Limahuli Stream. Kido reported that between 1994 and 1999, average stream flow was approximately 6.3 million gallons per day (mgd). Even in severe drought periods, substantial groundwater flow in the valley sustains base flows of approximately 2.6 mgd. According to U.S. Geologic Survey’s Annual Statistics for Hawai‘i, for the period of 1999-2005 the average surface flow was 7.72 mgd.

Limahuli Stream water is diverted for irrigation and residential purposes by multiple landowners. According to the CWRM, there were seven separate diversions from Limahuli Stream, six of which are still active. Of the six active diversions, three supply NTBG’s Limahuli Garden and Preserve and three serve private residences. A portion of the water diverted for Limahuli Garden is conveyed to the lo‘i at Hā‘ena State Park by PVC pipe. Two of the diversions serve domestic uses and the rest are for agricultural, landscaping, or other irrigation purposes. The total diversion amount for five of the diversions is 0.8822 cubic feet per second (cfs), or just over 570,000 gpd. The amount diverted for one of the private residences is unknown. Table 7 provides a summary of the registered diversions from Limahuli Stream.

**TABLE 7: REGISTERED DIVERSIONS FROM LIMAHULI STREAM**

<b>DIVERSION DIAMETER</b>	<b>OPERATOR</b>	<b>QUANTITY DIVERTED (CFS)</b>	<b>WATER USE</b>
3” pipe	National Tropical Botanical Garden	0.00203	Irrigation
1.5” pipe	National Tropical Botanical Garden	0.44557	Irrigation (May have been restored to the stream)
6” pipe	National Tropical Botanical Garden	0.3342	Agriculture, Landscaping, Irrigation
Pipe (diameter unknown)	Private Residence	0.0892	Domestic, Irrigation
2” pipe	Private Residence	0.0112	Agriculture, Landscaping, Irrigation
5” pipe	Private Residence	Unknown	Domestic
<b>TOTAL</b>		<b>0.8822</b>	
Source: CWRM (2008, 2011)			

### ***Potential Impacts and Mitigation Measures***

The Master Plan does not propose any additional water diversions or change to the volume of water currently diverted from Limahuli Stream for irrigation. However, the Master Plan suggests investigating the potential of Limahuli Stream as a renewable source of energy through a microhydropower system. Should any new or increased diversion of water from Limahuli Stream be desired, permits may be required from the CWRM, as described in the pre-consultation response letter dated August 25, 2008 (Section 11.0). CWRM permits that

may be required include: Stream Channel Alteration Permit; Stream Diversion Works permit and/or a Petition to Amend Instream Flow Standards. To minimize the impacts of microhydropower systems on native Hawai‘i amphidromous biota, the diversion intakes must be designed to have low-velocity intakes placed subsurface in relatively deep pool in the center of the stream in order to minimize entrainment of larval or post-larval stream animals. Also, as a potential in-stream use, any microhydropower system should be integrated with a public trust use such as the taro lo‘i production should it be pursued.

Microhydropower systems use the energy of instream flows to turn a turbine and produce electricity so no stream diversions are required. As noted in Section 2.5.3.2, a microhydropower system requires a consistently running source of water (as little as two gallons per minute) and a relatively small elevation change (as little as two to three feet of head) to turn a turbine to create power. Neighboring Limahuli Gardens uses a 24V microhydropower system to power their visitor center which includes lights, a computer, and cash register (Winter, personal communication 2011). Larger systems will power more uses.

Mitigation measures under consideration to ensure that the park elements do not contribute to the degradation of surface water resources include the installation of bioswales around the parking lot to filter stormwater before it is conveyed to drainages and the use of rain barrels to collect roof runoff for nonpotable water uses such as irrigation and toilet flushing. The Master Plan also recommends the use of non-chemical disinfectants and cleaning products and environmentally-safe soaps that contain plant nutrients and biocompatible cleaners as well as the elimination of chemical pesticides and herbicides.

Further investigation will be necessary prior to detailed design of the parking lot to see if the ‘auwai can be restored to serve the lo‘i without extreme requirements or cost. If it is found that it can be restored, the grading and landscaping of this area should be done so that stormwater runoff from the parking lot is diverted away from the ‘auwai and directed to flow across the grassed areas of the parking lot or towards the bioswales and adjacent landscaped areas, which could be designed as rain gardens. In addition, the design of the restored ‘auwai should be carefully done so as not to hydraulically connect it to Limahuli Stream since Limahuli Stream is currently free of the invasive apple snail and the park’s lo‘i are known to have them.

Pedestrian paths throughout the parking lot and drop-off/pick-up areas should be surfaced with permeable pavers or pavements or natural soil hardeners to increase rainwater infiltration while providing a stable, ADA-accessible surface. The proposed surface for the near-term visitor parking lot and the Kē‘ē special access parking area is permeable pavement and/or structural grass over the entire parking lot or at least half of the parking lot so it can be used for multiple purposes. This will stabilize the area while allowing rainwater to infiltrate into the ground to prevent ponding and soil erosion.

During construction of park elements, best management practices to control sediment, erosion, dust, or polluting runoff to the maximum extent practicable from flowing into

waterways will be employed. Certain construction activities within the park may trigger the need for a National Pollutant Discharge Elimination System permit.

### 3.5 WETLANDS

#### *Existing Conditions*

Throughout the park, there are areas designated as wetlands by the USFWS National Wetlands Inventory (NWI), using the best available data. They are primarily created through aerial photography interpretations and, while they cannot provide a definite wetland boundary for construction or regulatory purposes, they are useful for guidance when evaluating an area's suitability for development or uses.

The primary designation, PFO3C, covers most of the interior areas of the park behind the dunes and makai of the highway. PFO3C is a palustrine (inland, non-tidal) wetland that is forested with broad-leaved evergreen vegetation and is seasonally flooded. The PEM1C wetland type is mapped over Loko Kēʻē and east of the parking area. These areas are palustrine (inland), persistently emergent (characterized by hydrophytic plants) and seasonally flooded.

Along and off the coast are several classifications of marine wetlands. M1RFL is the predominant offshore classification indicating a subtidal (permanently submerged below tidal waters) marine wetland with coral reefs. Along the narrow splash zone of the coast are two different intertidal marine wetlands – M2USN (unconsolidated shores that are regularly flooded at least once daily such as beaches and flats) and M2RSN (rocky shorelines that are regularly flooded by tidal waters). Within the two broader beach areas are M2USP wetlands which are intertidal, unconsolidated shorelines that are irregularly flooded (less than daily). Limahuli Stream is classified as an upper perennial (high gradient with fast water velocity) riverine system with a rocky bottom that is permanently flooded (R3RBH).

In October 2008, a wetland delineation study was prepared by AECOS, Inc. for the renovated comfort station's individual wastewater system (constructed wetland) project at Kēʻē. AECOS interpreted the western edge of the PFO3C wetland to be a former pond wall (thought to be the edge of Loko Kēʻē). However, in their June 15, 2009 letter<sup>3</sup>, the U.S. Army Corps of Engineers (USACOE) determined that the wetland did not extend as far as the wall and recommended that any work performed fifteen feet east of the wall require a new wetland delineation study. The new study would also require a new determination by the USACOE. The AECOS wetland delineation study and USACOE determination letter are documented in the Final Environmental Assessment for the Hāʻena State Park Individual Wastewater System Improvements (PBR HAWAII & Associates 2010) and are included as an appendix in the Master Plan report, which is available on the State Parks website for Hāʻena State Park (<http://dlnr.hawaii.gov/dsp/parks/kauai/haena-state-park/>) attached as Appendix I.

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<sup>3</sup> USACOE File Number POH-2009-00067.



Presently, ongoing management of the wetlands is limited to the stocking of the surface water with mosquito guppies as a vector control measure (Juran, personal communication).

Figure 15 compiles the approximate NWI wetland boundaries from the State GIS files, the AECOS wetland survey map, and the recommendation from the USACOE.

In the biological report prepared by Geometrician Associates (Appendix C), two of the eleven vegetation zones are identified as wetland-related: “Marsh/Pond and Marsh/Cultivated Zones” and “Hau swamp and Hau Forest Zones.”

### ***Potential Impacts and Mitigation Measures***

No new facilities are proposed within known wetlands. However, the ~~Interpretive-Pedestrian~~ Path may cross over them and therefore the footings for this ~~elevated~~ walkway will need to be installed in potential wetland areas. The NWI maps are non-regulatory and do not represent a precise delineation of wetlands. Therefore, State Parks will need to carefully design the proposed improvements to ensure that wetlands are avoided or can be appropriately mitigated. If it appears that water, hydric soils or wetland plants are present in the vicinity of proposed construction or grading activity, a wetlands delineation study will be conducted to locate the boundary of the resource and verification from the USACOE will be sought.

Some members of the MPAC expressed a desire to restore the loko and wetland areas (Loko Kē‘ē and Loko Naia) for endangered native birds and possible agricultural uses. Geometrician Associates believe it might be possible to restore the small wetlands on the property for the purpose of creating a native bird habitat. However, they do not recommend modifying these areas specifically to attract endangered birds or any federally listed species for practical and legal reasons. However, if this is pursued, there are several management requirements to be considered, some of which are outlined below.

- Consult and coordinate with state and federal agencies to determine best course of action for improvements and ongoing management of the park for endangered animal species.
- State Parks must enter into a Safe Harbor Agreement (SHA) prior to undertaking the habitat improvement. This is a voluntary arrangement between the USFWS and a cooperating non-federal landowner under the authority of Section 10(a)(1) of the Endangered Species Act of 1973, 16 U.S.C. 1536(b)(4), 1539(a)(1). Under the SHA and an associated enhancement of survival permit, the non-federal property owner implements actions that will result in a net conservation benefit for species listed under the Act without the risk of further restrictions pursuant to Section 9 of the Act, which prohibits take of listed species. The property owner also receives assurances related to modifications of the SHA or termination of the permit. Such agreements allow a landowner to promote threatened and endangered species on their property without liability for incidental takes that may occur.
- The wetlands should be protected through fringing vegetation that encourages viewing but discourages direct entry and possibly fencing shielded by landscaping to

help minimize access by predators. This would reduce the potential for endangered birds to be harassed, injured or killed directly or indirectly by people or their pets due to the wetlands' proximity to the main entrance. This action should be done for any wetland restoration effort.

Restoration of the loko is expected to be beneficial to the environment, thus, no mitigation measures are anticipated at this time. In particular, wetland restoration would help protect the park against the impacts of climate change, particularly sea level rise, in accordance with the climate change adaptation priority guidelines (§226-109, HRS). If the loko are restored for agricultural uses, the Master Plan recommends the avoidance of pesticide or herbicide use. No diversion of the surface waters present in the park's wetlands are proposed.

### **3.6 MARINE ENVIRONMENT**

#### ***Existing Conditions***

SWCA Environmental Consultants investigated the existing marine conditions at Hā'ena State Park in 2008. The subsequent report (SWCA 2010) analyzed the adjacent nearshore waters around Kē'ē Beach and is attached as Appendix D. As part of the initial master planning efforts, a beach and ocean recreation study for Hā'ena State Park was prepared for DLNR by John Clark in 1992. In addition to analyzing potential recreational opportunities and constraints, the study also provides a description of the nearshore marine environment including the reefs that fringe the Hā'ena coastline (Figure 16). The SWCA report included a review of Clark's 1992 report and provided updates to Clark's findings where necessary.

Hā'ena State Park is located in the Ka'ilio shoreline sub-section of Hā'ena. Three outlets bisect the beach within the park boundaries—Limahuli Stream, a small intermittent tributary stream, and several freshwater seeps. Ocean conditions in the park are typical of northern exposed coasts in Hawai'i which can experience dangerously high surf conditions, primarily during winter months. Between October and May, swells can be in excess of ten feet at Hā'ena, but during summer months when trade wind swells typically dominate, the surf is generally reduced (Clark 1992). Recent observations show that many of the tree roots along the shoreline have become exposed due to erosion from wave action (SWCA 2010).

According to SWCA, northeast trade winds are present between 90-95 percent of the year and almost always generate some surf activity on the outer reef margins. Predominant longshore currents run east to west outside the reef. High surf conditions added to these currents can generate a powerful rip current that exits the narrow channel at the west end of Kē'ē Lagoon and into the open ocean, creating a hazard for swimmers and divers (SWCA 2010). Previous studies found tidal currents ranging from 0.1 to 1.0 knots, and Clark (1992) suggested that such current velocities were not usually a concern for nearshore ocean recreation activities. However, lifeguards at Kē'ē Beach strongly objected to SWCA biologists' plan to conduct snorkel surveys of the outer reef in November 2008 even during a day with unusually calm conditions (SWCA 2010).

Between Kēʻē Beach and Limahuli Stream, the beach is the wide and extends up to 150 feet mauka. The edge of the beach is lined with false kamani and ironwood trees. The area between Hāʻena Point and Kēʻē Beach is backed by low sand dunes roughly four to eight feet high. Growth of these sand dunes is limited due to the presence of introduced tree stands. Clark noted a continued recession of the existing shoreline based on historical photo analysis of the region since the 1920s.

Since Clark’s inventory, the University of Hawai‘i, School of Oceanography and Earth Science and Technology (SOEST) has similarly studied beach erosion based on aerial photography. Depending upon the location along the shoreline at Hāʻena State Park, SOEST found the beach to be eroding at a rates ranging between less than six inches per year to as much as one foot per year (see Figure 17).

The primary swimming area in Hāʻena State Park is Kēʻē Lagoon, which is a large sand pocket protected by the surrounding platforms of fringing reef. SWCA found that much of Clark’s description of the reef in 1992 still remains accurate in 2008. “Sand and reef pavement comprise the dominant marine geomorphologic structures between Kēʻē Beach and Maninihola Bay to the east. From Maninihola Beach west to Hāʻena Point the reef consists of aggregate reef, scattered coral and rock, and rubble with small patches of reef pavement. The reef pavement is covered with “macro-algae, coralline algae, and corals; however, the sandy lagoon floors and channels are uncolonized” (SWCA 2010). Live coral cover in Kēʻē Beach ranges between 4 and 47 percent in some areas due to the large amount of visitor traffic. There are a variety of inshore reef species in addition to macroinvertebrates, algae, and live coral species (SWCA 2010).

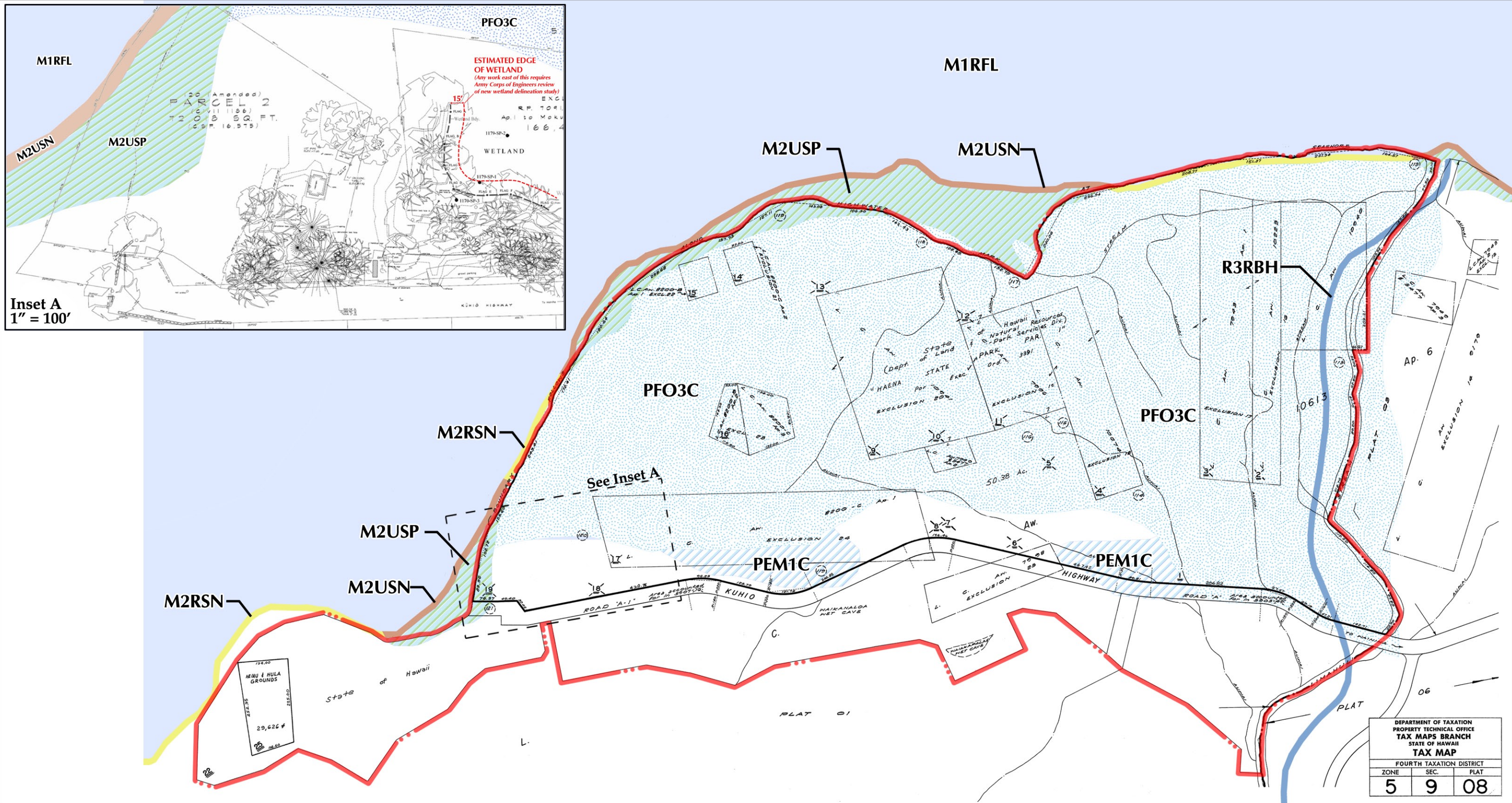
The State DOH has designated the offshore marine waters of Hāʻena with a Class AA rating which recognizes the area’s significant ecological and recreational value (Figure 18). The Class AA waters are bounded by areas less than 18 meters (60 feet) in depth. Uses to be protected in this class of waters include oceanographic research, the support and propagation of shellfish and other marine life, conservation of coral reefs and wilderness areas, compatible recreation, and aesthetic enjoyment.

Based on initial samples collected in 2005-2006, the DOH (2008) found that state standards for Class AA waters for enterococci and coliform were attained at Kēʻē Lagoon. State standards for Class AA waters were also attained at Hāʻena State Park for temperature, salinity, dissolved oxygen, pH, and turbidity (SWCA 2010).

### ***Potential Impacts and Mitigation Measures***

In general, the Master Plan is not anticipated to have any impact on the natural marine processes, such as waves and currents. All of the proposed facilities are located outside of FEMA’s delineated 100-year special flood areas subject to wave action. However, because the Master Plan proposes a limit on the average number of visitors to the park per day, the improvements and management strategies seek to have a net positive impact on the park’s marine environment, including marine water quality and health of the coral reef.



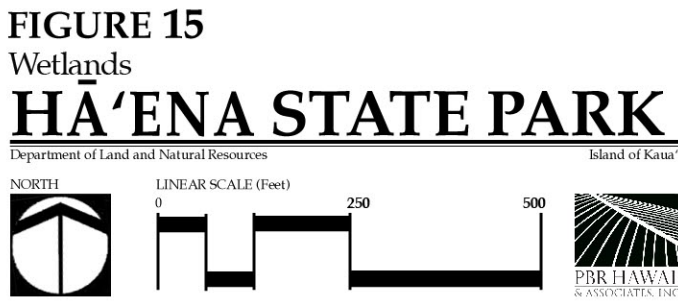


# LEGEND

- Project Boundary
- Estimated Edge of Wetland (USACOE)
- Wetland Boundary (AECOS, Inc.)

## NATIONAL WETLAND INVENTORY

- Estuarine and Marine Wetland (M2USP)
- Freshwater Emergent Wetland (PEM1C)
- Freshwater Forested/Shrub Wetland (PFO3C)
- Estuarine and Marine Wetland (M2USN)
- Estuarine and Marine Deepwater (M1RFL)
- Estuarine and Marine Wetland (M2RSN)
- Riverine (R3RBH)



Source: AECOS, Inc. (October 31, 2008)  
Dept. of Army, Corps of Engineers letter (File Number POH-2009-00067, June 15, 2009)  
U.S Department of the Interior, Fish and Wildlife Service (GIS)  
Disclaimer: This graphic has been prepared for general planning purposes only.  
Incorrect of outdated Hawaiian spellings on source map have not been corrected.





## LEGEND

--- Hā'ena State Park Project Boundary

Source: SWCA Environmental Consultants (2009)  
 Disclaimer: This graphic has been prepared for general planning purposes only.

FIGURE 16

Reef Environment and Surf Breaks

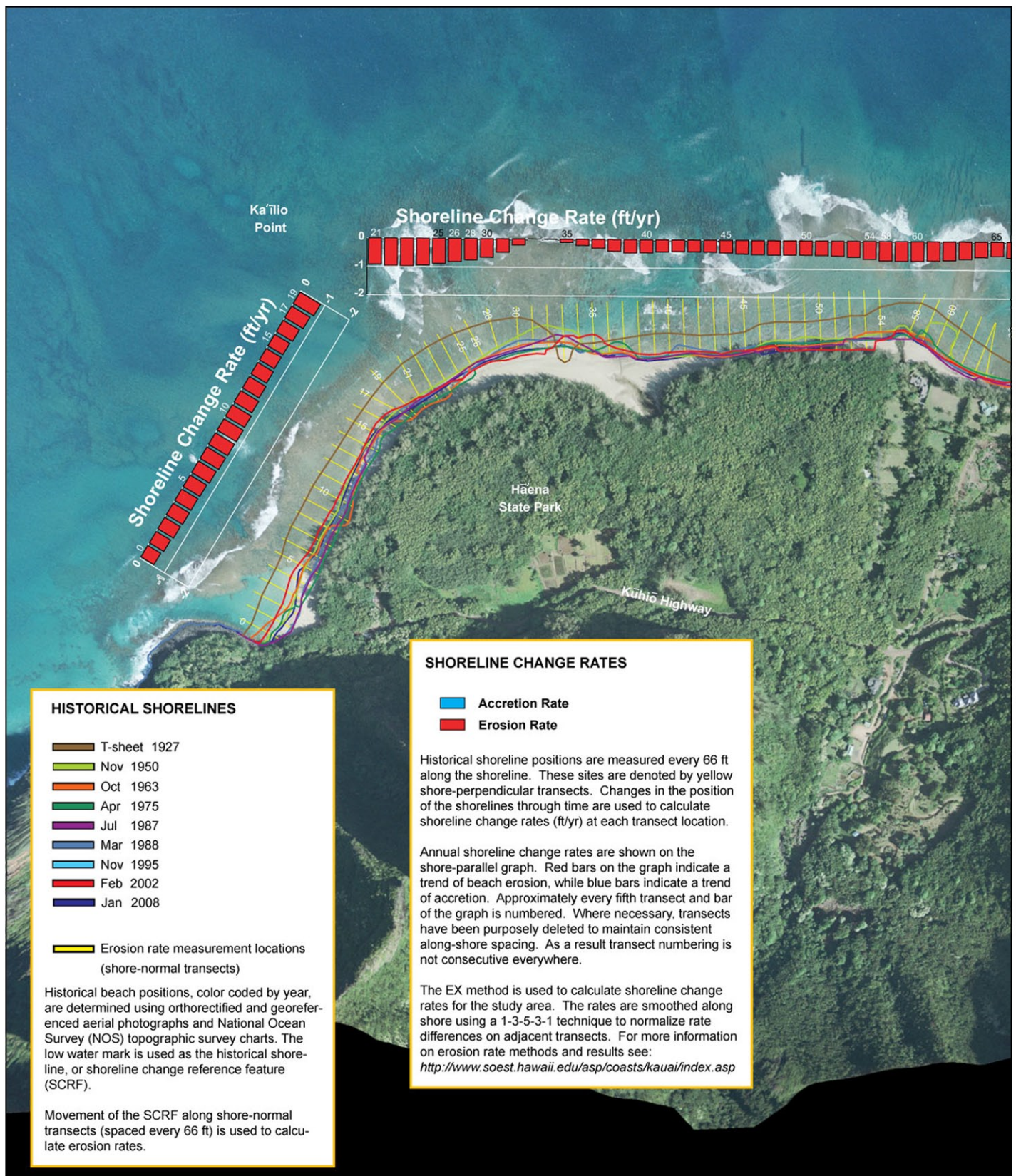
## HĀ'ENA STATE PARK

Department of Land and Natural Resources  
 North Linear Scale (Feet)

Island of Kaua'i



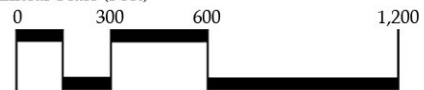




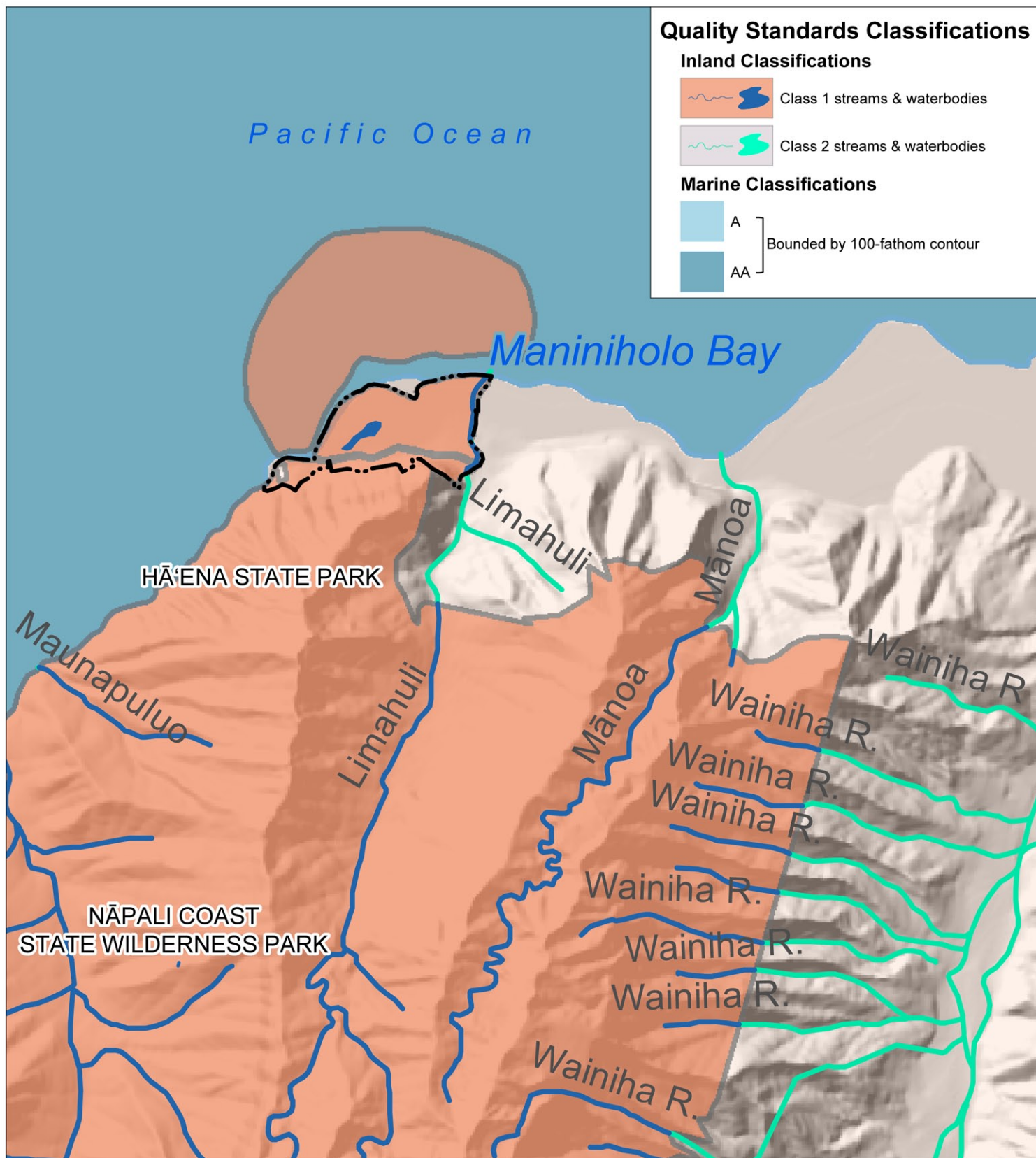
**FIGURE 17**  
**SOEST Shoreline Erosion Rates**  
**HĀ'ENA STATE PARK**

Department of Land and Natural Resources  
 North Linear Scale (Feet)

Island of Kaua'i







## LEGEND

--- Hā'ena State Park Project Boundary

**FIGURE 18**

DOH Water Quality

## HĀ'ENA STATE PARK

Department of Land and Natural Resources

Island of Kaua'i

NORTH



LINEAR SCALE (Feet)



A variety of potential management measures are recommended to maintain Class AA coastal water standards and prevent shoreline erosion. They include reduction, detainment, and filtration of stormwater runoff, increased treatment and reuse of wastewater effluent, prevention of soil erosion, and instruction on ocean-friendly visitor behavior. Shoreline erosion can be slowed or even halted by allowing natural tidal, current and wind processes to shape Hā'ena's shoreline. Measures under consideration to accomplish this goal include studying Hā'ena's specific natural dune building processes, restoring or removing vegetation as appropriate, compliance with the County of Kaua'i's shoreline setback regulations, and prohibition of shoreline hardening structures. These mitigation measures may also help protect the park against the impacts of climate change, particularly sea level rise, in accordance with the climate change adaptation priority guidelines (§226-109, HRS).

### **3.7 MARINE BIOLOGICAL RESOURCES**

#### ***Existing Conditions***

The nearshore waters of Hā'ena are known for their abundance of marine life. The plant and animal life of Hā'ena's waters provided sustenance for the ahupua'a and have become an attraction for sport fishers and snorkelers. Historically, Hā'ena is particularly known for abundant limu kohu (*Aparagopsis taxiformis*) and a large population of octopus (*Octopus vulgaris* and *Octopus ornatus*).

In 1999, Carl Stepath and Save our Seas compiled a variety of studies and found that fish populations in Kē'ē were not as diverse as in other areas. During the survey, approximately 40 species of fish were identified by divers. In neighboring Hanalei Bay, approximately 160 species of fish were identified. However, the majority of fish observed in the Hā'ena study areas were in their juvenile stage which indicates Kē'ē is an important nursery area for native fish species.

Endangered Hawaiian monk seals (*Monachus schauinslandi*) or 'īlio-holo-i-ka-uaua, "the dog who runs in the sea," are frequently observed at Hā'ena State Park. In August 2015, the National Marine Fisheries Service (NMFS) issued a final rule revising the critical habitat for the Hawaiian monk seals to include the marine habitat fronting Hā'ena State Park from the 200-meter depth contour line, including the seafloor, through the water's edge and 5 meters into the terrestrial environment from the shoreline (50 Code of Federal Regulations Part 226). Therefore, any changes in these areas will require consultation with the NMFS. The honu, or green sea turtle (*Chelonia mydas*), is listed as threatened under the Endangered Species Act and are known to graze upon algae in shallow nearshore reef waters around the north shore of Kaua'i, including the waters of Hā'ena State Park. Although no evidence of turtle nests were reported in SWCA's survey, the sandy beaches within Hā'ena State Park are suitable for sea turtle nesting, and the possibility of a future turtle nesting there cannot be dismissed (SWCA 2010, Appendix D).

#### ***Potential Impacts and Mitigation Measures***

Human disturbance in the water can also cause harm to marine resources, including coral, fishes, and honu. As described in Section ~~2.5.2.1~~ 2.5.4.5, it is recommended that all visitors

~~attend an educational session~~ receive visitor orientation information prior to park entry that would provide a brief overview of the park's extensive but sensitive natural and cultural resources and instruct visitors of the appropriate activities and behaviors allowed at the park, such as no reef walking or harassing marine life, especially endangered and threatened species. The recommendation to apply sunscreen after exiting the water rather than just before entering will also be made to reduce impacts to water quality.

The proposed Master Plan seeks to reduce potential impacts to marine wildlife compared to current conditions. State Parks is proposing to limit the average number of people in the park to 900 people per day ~~which is less than half of the current number of visitors per day during the summer during peak visitor hours~~. This number is an initial visitor limit which State Parks may adjust over time depending on future improvements, improved/increased maintenance, and/or other studies such as impact studies, particularly if harmful impacts to the natural, cultural and archaeological resources arise.

Marine species, including coral and the fishes and invertebrates that live in coral reef environments, are sensitive to land-based polluted runoff (Wilkinson and Brodie 2011). The Master Plan includes measures to minimize polluted runoff, including the consolidation of visitor parking to the main entry lot and subsequent reduction in the number of motor vehicles driving the length of Kūhiō Highway and idling and turning around at Kē'ē Beach. Currently, there is no limit to the number of vehicles entering the park and driving the length of the highway to Kē'ē. However, cars will not be permitted to drive along the highway in the proposed plan. In addition, the total number of vehicles in the park will decrease as a result of the reduction in visitors permitted to enter the park and the provision of a shuttle service to the park could further reduce that number.

Land-based pollution will be further minimized through solid waste management and the installation of bioswales around the parking areas to capture sediment and pollutants that might run off this surface. Rainwater cisterns will also be employed to collect rainwater that falls on the roofs of the proposed facilities, further reducing the quantity of runoff flowing into the ocean. Collected rainwater is recommended for irrigation and other nonpotable water uses such as toilet flushing.

The Master Plan recommends secondary treatment of all wastewater to a minimum of R-2 water quality with an aerobic system with aeration and non-chlorine treatment such as UV disinfection to improve effluent quality and reduce potential impacts to marine water quality. Also recommended is replacement of the plants at the constructed wetlands to high-nutrient removing plants to improve water quality, the use of non-chemical disinfectants and cleaning products for maintenance, particularly if composting toilets are installed, and environmentally-safe soaps that contain plant nutrients and biocompatible cleaners to minimize impacts to wastewater treatment processes and effluent quality. Chemical herbicides and pesticides for agricultural uses and park maintenance are also not recommended.

In their EISPN comment letter, the USFWS also recommends that lighting plans and management plans be carefully designed and implemented so that no light from the park is visible from the beach to minimize impacts to nesting sea turtles or their hatchlings seeking the ocean. These recommendations have been added to the Master Plan.

One of the management ~~strategies~~ goals in the Master Plan is to protect and sustain the long-term viability of Hā'ena State Park's nearshore resources. The Master Plan includes recommendations for interpretive devices such as signage and programs administered at the ECC to assist visitors in understanding the fragility of nearshore marine resources. State Parks will also support the rules adopted for the Hā'ena Community-Based Subsistence Fishery Area. Other management strategies under consideration include:

- Establish a program of long-term scientific monitoring of fish and invertebrate populations trends within park marine waters.
- Allow sufficient flexibility and insure long-term monitoring to employ the principal of adaptive management and allow changes to be made to permitting processes and management actions, as deemed appropriate, based upon the results of long-term monitoring and catch statistics.

As noted earlier, better protection and maintenance of the health of the coral reef will also better protect the park against the impacts of climate change, particularly sea level rise, in accordance with the climate change adaptation priority guidelines (§226-109, HRS).

### **3.8 TERRESTRIAL AND FRESHWATER FLORA**

#### ***Existing Conditions***

In May 1988, Kenneth M. Nagata conducted a botanical study for Hā'ena State Park on behalf of DLNR (Nagata 1991). In addition to identifying the various types of vegetation found within the confines of the park, Nagata also provides additional recommendations to preserve existing fauna. In January 2009, Drs. Terry and Hart (Geometrician Associates, LLC) conducted an updated biological survey of Hā'ena State Park. The survey included a physical survey of flora and fauna; a review of previous surveys of the area (including Nagata's work); report of the results describing plant communities, and habitats; and, discussion of potential effects from increased recreation on wildland resources. Appendix C contains Terry and Hart's survey report.

Terry and Hart found that biological resources within the park have been drastically affected by the introduction and proliferation of non-native, invasive plants and trees. They identified eleven vegetation zones compared with Nagata's six (Figure 19). Over time, areas that were grasslands have become more wetland-like. Terry and Hart dug several soil pits during their winter survey (January 2009) and noted the presence of mucky, sulfidic soils indicating frequent saturation and reducing conditions, meaning that the inundated condition is not unusual. They recommended further investigation to delineate the boundaries of the wetlands per the definitions of Section 404 of the Clean Water Act. The area also included approximately an acre of standing water and they noted native Koloa Maoli or Hawaiian ducks (*Anas wyvilliana*) utilizing the ponds daily.



Additionally, areas that Nagata found to be dominated by ironwood trees (*Casuarina equisetifolia*) near the dunes have been encroached upon by Java plum (*Syzygium cumini*) and false kamani (*Terminalia catappa*) forests.

A total of 117 flowering plants and nine ferns or fern allies were observed by Terry and Hart at the park in 2009. Most of the plant species found were alien. However, fifteen were indigenous and six were Hawai'i endemics. Several of the alien species recorded are also considered invasive. In whole, native species comprise approximately 17 percent of the total number of species, but account for negligible land cover. No listed or proposed threatened or endangered plant species were found on-site during Terry and Hart's survey.

However, comments from the USFWS dated August 29, 2008 (Section 11.0) indicate that one endangered plant species, makou (*Peucedanum sandwicense*), is reported from the area, but there is no designated critical habitat in the planning area. In 2010, critical habitat ecosystems were updated for the Island of Kaua'i. A review of Geographic Information Systems (GIS) data after this update found that no new critical habitats have been designated for Hā'ena State Park. USFWS confirms that there are no critical habitats within the park, but there is one nearby in the Nāpali Coast State Wilderness Park for the makou.

The native plants Terry and Hart did find within the park were scattered and in small numbers. The exceptions were along the strand associated with the dune complex, on rugged pali cliffs, and in the wetland areas where hau (*Hibiscus tiliaceus*) dominates although the hau is a relatively recent newcomer and was not nearly as widespread in 1991 as it is today. Of the 15 native species, only Koali, or morning glory (*Ipomoea indica*), and the Ni'ani'au fern (*Nephrolepis exaltata hawaiiensis*) are widely common today, with hala (*Pandanus tectorius*) and hau scattered but locally abundant. Pōhuehue (*Ipomoea pes-caprae*) is considered abundant in the strand zone. Except in the pali area, all of the endemic species are uncommon in the park.

Two endemics found in 1988 were also found in 2009. They are Ko'oko'olau (*Bidens forbesii*), a common lowland species on the north shore, and 'Āhinahina (*Artemisia kauaiensis*), which is found throughout the sea cliffs of Kaua'i and are found only on Kaua'i.

Kumu Roselle Bailey noted in her article published in *Humu Mo'olelo: Journal of the Hula Arts*, that the native 'Ālula (*Brighamia citrina*) and 'Ēkaha (*Asplenium nidus*) once grew at Ke Ahu a Laka but disappeared after a news story of the Keonelo petroglyphs made the site popular to the general public (Bailey 2008). Terry and Hart make no mention of them in their 2009 survey however they may have historically been there as noted.

Species of cultural importance, such as Ki or Ti (*Cordyline fruticosa*), 'Ōhi'a 'ai or mountain apple (*Syzygium malaccense*), Kō or sugar cane (*Saccharum officinarum*), Mai'a or banana (*Musa paradisiaca*), Noni (*Morinda citrifolia*), Niu or coconut (*Cocos nucifera*), 'Ulu or breadfruit (*Artocarpus altilis*), 'Ape (*Alocasia macrorrhizos*), kalo or taro (*Colocasia esculenta*) and kukui or candlenut (*Aleurites moluccana*) are found in small numbers

throughout the park, with some larger specimen of kukui and breadfruit indicating old plantings.

According to an unpublished report prepared for DAR by Mike Kido, riparian cover along Limahuli Stream's contours are predominantly alien species and provide shade for approximately 70.4 percent of the stream. Native tree species account for less than one percent of all riparian areas below Limahuli Falls. Approximately 328 metric tons of plant litter is deposited within riparian areas annually, which Kido estimates translates into 48,204 metric tons of plant litter being processed within the stream environment and exported as organic nutrients in times of flooding (Kido 2001 unpublished).

### ***Potential Impacts and Mitigation Measures***

The Master Plan proposes to improve the park's terrestrial flora by clearing invasive species and restoring native vegetation and native ecosystems throughout the park. The areas in order of priority are the coastal strand, the ironwood and false kamani forest, the Limahuli riparian zone, and talus slopes. Restoration of the native flora would increase native plant conservation and opportunities to educate the public. This may also indirectly support native birds including endangered and threatened species without a formal effort to create an endangered species habitat.

State Parks also proposes a 900 person daily visitor limit ~~in the Master Plan on average during peak hours~~, which is less than half of the current number of visitors during the summer. Additionally, as described in Section ~~2.5.2.1-2.5.4.5~~, it is recommended that all visitors be ~~required to attend an educational session provided with visitor orientation information prior to park entry~~ that would provide a brief overview of the park's extensive but sensitive natural and cultural resources and instruct visitors of the appropriate activities and behaviors allowed at the park. Such a significant reduction in visitor use and better education on the park's resources will have a net positive impact for the park's flora.

These restoration activities are considered to be beneficial to the park's botanical resources. Therefore, no mitigation measures are anticipated.



### 3.9 TERRESTRIAL AND FRESHWATER FAUNA

#### *Existing Conditions*

Terry and Hart's January 2009 biological survey (Appendix C) conducted for the Master Plan also included a survey of animals within the park. Thirteen species of birds were observed during their survey including the endangered Koloa Maoli, or native Hawaiian Duck (*Anas wyvilliana*), two indigenous shorebirds (Kōlea, Pacific Golden Plover, *Pluvialis fulva* and 'Ūlili, *Heteroscelus incanus*) and Koa'e Kea, the White-tailed Tropicbird (*Phaethon lepturus dorotheae*), an indigenous seabird. All other observed birds were non-native introductions.

Additional species of seabirds, waterbirds, shorebirds and forest birds that are federally listed as endangered or threatened may use the park. The wetlands may also provide feeding and nesting areas to the indigenous 'Auku'u or Black-crowned Night-heron (*Nycticorax hoactli*). Other federally endangered waterbirds that would likely use the wetlands are the Ae'o or Black-necked Stilt (*Himantopus mexicanus knudseni*), 'Alae ke'oke'o or Hawaiian Coot (*Fulica alae*), 'Alae'ula or Hawaiian Moorhen (*Gallinula chloropus sandvicensis*), and Nēnē or Hawaiian goose (*Branta sandvicensis*).

It is also expected that the federally endangered 'Ua'u or Hawaiian Petrel (*Pterodroma phaeopygia sandwichensis*), federally threatened 'A'o or Newell's Shearwater (*Puffinus auricularis newelli*) and the 'Ake'ake or Band-rumped Storm-petrel (*Oceanodroma castro*), listed by the State of Hawai'i as endangered, would fly over Hā'ena State Park to their nests in the mountains. These birds, especially the young, can be affected by exterior lighting and become disoriented.

Although not sighted during the survey, the endangered 'Ōpe'ape'a, or Hawaiian Hoary Bat (*Lasiurus cinereus semotus*), probably utilizes Hā'ena State Park as it has been seen in the Hanalei and Princeville areas.

Terry and Hart detected feral cats (Pōpoki; *Felis catus*) during their survey, and also recognized that mice ('Iole li'ili'i; *Mus* spp.) and rats ('Iole; *Rattus* spp.) are likely also present. They also acknowledged the presence of wild pigs (Pua'a; *Sus s. scrofa*) and goats (Kao; *Capra h. hircus*) that are known throughout this part of Kaua'i.

Terry and Hart's survey also identified various skinks, anole, gecko and bullfrog in the park, and acknowledge that there are likely more species of reptiles and amphibians throughout the park. All were alien species and common on Kaua'i.

Terry and Hart also surveyed the freshwater species inhabiting Limahuli Stream. They note five species of endemic 'O'opu or Hawaiian gobies may inhabit this stream, including the 'O'opu alamo'o (*Lentipes concolor*), 'O'opu nopili (*Sicyopterus stimpsoni*), 'O'opu naniha (*Stenogobius hawaiiensis*), 'O'opu akupa (*Eleotris sandwicensis*) and 'O'opu nakea (*Awaous guamensis*).

Invasive species in Limahuli Stream include the Tahitian prawn (*Macrobrachium lar*) and poeciliids (swordtails, *Xiphophorous helleri* and guppies, *Poecilia reticulata*). According to Kido, the presence of poeciliids in particular poses a serious threat to the native ‘O‘opu. Poeciliids are known to carry water-borne pathogens which infect ‘O‘opu (Kido 2001 unpublished). Limahuli Garden and Preserve staff have observed that poeciliids are now well-established in the lower stream reaches.

### ***Potential Impacts and Mitigation Measures***

Seabirds are attracted to artificial lights and can be downed after circling the light source and tiring or colliding with the pole or other objects. Once grounded, they can be struck by motor vehicles or are easy prey for cats, dogs or other animals. Therefore, all exterior lights will be fully-shielded (completely opaque) and downward facing full-cut off fixtures with the lowest light level (lumens) possible, sufficiently large, and positioned so that the bulb is only visible from below to minimize distraction and disorientation of wildlife flying over the park. The use of artificial lights should be minimized or reduced as much as possible during the seabird fledging season of September to December, and during the sea turtle hatching period July to September, and yellow lighting invisible to honu should be used near the shoreline. Night time construction also should be avoided. The Master Plan does not include any parking lot lighting. However, if lighting is needed for safety, they can be installed lower to the ground with motion sensors and/or timers to minimize the amount of time they would be lit. The lighting design plan will also ensure that no lights are visible from the beach to minimize impacts to nesting honu and their hatchlings seeking the ocean.

Endangered waterbirds and Hawaiian Nēnē are attracted to standing water, including the former loko and restored lo‘i. In order to minimize predation of these birds by feral animals, measures to reduce the feral cat and rat population are proposed in the park. These measures include installation of animal-proof garbage receptacles and maintaining cooperation with the Humane Society, which at times had placed traps in the park for removal of feral cats. Additionally, the Master Plan recommends that, before any wetland restoration activities proceed, that an analysis of the costs, benefits and liabilities associated with intentionally creating habitat for endangered waterbirds be conducted. However, if the loko and wetlands are restored, they may still attract native birds and other wildlife. Perimeter fencing shielded by landscaping can help protect these areas from predatory animals and care will be taken not to disturb nesting sites during construction as recommended by DOFAW in their comment letter (Section 11.0).

The ‘Ōpe‘ape‘a, endangered Hawaiian Hoary Bat, roosts in woody vegetation. If large trees or woody shrubs over 15-feet in height are trimmed or removed during the breeding, birthing and pupping season during the months of June 1 through September 15, there is the risk of young bats being harmed or killed. In order to minimize impacts to ‘Ōpe‘ape‘a, it is proposed that State Parks restrict any cutting of large shrubs or trees over 15-feet in height to periods outside of these months.

In order to preserve the native aquatic species present in Limahuli Stream, the Master Plan avoids making any alterations to the stream bed or banks except for the proposed restoration



of the riparian resources and clearing of alien vegetation. None of the proposed facilities or activities are proximate to the stream. No changes to the existing stream crossing at the park entry are proposed.

A potential threat to Limahuli Stream and upstream resources is the further introduction of alien fishes and invertebrates. Limahuli Stream is one of the few places in the State that does not have apple snails and the snails are currently in the park's lo'i. Control measures to prevent the spread of apple snails from the park's lo'i to Limahuli Stream should be included in any design or implementation of the 'auwai and irrigation systems for the Agricultural Complex. Some suggested control measures include but are not limited to:

- Elevating and extending the outfall pipes from the Limahuli Stream diversions above the receiving 'auwai so the snails cannot crawl directly into the stream. The snails are known to not like cold, fast-moving water which is what flows from Limahuli Stream so the risk is minimized.
- Grading the 'auwai to flow makai and away from Limahuli Stream so water does not flow back to Limahuli Stream.

State Parks should also continue to cooperate with DAR to keep new alien fish out of the 'auwai and stream and in ridding the stream of periodic invasions of swordtails, guppies, and other alien fish (Terry and Hart 2009). To minimize the impacts of microhydropower systems on native Hawai'i amphidromous biota, the diversion intakes must be designed to have low-velocity intakes placed subsurface in relatively deep pool in the center of the stream in order to minimize entrainment of larval or post-larval stream animals.

The proposed daily limit of 900 visitors during peak visitor hours will further reduce impacts on these biological resources and the proposed ~~educational session—visitor orientation information provided prior to park entry described in Section 2.5.2.1 that all visitors must attend~~ will provide a brief overview of the park's extensive but sensitive natural and cultural resources and instruct visitors of the appropriate activities and behaviors allowed at the park. The reduction in overall visitor use and better education on the park's resources will have a net positive impact for the park's fauna.

### 3.10 NATURAL HAZARDS

#### *Existing Conditions*

Typical natural hazards impacting the Hawaiian Islands include flooding, tsunami inundation, tropical storms and hurricanes, volcanic eruptions, and earthquakes. The following sections describe the natural hazards that may impact the park and general area, as appropriate.

#### 3.10.1 FLOOD HAZARD

According to the FIRM Panel 1500020030E (9/16/05) prepared by the Federal Emergency Management Agency (FEMA), National Flood Insurance Program (NFIP), there are several special flood hazard areas within Hā'ena State Park (see Figure 20). They are located along the coast and along Limahuli Stream and include Zones VE, AE and A. Zone VE is a coastal

flood zone with velocity hazard for wave action subject to the one percent chance annual flood (100-year flood). Within the park and nearshore waters, base flood elevations have been determined and range between 10 and 21 feet with the lower base flood elevations at the furthest eastern and furthest western edges of the park. The highest base flood elevations are located offshore of Kaʻilio Point.

Moving inland of the Zone VE areas are the Zone AE areas. These are the special flood hazard areas subject to the one percent chance annual flood and where base flood elevations have been determined. Base flood elevations start at 10 to 11 feet near Limahuli Stream and increase to 15 feet near Kēʻē and 18 feet near Kaʻilio Point.

The base flood elevations have not yet been determined along the mauka portions of Limahuli Stream and therefore these areas are located in Zone A. However, they are still within the special flood hazard areas subject to the 100-year flood. Also according to Kennedy/Jenks, there are mapping discrepancies between the location of Limahuli Stream on the FEMA maps, the Kauaʻi Online Hazard Assessment database, and the Hawaiʻi NFIP database. As a result, the exact location of the Zone A area is not clear and Kennedy/Jenks has contacted DLNR, which is currently working to resolve this issue with the U.S. Environmental Protection Agency (EPA) Region 9. Kennedy/Jenks recommends maintaining a buffer along the stream until this can be resolved.

#### ***Potential Impacts and Mitigation Measures***

All of the proposed facilities are recommended to be built outside of the special flood hazard areas Zones VE, AE, and A to minimize any potential impact from flood hazards. Evacuation routes should also be located outside of the special flood hazard areas. Due to the remote location of the park and the potential for hazardous conditions, an emergency evacuation plan and rescue plans should be developed. Ocean safety signs and evacuation signs should be posted appropriately on paths and evacuation routes.

To facilitate evacuations in the event they are necessary, the helicopter landing pad is proposed to be retained with the Master Plan improvements. Emergency evacuation routes should also be planned and indicated on visitor brochures and materials and park signs. They can also be described and shown on maps during the visitor orientation sessions within the proposed Welcome Pavilion/Education and Cultural Center (ECC) included in the visitor orientation materials provided prior to park entry. The loop paths through the loʻi can be used as an emergency route between Kēʻē and the proposed Welcome Pavilion/ECC. An emergency phone is expected to be retained. Additionally, the presence of an on-site caretaker is expected to improve emergency warning communications and evacuation coordination within the park when necessary. The hardline phone at Kēʻē should be retained for emergencies and an additional emergency phone could be located at the Welcome Hale. If a shuttle system is developed as the main point of entry, an emergency evacuation plan will need to be developed specifically for the shuttle passengers.

### **3.10.2 TROPICAL STORMS AND HURRICANE HAZARDS**

The Central Pacific Hurricane Center (CPHC) notes that “in Hawaii, mountainous terrain accelerates hurricane and tropical storm winds causing extremely high winds that can destroy buildings, structures, trees, vegetation and crops. Heavy and prolonged rains can accompany all types of tropical cyclones including hurricanes, tropical storms, and tropical depressions. Even the weakest tropical depressions can bring torrential rains and flash flooding to the Hawaiian Islands.” (CPHC 2015)

Since 1980, two hurricanes have had devastating effects on Kaua‘i—Hurricane ‘Iwa, a Category 1 on the Saffir-Simpson scale in 1982 and Hurricane ‘Iniki, a Category 4 in 1992. Since Hurricane ‘Iniki hit from the south, there was no significant storm surge or overwash in Hā‘ena. However, ‘Iniki’s sustained winds reached over 100 mph with gusts up to 150 mph as it passed over Kaua‘i, making landfall near Makahū‘ena Point and sweeping northward to Hanalei (Businger 1998). ‘Iwa’s sustained winds were 75 mph with maximum winds at 110 mph and did not make landfall. However, its diameter was so great that it enveloped Kaua‘i as it passed to the north.

#### ***Potential Impacts and Mitigation Measures***

While it is difficult to predict such natural occurrences, it is reasonable to assume that future incidents are likely, given historical events and the FEMA Special Flood Hazard Areas along the coastline. The CPHC reports that between four and five tropical cyclones are observed in the Central Pacific every year on average. This number has ranged from zero, most recently in 1979, to as many as 11 in 1992 and 1994 ~~(CPHC 2015)~~ and fifteen in 2015 (CPHC Website 2018). Staff training and visitor education sessions, as well as ongoing coordination, communication, and annual park evacuation drills with the County Fire and Police Departments are recommended management strategies proposed in the Master Plan to help improve emergency readiness and public safety. Because of the nature of these events, there will typically be advanced warning of severe weather conditions and tropical cyclones. Therefore, the park can also be closed during these events and the public can be notified in advance of the approaching storms to avoid the area. State Parks can notify news and media outlets of park closures and utilize social media and email or text announcements to provide up-to-the-minute information to the public.

### **3.10.3 TSUNAMI HAZARD**

Hā‘ena has been struck by tsunami waves multiple times in recorded history. The tsunami of 1946 is remembered as particularly devastating, destroying homes, a church, and a school and taking lives. Another destructive tsunami struck in 1957, leaving only four of the 29 homes in Hā‘ena standing. Thankfully, it did not result in loss of life. The land makai of the highway within Hā‘ena State Park is located within the tsunami evacuation zone. An "extreme tsunami evacuation zone" has been added to all state civil defense maps and also includes the entire park and portions mauka of the highway up to the pali. During the 1946 tsunami, wave heights reached 30 feet near Kē‘ē and 24 feet off Ka‘īlio Point. Wave heights reached 28 feet off Ka‘īlio Point in the 1957 tsunami. Both of these tsunamis were generated by large earthquakes (magnitude 7.1 and 8.3, respectively) in the Aleutian Islands off Alaska. See Figure 21. The nearest State Civil Defense siren is located at Hā‘ena County Park.

### ***Potential Impacts and Mitigation Measures***

Staff training and visitor education sessions, as well as ongoing coordination, communication, and annual park emergency evacuation drills with the County Fire and Police Departments are recommended management strategies proposed in the Master Plan to help improve emergency readiness and public safety. There are two different types of tsunami events for which State Parks will plan; locally-generated tsunami give very little time to evacuate coastal areas while distantly generated tsunami can take hours to make landfall. Evacuation plans and readiness plans should be developed by State Parks for both scenarios and all visitors should be educated on what to do ~~during~~ via the required orientation ~~session upon information provided prior to entering the park.~~ Tsunami evacuation signs should be posted appropriately on paths and evacuation routes and park staff will be trained and will assist visitors in the evacuation. As recommended by State Civil Defense, a new siren should be installed in the park, potentially in the main parking lot. A subsequent letter from the Office of State Emergency Management/Civil Defense noted that siren coverage exists for the project site, but requested the existing siren to be upgraded to a 121db(c) omni-directional siren. State Parks will work with the Hawai'i Emergency Management Agency to ensure adequate siren coverage at the park. Also, a grassed helipad will be retained and cleared areas within the park may be used if people need to be airlifted out of the area.

### **3.10.4 SHORELINE EROSION**

The coastal geology group at SOEST has documented shoreline rates of change since 1927. As shown in Figure 17, shoreline erosion rates averages between zero and nearly one foot per year along different transects of the park's coastline.

### ***Potential Impacts and Mitigation Measures***

One of the first priorities identified in the Master Plan by both community members and biologists is dune restoration. According to Terry and Hart, the restoration of a native dune ecosystem would involve the removal of alien species and the planting of natives and Polynesian-introduced plants such as pōhuehue, naupaka, nanea, pōhinahina, nehe, pa'u-o-Hi'iaka, 'aki'aki grass, milo, hala and kou. Not only would they provide improved and more authentic vegetation but they could also be used to help reduce coastal erosion if carefully planted. Shoreline erosion can be slowed or even halted by allowing natural tidal, current and wind processes to shape Hā'ena's shoreline. Measures under consideration to accomplish this goal include studying Hā'ena's specific natural dune building processes, restoring or removing vegetation as appropriate, compliance with the County of Kaua'i's shoreline setback regulations, and prohibition of shoreline protection structures. These mitigation measures may also help protect the park against the impacts of climate change, particularly sea level rise.

Drainage improvements along the highway are also recommended in the Master Plan to prevent ponding, soil erosion, and beach washouts as has happened at Kē'ē during heavy rainfall events. State Parks will also consider resurfacing the former highway pavement with

appropriate materials as permitted by historical review and implement creative design solutions that can improve drainage and minimize erosion in the surrounding areas.

### **3.10.5 ROCKFALL HAZARD**

A Rockfall Hazard Assessment was performed by AECOM during the months of August and September, 2008 and updated in 2013 with a supplemental rockfall analysis and computer simulation in the area between the main parking lot and Wai a Kanaloa. The assessment, attached in its entirety as Appendix B, included a geological survey of the site and rockfall hazard identification which included a visual assessment and preparation of a geological report, locating rock outcroppings with GPS readings, and color photography. The Assessment also included an engineering planning study of the rockfall condition, development of preliminary rockfall protection design options, and cost estimates. A summary of their findings is presented graphically in Figure 22.

To evaluate rockfall risk, AECOM utilized the U.S. DOT Federal Highway Administration Rockfall Hazard Rating System methods and guidelines. This rating system evaluates a number of criteria including: slope height, ditch effectiveness, structural conditions, rock friction, erosion rates, volume of rockfall events, climate and presence of water on slope, rockfall history and slope topography. It uses a three-class rating system for hazardous conditions based on its potential to impact adjacent properties.

- **Class A** – high estimated potential for rockfall on adjacent properties with high historical rockfall activity. Chances for rockfall is moderate to high and when rockfalls occur, they will more than likely reach adjacent properties.
- **Class B** – moderate estimated potential for a rock to fall on adjacent properties with moderate historical rockfall activity. Class B rating indicates that although a rockfall is probable, the chances of it reaching adjacent properties are low to moderate. This could involve scenarios where risk is mitigated by the presence of catchment ditches or large flat areas that can contain rockfalls.
- **Class C** – low to no estimated potential for rockfall on adjacent properties with low historical rockfall activity.

AECOM also analyzed the chance of rockfall. This is primarily based on the stability of the rock face and condition of the supporting materials. There are four categories:

- **Category 1** – imminent potential for rockfall (could happen anytime)
- **Category 2** – short term potential for rockfall (within several to a dozen years)
- **Category 3** – medium term potential for rockfall (within dozens of years)
- **Category 4** – long term potential for rockfall (up to or more than a hundred years)

Please note that the time scale references are used symbolically and are not meant to represent an actual timeframe within which the rockfall events may occur.

AECOM used computer simulation to model rockfall events along five transects within the park. They determined that the rockfall hazard conditions at Hā'ena State Park consists of both Class A and Class B rockfall ratings based on the potential for rockfalls to reach the



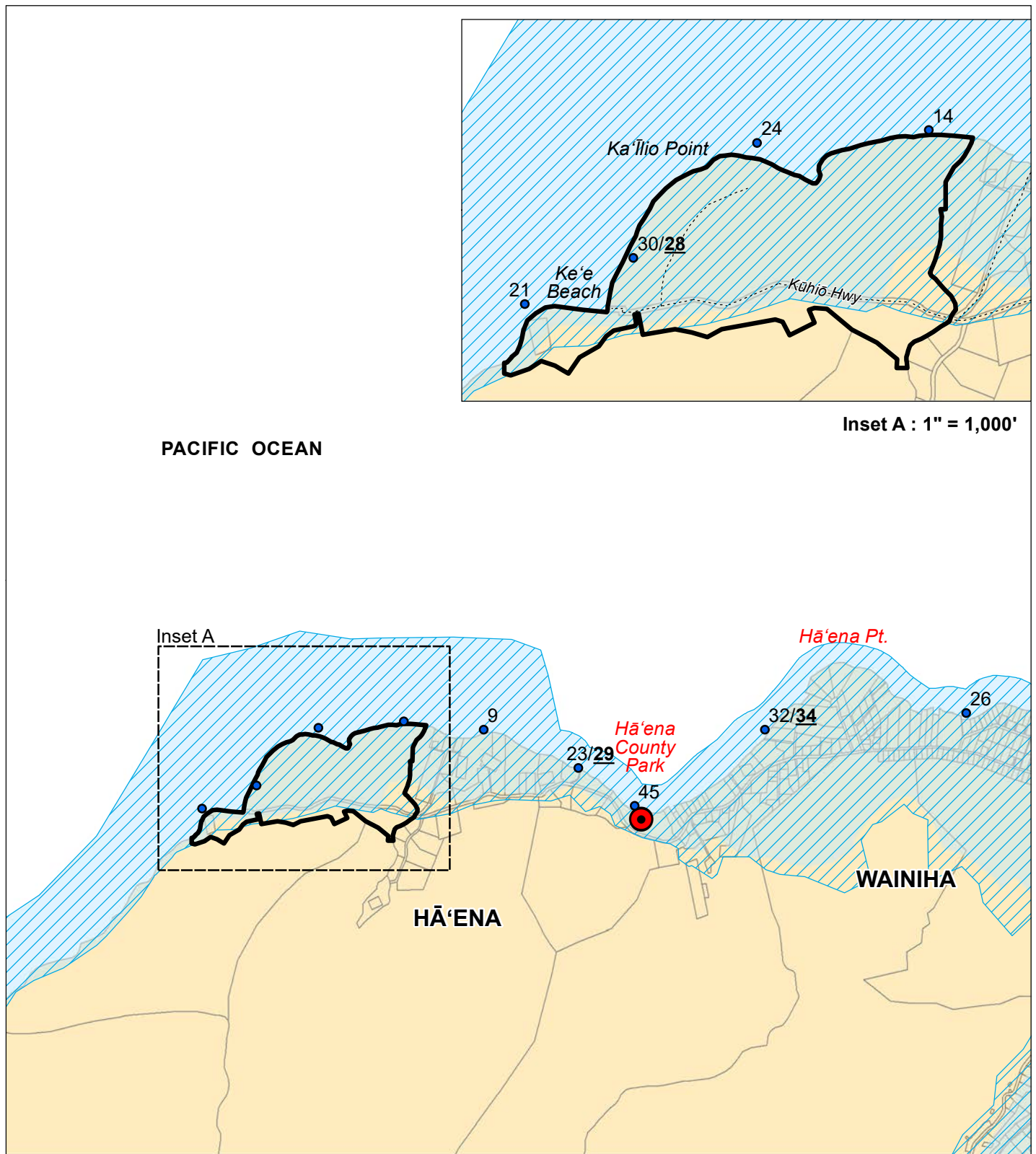
highway at various positions as well as at Kēʻē Beach and the Kalalau Trailhead. See Figure 22. The area around Wai a Kanaloa is the most hazardous rockfall area (Class A) because: 1) many rockfall features exist here; 2) the very high probability for rockfalls to reach the highway and Wai a Kanaloa; and 3) the almost constant presence of visitors. Rockfalls are less likely to reach the highway or beach at the other areas (Class B). AECOM also analyzed the chance of rockfall at specific locations within the park which are also shown on Figure 22. They range from Category 1 through 3. AECOM performed supplemental analysis in the area between the main parking lot and Wai a Kanaloa to help guide the design of the proposed park Master Plan. Using computer modeling, they provided a baseline estimate of how far simulated rockfalls would reach. The 0% and 5% chance of simulated rockfall lines were determined based on computer modeling and then used to help locate all major facilities outside of the rockfall zones. The approximate location of these lines are also shown on Figure 22 in green and red, respectively.

### ***Potential Impacts and Mitigation Measures***

The health and safety impacts of rockfalls are proposed to be mitigated by siting all of the major visitor facilities and paths, including the ~~Interpretive-Pedestrian~~ Path to Kēʻē, Welcome Hale, and main parking lot outside of the 0% chance of modeled rockfalls as mapped by AECOM in their Rockfall Hazard Assessment report (Appendix B). Specifically, these improvements along with the ~~Welcome Pavilion/ECC, Interpretive Path, proposed highway closure to through traffic and installation of warning with~~ signage and gates, and the main parking lot/shuttle improvements should be considered elements of rockfall mitigation and therefore prioritized in capital improvement project funding as they will shift the park's major visitor traffic away from the area of potential rockfall hazard. In addition, warning signs should be installed at appropriate locations at both ends of the highway and between the turnaround and Kēʻē. ~~Safety warnings information should also be given during the visitor orientation session as part of the visitor orientation materials~~ prior to park entry. The only vehicles that will be permitted on the highway to Kēʻē beyond the gate will be special access vehicles such as the lifeguards, hula practitioners, lawai'a and hunters, family caretakers of the cemeteries, and vehicles with the appropriate ADA placard to minimize the public's exposure to rockfall hazards. A dense native tree screen is also recommended along Kūhiō Highway, especially near the main parking lot, as trees may serve to catch or slow smaller rockfall events. Thus, general tree removal north of the highway is also not proposed unless the tree itself poses a hazard. The Master Plan elements also include features to restrict the public from standing immediately in front of the wet cave, Wai a Kanaloa, where the cliffs above are identified as Class A hazards should they choose to traverse the highway despite the rockfall warnings. Native and Polynesian-introduced landscaping are recommended as aesthetic and culturally appropriate screens for the safety devices or barriers.







## LEGEND

- Hā'ena State Park Project Boundary
- Road
- Tsunami Evacuation Zones
- Tsunami Evacuation Zones (Extreme)
- Existing Civil Defense Siren
- Tsunami Wave Heights ( Height in Feet, 1946/1957)

Source: Kaua'i Civil Defense Agency (2013); State GIS (1999, from Loomis 1976)  
 Disclaimer: This graphic has been prepared for general planning purposes only  
 and should not be used for boundary interpretations or other spatial analysis.

FIGURE 21

Tsunami Evacuation Zones

## HĀ'ENA STATE PARK

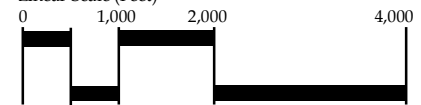
Department of Land and Natural Resources

Island of Kaua'i

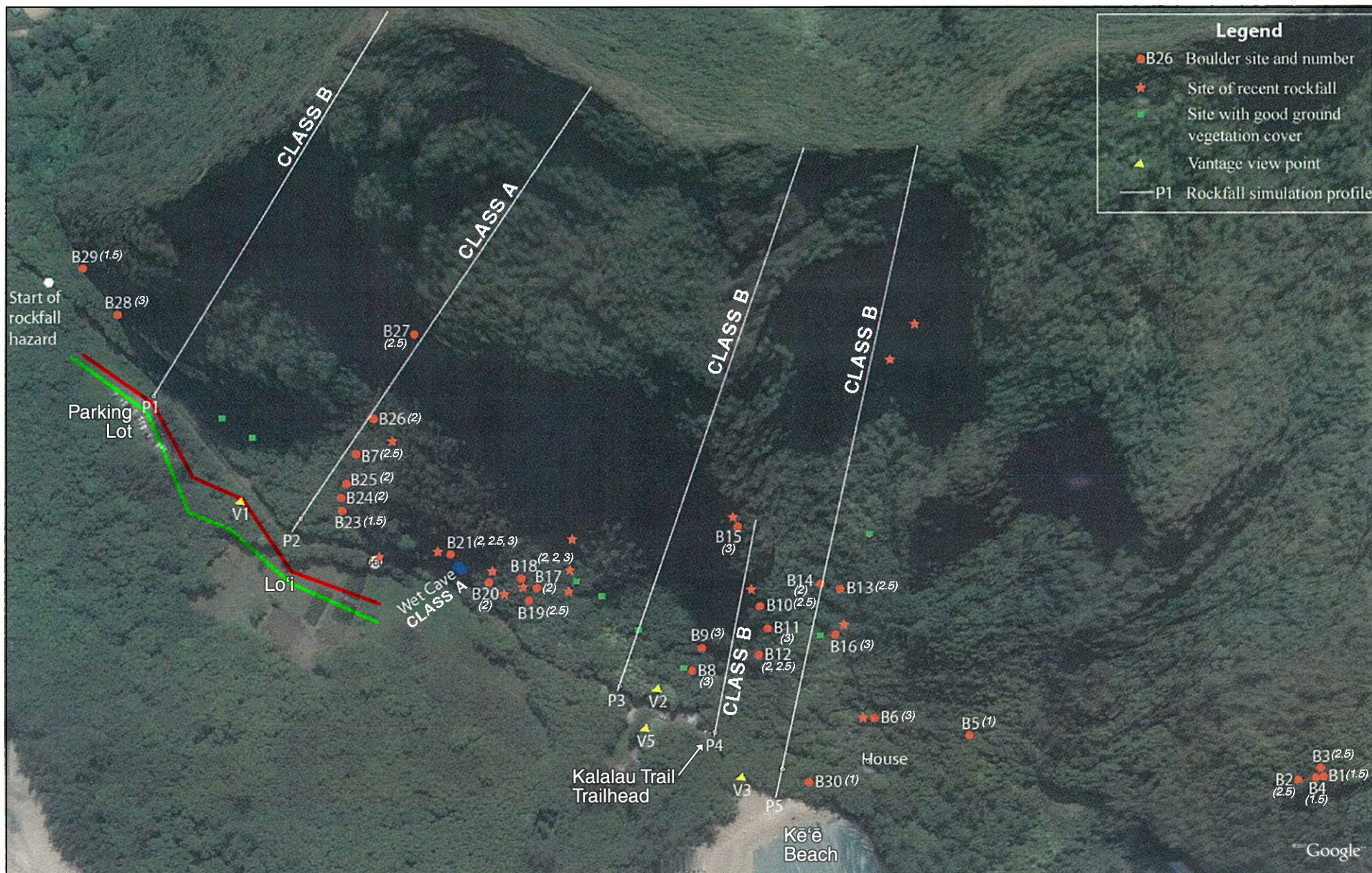
North



Linear Scale (Feet)







## LEGEND

### Rockfall Hazard

Class A -  
High Estimated Potential  
Class B -  
Moderate Estimated Potential

### Chance of Rockfall

Category  
(1) - Imminent  
(2) - Short-term Potential  
(3) - Medium-term Potential  
(4) - Long-term Potential

### AECOM Study\*

Estimated potential for simulated rockfalls  
to reach this point:

0% Chance  
5% Chance

FIGURE 22

Rockfall Hazards

## HĀ'ENA STATE PARK

Department of Land and Natural Resources  
North

Island of Kaua'i



NOT TO SCALE



Source: EarthTech (2008): Figure 1-1

\*Disclaimer: Rough overlay based on the maps by AECOM. This graphic has been prepared for general planning purposes only and should not be used for any detailed design purposes or other spatial analyses.



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## 4.0 ASSESSMENT OF THE HUMAN ENVIRONMENT, POTENTIAL IMPACTS, AND MITIGATION MEASURES

This section describes the conditions of the human environment, potential impacts of the proposed Master Plan and mitigation measures proposed to minimize any impacts.

### 4.1 ARCHAEOLOGICAL AND HISTORIC RESOURCES

#### *Existing Conditions*

State Parks, under the guidance of Joseph Souza, a Kauaʻi native, undertook extensive efforts to study and document the rich Hāʻena heritage and archaeology starting in the late 1970s (Griffin 1984). The first survey and testing program began with Griffin et. al. in 1977 in the western portion of the park, stretching from the eastern edge of Loko Kēʻē and the outlet of the ʻauwai just east of Kaʻilio Point to the western dunes and back dune areas. In 1978, Dr. Hallett Hammatt and his colleagues at the Archaeological Research Center Hawaiʻi, Inc. (ARCH) performed a series of five excavations along the Hāʻena State Park dunes to characterize the prehistoric use of the area. Based on their findings, they provide a preliminary sequence of human settlement and subsistence beginning with a marine oriented occupation at Kēʻē Beach sometime before 1000 AD. After 1000 AD, occupation expanded at Kēʻē as well as inland utilizing a broader resource base and further intensification occurred after 1400 AD with the construction of the agricultural fields and loʻi. By 1700–1800, occupation continued but with less emphasis on exploitation of marine resources and the density of cultural material in the deposits indicates a possible depopulation of the area or a shifting settlement pattern (Hammatt et al. 1978).

Other surveys, restoration plans, and burial treatment plans followed covering various areas of the park (Hammatt and Meeker 1979; Riley and Clark 1979; Yent 1980; Carpenter 1996; Major and Carpenter 2000; Major and Carpenter 2001). As a result, archaeological surveys have been conducted throughout most of the park. When combined, this information characterizes the distribution pattern of archaeological and historic properties throughout the park.

An archaeological sensitivity map was produced by State Park’s archaeologist to identify those areas where future development should be avoided due to the known sites and potential for finding extant archaeological sites (see Figure 23). As such, the proposed Master Plan locates new facilities and improvements away from these sensitive areas. The Master Plan graphics also include labels on all the major sites and features for future reference.

The park includes the “Hāʻena Archaeological Complex,” listed in the Hawaiʻi and National Register of Historic Places in 1984 (State site #30-02-1600). It also includes a portion of the “Kauaʻi Belt Road” (North Shore Section) (Site #30-02-9396), which was listed on the National Register of Historic Places in 2004. The Nāpali Coast Archaeological District (30-

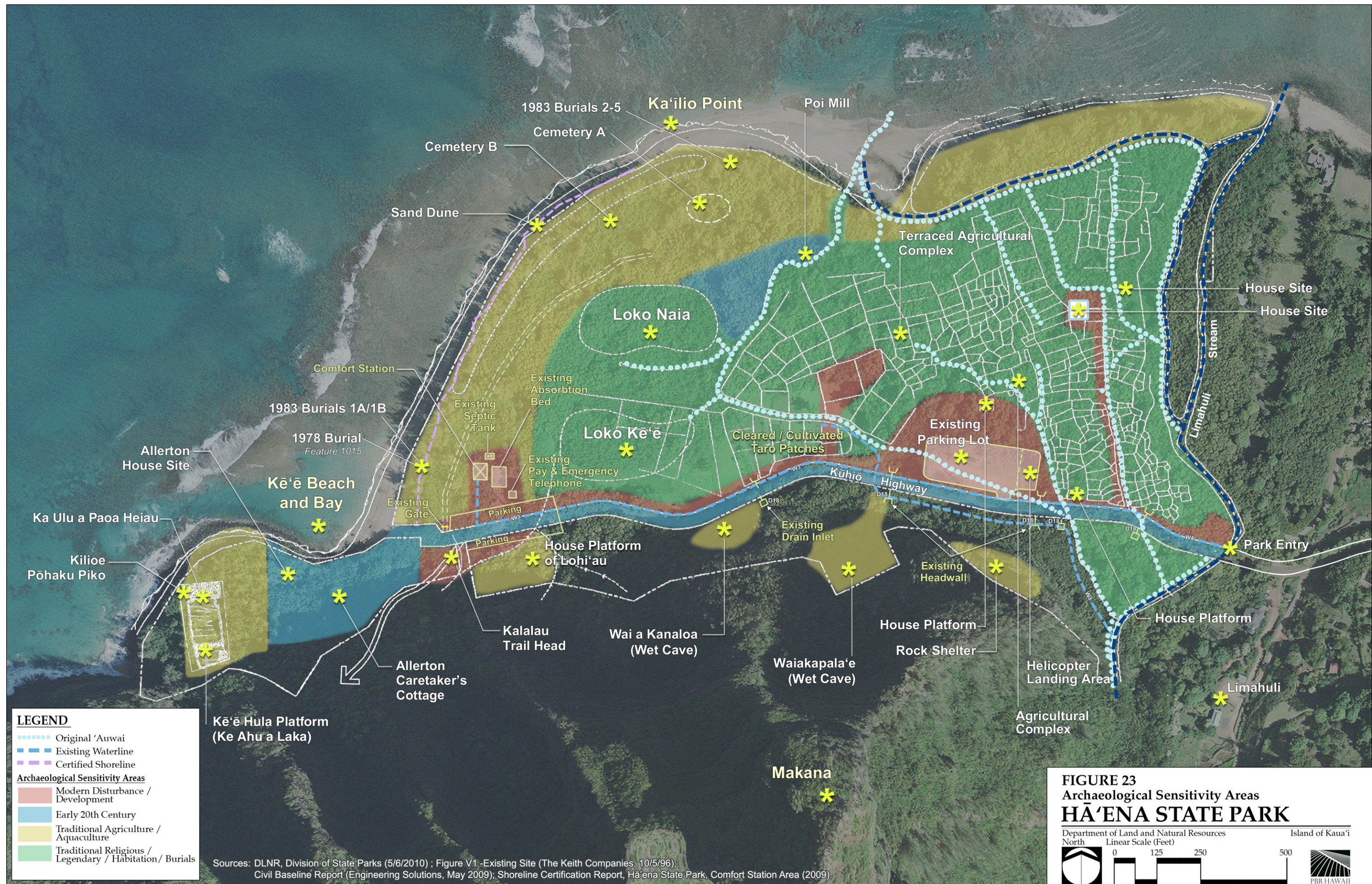
02-3200) overlaps the park within TMK: 5-9-01: 022 in the areas mauka of the highway and was listed on both National and State Registers in 1984 at the same time the “Hā‘ena Archaeological Complex” was listed.

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 (Yent 1983). Grouped broadly by location and type, the complex includes: 1) subsurface cultural layers and features, including burials, found within sand dune and beach-derived deposits forming a band along the seaward edge of the coastal flat; 2) irrigated agricultural field systems and wetlands that dominate the alluvial flat between the sand dune and the talus slopes along the cliff base, and 3) the traditionally important sites located along the talus slope, including the cliff face itself, that are significant to native Hawaiians because of their association with various legends, customs, and beliefs. These sites include Ka Ulu a Paoa Heiau, Ke Ahu a Laka hula platform, Lohi‘au’s house site, Wai a Kanaloa and Waiakapala‘e caves. In addition to burials, the subsurface cultural layers include fire hearths, refuse pits and post holes. The field systems include agricultural walls and ‘auwai. Historic-era cemeteries are also located within the park. The cemeteries continue to be visited and cared for by local families. Remnants of a poi mill have also been identified within the park.

The following highlights a few of the significant sites within the park. Additional detail and a history of the site are provided in the Master Plan report (~~Appendix I~~) available on the State Parks website (<http://dlnr.hawaii.gov/dsp/parks/kauai/haena-state-park/>) and in the Cultural Impact Assessment (Appendix E).

- **Kē‘ē.** As the setting of one of the most famous mo‘olelo, Kē‘ē holds extreme cultural importance and significance to Native Hawaiians and those who practice hula. Ka Ulu a Paoa Heiau overlooks Kē‘ē from atop the cliffs and is Hā‘ena’s most sacred and significant site. It is where the legendary love affair between Pele and Lohi‘au began.
- **Coastal dunes.** Archaeological excavations conducted within the sand dunes indicated the widely distributed presence of at least one and sometimes multiple cultural layers and an array of subsurface feature types (Site No. 30-02-7001). Along the seaward edge of the dune, the thickness of the cultural layers, their composition, and depth below surface varied to the point of making generalizations and correlations difficult. Cultural layers could range in depth from 15 cm to 4 meter (5.9” to 13’) below the surface and be between 5 to 50 cm (1.97” to 19.7”) inches thick. This high level of variability was attributed to the instability of sand dunes which are repeatedly, but not always evenly, disturbed by high surf and tsunami or by the persistent and heavy winds. In all excavations, midden analyses suggested, as could be expected, a reliance on marine resources with shell fish and fish bone being well represented and predominant. Near shore fish species were better represented than pelagic species despite the proximity of a reef channel and canoe landing at Kē‘ē Beach that gives advantageous access to off-shore waters. Use of the coastal sand dune and beach deposits primarily for settlement purposes, at least during the late prehistoric and early historic period, is supported by the Land Commission Awards and related testimony recorded between 1848 and 1852 (McEldowney 2007).











- **Ka Ulu a Paoa Heiau and Ke Ahu a Laka.** According to Kehaulani Kekua, a kumu hula and cultural expert from Kaua'i and member of the MPAC, "hula in its most primordial and sacred form is to inspire growth (physical, spiritual, intellectual growth) and the continuum of life cycles for the land and resources, mankind, ancestors and gods. The entire site is a heiau that was dedicated to the worship and practices of 'aiha'a and hula, including the highest level of the site named Ke Ahu a Laka." Ka Ulu a Paoa translates to "the inspiration and growth of Paoa." Paoa comes from the formal name, "Kauakahiapaoa," who was an ali'i of Hā'ena. He was a very close friend of Lohi'au, as well as a master of hula himself (K. Kekua, personal communication, November-December 2010).
- **Lohi'au's House Platform.** Mauka of Kūhiō Highway and near Kē'ē Beach is Lohi'au's House Platform. The physical remnant of the legendary character, it consists of a dry stack rock platform that is earth and stone-filled with an unpaved terrace. It is 80 feet long, 54 feet wide and 8.5 feet high at its highest part. It is an impressive site located at the base of the bluff near the Kalalau trailhead but it has suffered in recent history. Invasive exotic forest plants have overgrown portions of this site. However, several MPAC members have noted that its relative obscurity has probably protected it from vandalism.
- **Kilioe.** A large boulder located near the edge of the ocean cliff at Kē'ē. According to Wichman (1998), Kilioe was a chiefess of the hālau hula at Hā'ena whose body became this furrowed rock. This pōhaku piko is still used today to safeguard the umbilical cords of newborns and in doing so, place those children under the protection of Kilioe. According to mo'olelo, the boulder Kilioe is the physical remains of one of two mo'o (lizard) women who challenged Pele when she arrived at Kē'ē and later stole Lohi'au's spirit from his body (Andrade 2008).
- **Makana.** Translated as "gift," Makana is a triangular peak, prominent and unmistakable, overlooking the park. Firebrands made up of hau (*Hibiscus tiliaceus*) or pāpala (*Charpentiera*) wood whose soft core burns before the outer layers, were once thrown from the top of this peak. Under the right conditions, the brands would fall and rise, moving slowly a mile or more over the ocean, leaving a trail of glowing embers. These exhibitions were normally reserved for very special celebrations or sacred ceremonies such as chiefly graduations or visits. It was done for Queen Emma's visit in 1860. The cliffs that edge the park are often referred to as Ka Pali o Ahi o Makana.
- **Agricultural Complex.** Previous archaeological studies show that nearly the entire coastal flat behind the dunes was developed as irrigated lo'i terraces which originated in prehistory (Major and Carpenter 2000). There is also evidence that the lo'i extended to the base of the pali, but was disrupted by the construction of the highway (Hammatt 1978). The vast Hā'ena agricultural complex extended east of Limahuli Stream beyond the park and also included loko kalo, or swampy planting areas that

used innovative methods of planting on rafts within ponds (Handy 1972). Other crops such as ‘uala, or sweet potato, in sandy areas and mai‘a (bananas), kō (sugar cane) and ‘awa in the Mānoa and Limahuli Valleys were also known to be cultivated (Handy 1972). Portions of the Hā‘ena lo‘i were cultivated into the 1960s although the loko were abandoned by then (Carpenter 1996).

- **Waiakapala‘e and Wai a Kanaloa.** These caves were carved as a result of a rise in sea level during the Pleistocene, when existing lava tubes were enlarged by wave action. Wai a Kanaloa, “water made by Kanaloa,” is a wet cave located in the pali face on the south side of Kūhiō Highway. The waters of the cave were called, “Halaaniani,” or “clear pandanus.” The waters were thought to have restorative properties and were reserved for the ali‘i. The feature may have been an important water source, but no archaeological work has been conducted in the area. Waiakapala‘e, “water of the lace fern,” is a wet cave to the east of Wai a Kanaloa, also in the pali face south of the highway but further up the slope. This feature is another probable water source with legendary associations. It is said that the water in the cave had a brown hue, and was the hair of a beautiful mo‘o. The story goes that as she grew older, her hair and thus the water turned grey (Orr 2010).
- **Loko Kē‘ē and Loko Naia.** The two former loko within the park are seasonally flooded and designated as wetlands on the U.S. Fish and Wildlife Service’s National Wetland Inventory. Loko Naia is thought to have been a loko kalo, or a low-lying area for the planting of taro. The depression measures roughly 100 by 200 meters and is located mauka of the sand dune. Archaeological testing in 1977 indicated an agricultural use of the feature, including evidence of ‘auwai and agricultural soils. Loko Kē‘ē has been described as both a buried fishpond and a loko kalo (Griffin et al 1977). It is located to the south of Loko Naia and adjacent to the highway. Testing indicated low walls and an ‘auwai suggestive of a kalo lo‘i. It measures approximately 150 by 50 meters.

The post-contact history of the area within and surrounding Hā‘ena State Park from just after the 1824 rebellion saw control over the lands undergoing a transition from Kaua‘i to O‘ahu and Maui ali‘i. Abner Kuho‘oheiheipahu Pākī was awarded the entire Hā‘ena ahupua‘a as a direct result of the partition following the 1824 rebellion. Pākī, father of Bernice Pauahi Bishop, was married to Konia, one of Kamehameha I’s granddaughters, who was an ali‘i wahine or high chiefess in her own right (Silva 1995).

Pākī, as chief of Hā‘ena, held control over Hā‘ena’s fresh water sources, the produce harvested from the ocean, fisheries, mountain and special fields reserved for the chief, called kō‘ele. These kō‘ele were harvested once a week to support the chief and his household. Hā‘ena residents cultivated at least twelve kō‘ele, each having a specific name, to serve Pākī (Silva 1995). As chief, Pākī also had the privilege of putting a kapu on certain fish harvested from the waters off the coast. Pākī placed this kapu on he‘e (octopus) (Carpenter 1996, Silva, 1995).

Interestingly, Silva notes that Kekela‘akalaniwahikapā‘a (Kekela) was appointed the konohiki (land manager) of Hā‘ena circa 1837.

It was unusual for Kekela to hold this position of authority; although she was a ranking chiefess, she nevertheless was a woman and remains in history as one of the few known female konohiki. Women were rarely given the right to claim lands during this period; widows of bonafide native tenants or female heirs (in absence of a male heir) of long-time residents of an area would apply for lands, however this was uncommon and infrequent. Native testimony recorded that Kekela herself had claimed five parcels in Haena [sic] and had resided there in 1839. (Silva 1995)

Silva explains that during the time Kamehameha and Kaumuali‘i were negotiating their truce, Kamehameha impressed the Kaua‘i chiefs by presenting his recently widowed sister-in-law, Kekela, to Kamaholelani, sometimes referred to as Kaumuali‘i’s cousin and son. Kekela returned with Kamaholelani to Kaua‘i and the two settled in Lumahai, which Kaumuali‘i had given to both of them. In 1820, Kamaholelani dies and Kekela remains in Lumahai until 1824, the time of Kaumuali‘i’s death and the uprising, when she returns to O‘ahu and either forfeits her claim to Lumahai or is dispossessed of it. However, Silva also states that Kekela is well-spoken-for in the courts of Kamehameha and Kaumuali‘i, and she is also the sister of Abner Pākī’s own mother. Hence, her close association to her Hā‘ena claim, Pākī’s claim to the ahupua‘a and her management of Pākī’s Hā‘ena holdings (Silva 1995).

Kekela is also credited for advising many of the maka‘āinana to apply for kuleana awards during the Mahele (Wichman 1998). There is a slight difference between Silva and Carpenter’s counts as to how many Land Commission Awards (LCA) were within Hā‘ena. However, it is either 22 or 23 claims made within the Hā‘ena ahupua‘a, ten of which overlap the current park boundaries. They range in size from 0.75 acres to 4.4 acres and are shown in Figure 24.

Although Pākī retained interest to the entire ahupua‘a, those parcels awarded to native tenants were respected and excluded from his award (Silva 1995). Ten of these kuleana awards (or portions of awards) are located within the Hā‘ena State Park boundaries, and they consisted of thirteen parcels (Carpenter 1996). Of the ten claimants, only three trace their claims to the lands before 1824, and there are no clear records of the dispossessed chiefs of this area prior to this date, again a reflection of the political changes that occurred in that year (Carpenter 1996).

Pākī died in 1855, followed soon after by his wife, Konia, in 1857. Pākī’s daughter, Bernice Pauahi Bishop, inherited their lands but soon after sold Hā‘ena to W. H. Pease, a surveyor, in 1858. Because the lands were “in name only,” this meant that the lands were never described or surveyed at the time of deeding (Silva 1995). Kekela died in Honolulu in 1865 but did make five claims of her own in Hā‘ena (Silva 1995), at least one of which was within the park site (Carpenter 1996). Pease died in 1871 and the administrators of his estate conveyed Hā‘ena to William Kinney in 1872 who then sold Hā‘ena to Kenoī Kaukaha and 37 other individuals, referred to as the Hā‘ena Hui (Hui Ku‘ai‘ainana o Hā‘ena), as tenants in common in 1875. In this transaction, roughly 2,500 acres were transferred. Five years later,

“Mahuiki and Company of 30 natives” are listed as “taro planters” in Hā‘ena. The company was said to be owners of 900 acres, 40 acres of which was in active cultivation (Silva 1995).

Missionary censuses showed a relatively small population residing in Hā‘ena over this time period. In 1835, there were 116 people (16 of whom were minors) who resided in Hā‘ena. By 1847, the population rose to 162 (54 of whom were under the age of 20). According to Silva (1995), this rise was probably due to the arrival of Chiefess Kekela and her entourage in 1839. However, by 1900, there were only 45 residents (seven households) in Hā‘ena, all of whom were native Hawaiian, a drastic decrease over 50 years. Ten years later in 1910, there was a slight population increase to 67 individuals in fifteen households. However, demographically the population was beginning to change with two Asian immigrant households leasing land to grow rice in Hā‘ena (Carpenter 1996).

Carpenter also notes that photographs from the early 1900s show that extensive areas of the park were still under taro cultivation. This included Loko Kē‘ē which photos show planted with taro and Loko Naia, which appears in photos to have two dividing walls within it. The entire park area also appeared to be a treeless plain with only low-lying beach vegetation just behind the dunes (Carpenter 1996). According to Handy, by the 1930s, taro production dropped significantly, with the Limahuli and Mānoa Valley terraces being abandoned first. Limited production continued in the flatlands but also large areas along the lower reaches of Limahuli Stream were turned over to pasture or overgrown with brush and grass (Carpenter 1996).

Then, in 1946 and again in 1957, tsunami devastated the area. According to Silva, there was a stable Hawaiian population of about 60 individuals in Hā‘ena at the time of the 1946 tidal wave. In the 1946 tsunami, at least nine people died and one went missing (Silva 1995). During the 1957 tsunami, all but four of the 29 homes that stood in Hā‘ena were destroyed or deemed unlivable, but amazingly, there were no injuries or deaths.

Prior to the second tsunami, Hā‘ena Hui members John Gregg Allerton and Paul G. Rice filed a petition for partition and dissolution of the Hā‘ena Hui in June 1955. The three commissioners assigned to the case submitted their report ten years after the 1957 tsunami in April 1967.

As a result of the suit filed against the heirs of Hannah K. Ahi et. al., the County of Kaua‘i received parcels within the current park site, which included Wai a Kanaloa and Waiakapala‘e wet caves and Lohi‘au’s house site. The County also received Maniniholo, which is in Hā‘ena County Park. The County was tasked with the maintenance and preservation of these sites for the general public. Disregard for this meant automatic transfer of the sites to the Pacific Tropical Botanical Garden. Title to another parcel was given to Allerton with the condition that he maintains and preserves a five-foot wide path for public access to the heiau and hula site. Upon his death or conveyance of property, title would automatically transfer to the County.



The State also requested a 40-acre section of prime beach front property for a public park. Four unawarded lots were also auctioned in 1967 to cover the legal costs of the partition. The auction was limited to existing shareholders and \$35,801 was netted (Silva 1995).

Also during the late 1960s through the early 1970s, Howard Taylor, actress Elizabeth Taylor's brother, purchased a large parcel along the Hā'ena coast. A transient community arose at the area called "Taylor Camp." The Taylor Camp is remembered through various lenses; fondly by some who came across the place during the "flower power" years; and far less so by those who observed drug use, disrespect for the place, an abundance of rubbish, lack of sewer or waste disposal facilities and resulting hepatitis outbreaks.

Eventually, the State condemned this property in 1975 due to the unsanitary conditions and it was added to the Park's inventory. According to Carpenter, the last of the Taylor Camp residents were evicted in 1977, which allowed the State to finally create the park.

Carpenter also notes that by 1964, based on a historical photograph of the area, both loko within the park site seem to be abandoned although several lo'i on the eastern side of the park were still actively cultivated. He also notes that the vast majority of the park site, particularly along the coast, is covered by a dense canopy of trees, similar to conditions today (Carpenter 1996).

### ***Potential Impacts and Mitigation Measures***

Human use and development has the potential to disturb and damage archaeological and historic resources. Therefore, in implementing the Master Plan, State Parks will employ both programmatic as well as physical mitigation measures to minimize negative impacts to archaeological and historic resources and to provide positive impacts wherever possible.

Preservation, restoration, and cultural use and reactivation of the park's historic and archaeological resources while providing quality opportunities for outdoor recreation are at the forefront of the proposed Master Plan. The entire western portion of the park surrounding Ka Ulu a Paoa Heiau has been designated as the Hula Complex and the restoration of the heiau based on historic information and surveys such as Henry Kekahuna's 1959 drawing of the heiau are recommended in the plan. Similarly, the continued restoration of the Agricultural Complex, which spans the majority of the park's land, and historic structures such as the Allerton Caretaker's Cottage and Montgomery House are recommended along with the restoration of the other historic and archaeological sites scattered throughout the park such as Lohi'au's House Platform, the coastal dunes, and the loko.

Using the archaeological sensitivity map as an overlay, all new facilities in the proposed Master Plan have been located in previously disturbed areas to minimize impacts to archaeologically sensitive areas. Design efficiencies such as locating the absorption bed for the wastewater facilities under the parking lot is also recommended to minimize the amount of land area disturbed for the proposed improvements.

The closure of the highway to general traffic will also serve as a mitigation measure. By limiting the volume of vehicle traffic on the historic roadway segment between the main highway and Kēʻē, the macadam surface of the Kauaʻi Belt Road will be better preserved than if it continues to experience current volumes of traffic.

At Kēʻē, the lifeguard stand is proposed to be relocated, in order to improve the ability for lifeguards to see key areas of the lagoon and Kēʻē Channel. To avoid potential impact to subsurface resources, the foundation is proposed to be built up rather than excavated down into the sand. The picnic tables once located on the dunes in the Keith Companies' 2001 draft plan have been removed and located to previously disturbed areas such as the end of the highway pavement at Kēʻē ~~and adjacent to the Welcome Pavilion and ECC.~~

The plan also recommends that State Parks involve its archaeologists and staff whenever siting, designing, or installing any new park facility, especially when ground disturbance is required. Additional archaeological surveys and tests should be performed as necessary prior to undertaking projects requiring ground alteration or excavation. Ongoing efforts to identify and prioritize historic properties including archaeological resources in need of maintenance, restoration, and monitoring should be continued. The plan also recommends that alien plants and trees that undermine the archaeological sites be removed, as appropriate. State Parks archaeologists and staff should also conduct archaeological monitoring during any earth moving or ground disturbing activities in case there are inadvertent discoveries.

The primary programmatic action to mitigate impacts to archaeological resources will be to establish a Cultural Advisory Group (CAG) to help guide implementation of the Master Plan and management of all aspects of the park. Specifically, the Master Plan recommends that the CAG be consulted on management actions and construction projects as well as interpretive materials and educational programs. The participation by the CAG will enrich interpretation of the park's archaeological resources, and as a result, the visiting public will become more aware and sensitive to the importance and fragility of the site's archaeology.

State Parks is also proposing to limit the number of people in the park to 900 people per day during peak visitor hours, which will reduce the exposure of the sites to human activity ~~by over half~~. This number is an initial visitor limit which State Parks may adjust over time depending on future improvements, improved/increased maintenance, and/or other studies such as impact studies, particularly if harmful impacts to the natural, cultural and archaeological resources arise.

~~Additionally, the Interpretive Path through the loʻi is expected to serve as a key component to the interpretive program at the park. Access to the park will be via the Interpretive Path, which will begin at the Welcome Pavilion/ECC, where the visiting public has an opportunity to learn about the archaeological, historic, cultural and ecological significance of the park's resources through interpretive displays and exhibits installed along the path. Additionally, the interpretive displays and visitor orientation information provided to visitors and made available on the State Parks website will help educate visitors of the rich cultural, historic,~~

and archaeological resources at the park and of appropriate behaviors and cultural protocols to be observed while at the park.

## 4.2 CULTURAL RESOURCES

### *Existing Conditions*

Maria Ka'imipono Orr prepared a Cultural Impact Assessment (CIA) including a detailed overview of the historical and cultural background of Hā'ena and Kaua'i, traditional literature from mo'olelo (stories and legends), oli (chants), mele (songs), genealogies, and interviews and surveys of those most familiar with the area. The CIA underscores the importance of Hā'ena to Hawaiian culture, describes the ahupua'a life-system that existed into the 20<sup>th</sup> century, and highlights individuals' personal relationships with Hā'ena's resources through their stories and recollections. The CIA is attached as Appendix E.

In addition to the sites and cultural values described in Section 4.1, Orr summarizes her findings as follows:

Wahi Pana or sacred places are important cultural resources to native Hawaiians regardless that the original sites that may have been there no longer exist.

The project lands were once a part of an ancient Hawaiian ahupua'a life-system as well as a support system for the ali'i who lived there and the hula hālau. The physical evidence of multi-use ancient or traditional cultural practices still exists (e.g. Lohi'au's hale, hula platform, heiau, fishponds and lo'i), which not only indicate traditional land-use of the area, but that [Kē'ē] was/is considered a wahi pana. The evidence also indicates that Hā'ena was not only well established, but part of ancient Hawaiian life-systems that included the traditional gods, goddesses, other significant deities, ali'i nui, officiating kahuna and people who lived and cared for the land. The hale or house complex of Lohi'au confirms that portions of Hā'ena were ali'i lands with all the necessary traditional infrastructure and required support systems. According to several sources, there are burial grounds for ancient as well as historic Hawaiians. The project area also included fishponds, considered resource/property of the ali'i nui and an extensive taro lo'i -'auwai system with documented kō'ele or taro patches set aside for ali'i nui. (Orr 2010)

The CIA describes ancient cultural practices that continue today, as well as the wishes voiced by interviewees to see other practices revived.

[Cultural practice] includes items that are essential to the practices that have cultural value to either native Hawaiians or other ethnic groups. Burials are considered a very significant cultural practice and both cave and sand dune burials are located within the project lands. The whole area of Kē'ē, Hā'ena, was once part of the original hula hālau connected to Laka, and honored by Hā'ena ali'i nui Lohi'au whose hale or house is located at the base of Pu'u Makana, to current kumu hula. Other traditional practices included 'ōahi (firebrand throwing), crop cultivation (e.g. taro, sweet potato and banana), salt water and stream fishing, marine gathering (e.g. seaweed or limu, limpets or 'opihi, wana, he'e or octopus and sea cucumber), stream gathering of crayfish and kupe'e), forest gathering of medicinal plants, food plants and craft plants. Many of these latter practices continue to today.

There are historic burials within the project lands, but while people are no longer being buried there, their families continue to honor them, a filial practice that has been continuous. The poi mill foundation is all that exists of a historic cultural practice, however, some of the Hā'ena people would like to see it restored to be used in conjunction with ancient and historic taro lo'i that have been restored and re-cultivated within the last twelve years. The ancient fishponds were also used in

historic times, but often modified to include non-traditional species such as introduced fish, ducks and rice. And although both Kēʻē fishponds were discontinued years ago, some Hāʻena people would like to see them restored and utilized again as a community food and education resource. ... the two historic wooden [houses] should be assessed on their integrity and possible future uses.

The historic practice of sand dune burials was discontinued; the historic use of the fishpond aquaculture was also discontinued in Hāʻena. The restoration and continued practice of growing kalo (taro) has been revitalized in recent years in Hāʻena State Park and elsewhere in Hawaiʻi. Fishpond aquaculture has also been revitalized around Hawaiʻi and there is some hope that this will happen in Hāʻena State Park as well, for subsistence and cultural purposes. Several marine cultural practices continue today with some modifications. Limited fishing continues although hampered somewhat by the extensive use of the visiting tourist who use the beaches and snorkel in the protected Kēʻē lagoon. Use of the reef is discouraged so there is little likelihood of limu gathering there, although limited gathering of ʻopihi may still continue on shore-line. (Orr 2010)

The CIA also provides recommendations from the recent interviews and surveys. Several recommendations that have been incorporated into the plan such as the creation of a Cultural Advisory Group, installation of a full-time caretaker or kahu on-site, shifting the flow of visitor traffic makai away from the edge of the cliff for safety, permeable pavement in the parking lot, closing the highway within the park to through traffic, restoration of the dunes, Agricultural Complex, and Hula Complex, increased interpretive materials, developing cultural and ceremonial protocols, and creating a cultural retreat. The CIA also includes a recommendation to take a cultural approach to organizing the ongoing management and implementation of the Master Plan into different “houses,” or areas of expertise. These cultural “houses” include fishing, marine biology, kalo, botany, protocol, masonry, and State Parks.

Supplementing the information in the CIA, the following cultural knowledge was primarily shared by the MPAC at various meetings, and via phone calls, emails and other communications. As this summary is but a snapshot of these core values, the hope is that these basic concepts drive the implementation of the Master Plan and management of the park and that the discussions and collaborations between State Parks, the families, the cultural practitioners, and the community continue into the future.

For the families and kūpuna who remember living here and tending to this place, everything is connected. The health of the land, flora and fauna, the health of the ocean, streams and waterways, and the health of the people are all connected. Many feel that the people and families who are from this place need to return and need to feel welcomed to help take care of this place as well as the kūpuna whose iwi and spirits still reside in the park. Many also feel that there are currently too many visitors in the park and that the place needs space and time on a regular basis to rest and to be restored.

During one of the MPAC meetings, Kehaulani Kekua graciously shared with the group the deep connection that exists between hula and the forests and how this area is sacred to hula. She explained that hula is not just about dance for the sake of beautiful movements, but about regeneration and that there is a profound connection between the practice of hula and the health and regeneration of the natural environment.



She described the three kuahu (shrine) of hula that are recognized by the guild of hula practitioners. The first kuahu is the native forest. The second is the kuahu within the hālau hula, which could be described as a miniature of the native forest within the hālau. The third kuahu is the body of the hula practitioner. When adorned with greenery from the native forests, the dancer's body itself becomes a kuahu. So in practicing hula, it is the forest that is central and it is for the forest that hula is practiced. The health of our native forest in turns brings good health to the waters that flow in our streams and eventually to the ocean. The health of the forest brings health to the land, the waters, and the people.

### ***Potential Impacts and Mitigation Measures***

Human development, outdoor recreation, and visitor activities have the potential to undermine the cultural significance of a place if not understood or mitigated. Potential negative impacts include inadvertently offending cultural sensibilities by walking, climbing, or picnicking on features that are considered significant to Hawaiian culture such as the Ke Ahu a Laka hula platform or Lohi'au's house platform, or disturbing cultural practitioners while fishing, practicing hula, or caring for their ancestors at various internment sites in the park. Development and recreational activities can also impact the cultural environment by limiting a cultural practitioner's ability to access sites of cultural importance.

The Master Plan, therefore, takes the proactive approach of protecting and restoring the varied natural, cultural, and historic resources as they are all integral to the cultural values of this place and requiring visitor education of everyone who enters the park so they understand the cultural values and practices, and the appropriate behavior and protocol when visiting. Instruction should also be given on what to do when encountering active cultural practices so as not to disturb them. These measures are proposed to help increase visitor sensitivity to these activities and mitigate potential conflicts. The Master Plan also recommends the reduction in the number of visitors at the park so that an appropriate ambiance and space can be maintained for these cultural practices to take place. Initially, this visitor limit is set at 900 people per day during peak visitor hours. However, this number may be adjusted over time depending on future improvements, improved/increased maintenance, and/or other studies such as impact studies, particularly if harmful impacts to the natural, cultural and archaeological resources arise. The daily visitor limit would not include cultural practitioners such as lawai'a or hunters (with valid hunting permits for the Nā Pali Coast State Wilderness Park), or special user groups such as hula hālau, lo'i workgroups, cemetery caretakers, or school groups.

The Master Plan also includes the key recommendation that a Cultural Advisory Group be formed to advise State Parks and the potential future park management entity on all matters regarding the park (Section 2.5.4.2). Specifically, the Master Plan recommends that the Cultural Advisory Group be consulted on management actions, construction projects, behavior and access protocols, interpretive signage, and educational programs.

The primary physical mitigation measure is to avoid cultural resources when locating new improvements and, where appropriate, enhance existing cultural and historic resources with restoration, interpretation, and cultural reuse. For example, new development in the

Agricultural Complex is limited to facilities that support community gardening, such as a baseyard for equipment storage, which is located in previously disturbed areas where lo'i cannot be restored due to the condition of the soils. Similarly, the remnant Allerton house foundation and restored Allerton Caretaker's Cottage are recommended to be incorporated into the Hula Complex and serve as support or park-related facilities.

Beneficial impacts to the cultural environment are expected from enabling cultural practices in the park through lo'i restoration and kalo cultivation; hula; traditional subsistence fishing; and caretaking of the Hula Complex and cemeteries. As a means to preserve access to cultural resources, perpetuate tradition, and provide essential maintenance of resources, State Parks has entered into a partnership with the Hui to curate the Agricultural and Hula Complexes. Additional partnerships will be encouraged to help manage other cultural resources within the park. In addition, the plan recommends that State Parks undertake separate efforts to work with cultural practitioners and the CAG to develop appropriate protocol for the park's cultural and historic resources, such as the Hula Complex, Agricultural Complex, and other archaeological/historic sites. These protocols will be incorporated into the visitor education program.

## 4.3 TRANSPORTATION

### 4.3.1 ROADWAYS AND TRAFFIC

#### *Existing Roadway Conditions*

Public vehicular access to Hā'ena State Park is limited to Kūhiō Highway (State Highway 560), which runs the length of the park and terminates at Kē'ē Beach. The highway is owned and managed by the State DOT and consists of two paved twelve-foot lanes. Approaching Hā'ena State Park, the highway has gravel and asphalt concrete pavement shoulders. The highway enters into the park over Limahuli stream by a single lane, 10-foot wide by 12-foot long concrete bridge. Within the park, the highway becomes two lanes again and measures approximately 24 feet in width. The pavement structure is unknown.

The North Shore section of the highway is listed on the National Register of Historic Places, including the segment that leads up to and enters the park. It is the only remnant of the Belt Highway system on Kaua'i to retain a high degree of integrity (Duensing 2003). However, paved shoulder lanes were installed along the highway within the park in 1985 and in 2002 guardrails were added (Kennedy/Jenks 2011). The shoulders are often used for illegal parking, particularly in areas around Wai a Kanaloa and closer to Kē'ē.

The narrow lanes and one-lane stream crossings give the highway its unique and scenic character. The narrowness and weight limits of these bridges also eliminates the passage of large tour buses and trucks through this portion of the North Shore. Passenger vehicles are limited to a 15-20-person maximum and the vehicle weight limits for the bridges range between 16,000 and 50,000 pounds (gross vehicular weight) according to the State DOT (DOT personal communication 2011). However, these are not the tested strengths of these historic bridges and it could be far less in reality. A typical 15-passenger van has a gross

weight limit (includes passengers and load) of 10,000 pounds (Austin Tsutsumi and Associates 2011).

The highway within the park has no pedestrian or bicycle amenities. Narrow shoulders on both sides of the highway often require pedestrians and bicyclists to traverse the vehicle travel lanes, creating potential conflict points. Pervasive illegal parking occurs along both sides of Kūhiō Highway within the park, despite the posted “no parking” signs. Cars park on the narrow shoulders, further blocking passage of pedestrians and bicyclists as well as narrowing the travel lanes for vehicles.

Unpaved access roads exist within the park, including the coastal beach road which runs behind the sand dunes and is gated at Kēʻē. There are also unpaved access roads to the Montgomery House, to the cleared loʻi (Phase I), and the driveway/access road to the former Allerton property. All of these roads are gated or chained along the highway.

### ***Existing Traffic Conditions***

Access to Hāʻena State Park is dominated by the personal vehicle, whether rented or privately owned. According to a 2007 OmniTrak survey of 283 park users performed for the Hawaiʻi Tourism Authority (HTA), 69 percent of visitors from Hawaiʻi and 42 percent of non-Hawaiʻi visitors arrived by private vehicle and another 19 percent of visitors from Hawaiʻi and 55 percent of non-Hawaiʻi visitors arrived by rental cars.

Austin, Tsutsumi and Associates, Inc. (ATA) prepared a Traffic Impact Analysis Report (TIAR) for the Master Plan, which is attached as Appendix F. According to historic data, Kēʻē experiences its highest attendance during the summer months. Recent traffic data was collected via pneumatic tubes placed at the Hāʻena State Park entrance between August 14, 2008 and August 18, 2008. During this analysis period, the three-day Admission’s Day weekend was included in the counts. This was also prior to the recession and downturn in Hawaiʻi visitor counts.

Weekend peak hour traffic occurred between 12:00 p.m. and 1:00 p.m. However, a large influx and efflux of traffic generally occurred between 10:45 a.m. and 3:45 p.m. Regional weekday morning and afternoon commuter traffic was assumed to occur between 8:00 a.m. and 9:00 a.m. and between 3:00 p.m. and 4:00 p.m. respectively.

A total of 1,550 vehicles per day were counted entering and exiting Hāʻena State Park. On the average over the study period, there are 781 vehicles entering the park and 767 vehicles leaving the park. Peak traffic was observed on Sunday, August 17<sup>th</sup> between 12:00 p.m. and 1:00 p.m. where a total of 107 vehicles entered and 85 exited the park. ATA concluded that observed traffic was well below the potential capacity of a two-lane highway; two-lane highways have the potential capacity of 1,700 passenger vehicles per hour per direction of travel. However, congestion within the park occurred due to the slow speeds resulting from pedestrians on the roadways and cars waiting for parking stalls. Some waited as long as five minutes for a stall.

Although no standards exist for determining the capacity of the one-lane bridges along the highway leading up to the park, ATA used Simtraffic Analysis software to estimate a baseline for the existing traffic. The Waipā Bridge was used for the analysis since it has the longest one-lane span and is located near the State DOT's count location. With 487 vehicles crossing the bridge in both directions per hour and an estimated bridge capacity of 1,250 vehicles per hour, the existing volume-to-capacity (VTC) ratio for the bridge is about 39 percent. This number was used to compare different scenarios for the master plan.

The most recent biennial DOT traffic counts in June 2013 registered 6,700 vehicles per day on the stretch of highway just before the County's Hā'ena Beach Park. This includes vehicles traveling in both directions with the counts split almost exactly in half for each direction, or roughly 3,350 traveling in each direction (DOT Kaua'i District 2015). This is a roughly 55 percent increase since the 2003 biennial counts, which recorded over 2,100 vehicles per day in each direction in August (DOT Kaua'i District 2007).

The overwhelming sentiment from the public and project team is that the traffic congestion is a significant problem that needs to be addressed as it continues to worsen. It causes safety concerns for pedestrians and bicyclists, backs up traffic into the neighboring areas, discourages local residents from going to the park, and negatively impacts the overall experience at the park. Community members also voiced the desire to continue to allow early morning and late afternoon access to the park and Kē'ē Beach for recreational jogging, walking, and biking and to institute a shuttle from Princeville as the main means of bringing visitors to the park.

### ***Potential Traffic Impacts and Mitigation Measures***

Because of the unique nature of the traffic congestion and circulation issues at the park, ATA took an innovative approach to the TIAR. ATA provided analyses of engineering considerations and potential traffic impacts as well as five example shuttle service scenarios to help inform the direction and design of the preferred Master Plan. They also considered varying amounts of parking spaces at the park and estimated the potential costs and break even requirements for the shuttle.

Scenario 1 describes baseline projection of traffic with the 900-daily visitor limit but without a shuttle. Traffic is reduced and remains well below the estimated roadway capacities for two-lane highways and the one-lane bridge. However, ATA noted that there may be backups at the parking lot unless parking passes or some other parking management system is instituted.

Scenarios 2 and 3 are the shuttle scenarios, comparing the proposed 900 daily visitor limit with a smaller 50-stall parking lot and with no parking lot. The reduced parking lots were requested by members of the MPAC since it was discussed that the demand for a shuttle may not be high enough if there is ample parking at the park. For comparison's sake, ATA also studied what the shuttle requirements would be if there were no visitor limit with both a 50-stall parking lot and no parking lot in Scenarios 4 and 5.



In Scenarios 2 and 3, ATA estimated that six or seven 15-person capacity vans making nine trips per day would be needed to serve the 50-stall parking lot and no parking lot scenarios, respectively. They estimated it would cost \$10.28 and \$10.18, respectively, per person for the system to be self-sustaining. It also included a 30% contingency for low or sporadic ridership.

Scenarios 4 and 5 estimated the requirements of the current unconstrained situation with 2,000 visitors per day and found that 15 vans operating constantly from a remote parking lot would be needed to shuttle all visitors to the park or 14 vans with a 50-stall parking lot. Roundtrip shuttle tickets would need to be about \$10.80 to break even with a 50% contingency for low or sporadic ridership.

In a previous analysis, ATA provided a reverse calculation and estimated that it would take 245 riders per day at \$10 per roundtrip ticket to make a two van (15-passenger capacity) system sustainable. This is comparable to what the owners of the Experience Kaua'i shuttle service shared with the County of Kaua'i's North Shore Shuttle Committee in March 2014. In all the shuttle scenarios, there was not much difference in estimated costs per rider or difference in traffic impacts based on the Waipā Bridge's volume-to-capacity (VTC) ratio. The VTC ranged from 27% to 31%, compared with the existing traffic's 39%, a difference of about 55 cars per hour. The reduction in daily visitors alone is estimated to reduce the hourly flow by 100 vehicles per hour, which is less than two cars every minute.

During the meetings with the MPAC and community, various suggestions were made to encourage or even require that visitors arrive at the park by different modes of transportation to help reduce traffic. Three concepts were explored with the MPAC: (a) Princeville-based park entry, (b) Combination on-site parking and Princeville entry facility, and (c) On-site parking only. ~~The preferred scenario, which best mitigates the potential traffic and parking impacts of the Master Plan, is described as follows.~~

The MPAC's originally preferred scenario is to implement the shuttle from the Princeville facility at the start of Phase I, minimizing the need for visitor parking in the parking lot in the park. However, the remote Princeville entry was rejected by the community due to the inconvenience of this and the fact that it might actually increase traffic for those who live closer to the park since they would have to find their way to Princeville and then double back to the park. Therefore, the Master Plan includes space to accommodate a parking lot for up to 100 vehicles ~~if needed~~. The design and materials of the parking lot would allow its size to be adjusted as the Master Plan is implemented. It could be reduced to accommodate as few as zero vehicles if the shuttle service is fully implemented and meets all needs, or expanded to accommodate up to 100 vehicles to address the possibility that the shuttle service might not be implemented on schedule or to accommodate special needs that could only be met by additional on-site parking (for example, the need for after-hours on-site parking, or additional parking for cultural practitioners, kūpuna, subsistence fishermen or ~~handicapped~~ visitors requiring ADA accessibility). This scenario should significantly reduce traffic in the park and surrounding neighborhoods. By providing visitors an alternative means to get to the park at the outset of the improvements, this will also reduce the potential for “spillover”

parking issues in the surrounding neighborhoods that could happen if parking is limited without providing an alternative for visitors to access the park.

### ***Potential Roadway Impacts and Mitigation Measures***

The Master Plan includes a combination of physical improvements and programmatic options that when applied in combination will have a positive impact on the existing roadway conditions.

Vehicle access beyond the main parking area to Kēʻē beach is proposed to be reduced from the currently unrestricted conditions to special access only (ADA, lifeguards, and cultural practitioners). Restricting general vehicular access from the main parking area to Kēʻē Beach will effectively eliminate illegal parking along the highway's shoulder, reduce the wear on the historic roadway's macadam surface, and reduce the number of visitors traveling in a potential rockfall hazard area. It will also reduce the potential conflicts between vehicles and pedestrians and bicyclists as the ~~Interpretive~~ Pedestrian Path becomes the main visitor path to Kēʻē and the highway is limited to special access vehicles, and it will reduce roadway maintenance costs for the State. Reducing the number of vehicles turning around and/or idling while waiting for parking at Kēʻē is expected to be a beneficial impact by reducing vehicle/pedestrian conflicts; reducing dust, noise and exhaust fumes; and reducing the amount of pollutants running off vehicles and washing into the lagoon and surrounding park areas.

## **4.3.2 PARKING**

### ***Existing Conditions***

Within the park, there are two designated parking areas, one approximately 800 feet from the park entrance and one at the terminus of the highway near Kēʻē Beach. The parking lot nearest the park entrance is unpaved and measures approximately 30,000 square feet in area, it is unsigned and unstriped. In the absence of striping, visitor parking patterns are informal and at times inefficient. During wet weather conditions the dirt/gravel surface becomes muddy and deeply grooved from vehicle maneuvering. As the parking surface dries, the grooved mud becomes hard packed ruts creating an uneven surface that further reduces the area available for parking.

The parking area near Kēʻē beach is hard-packed dirt on each side of the highway. Two ADA accessible spaces are paved, striped and signed.

ATA also noted the considerable amount of vehicles that were parked alongside the highway within the park leading to Kēʻē, many illegally parked despite the posted “no parking” signs. Visitors who park along the roadway or park in the lot closer to the entrance were exposed to oncoming traffic due to a lack of pedestrian sidewalks.

### ***Potential Impacts and Mitigation Measures***

The Master Plan recommends closing the highway within the park to general through traffic which will effectively eliminate the illegal parking that currently occurs along the highway.

Parking will be simplified and better organized by limiting it to two lots; the main one at the entrance and the special access parking lot at Kēʻē. The turnaround at the entrance will also keep traffic moving rather than allowing drivers to idle or requiring a multi-point turn to turnaround should the parking area be full. This should ease congestion and backups along the highway approaching the park and reduce the potential for conflicts between vehicles and pedestrians.

The main parking area is proposed to be surfaced with pervious paving material or structured grass that is ADA accessible over the entire parking lot or at least half of the parking lot so it can be used for multiple purposes and can be striped to create an efficient parking layout. Beneficial impacts are expected to include more orderly and efficient use of the parking area, an improved driving surface, and a reduction in sediment runoff. Bioswales around the parking area are also proposed to capture and help filter runoff. Methods for stormwater systems will be integrated with the overall water/wastewater/drainage system designed for the park as well as investigation of whether the ʻauwai can be restored or not. The area between the parking lot and the highway should be designed to provide rockfall catchment as recommended in the Master Plan as well as drainage and ʻauwai restoration as appropriate. Therefore, the design of the main parking lot should be coordinated with the design of the entry facilities and based on sustainability, cost, and availability of materials/technology.

The parking lot as shown in the Master Plan is large enough to park roughly 100 vehicles. However, to encourage use of the shuttle or transit system being planned for the North Shore, the number of available stalls may be reduced and the grassed areas of the lot can be used for outdoor activities, staging areas, loʻi, or educational purposes. The area shaded in a darker green in the plans shows how the parking lot could be partitioned for the different uses park users, whether they are fee-paying visitors or non-fee paying visitors, and can be adjusted with movable bollards and cordons depending on the number of cars for each user group. The division between the two can be adaptively managed weekly, daily, or even hourly throughout the day depending on demand. This design gives State Parks the flexibility to provide enough parking until the shuttle/transit system is operational and to adjust as needed the number of parking stalls that are available for the different user groups while also encouraging multimodal access to the park. Overnight parking could also be reduced or restricted and parking lot time limits could be proposed as needed to encourage turnover of the stalls. If the transit system proves successful once implemented, the areas ~~may~~ no longer ~~be-needed~~ for parking ~~and~~ could permanently be converted into an expanded shuttle stop area or other park uses such as additional educational gardens and picnic areas, event space with a grand entry lawn, or expanded staging areas.

The beneficial impacts of removing the illegal parking include fewer cars parked within rockfall hazard areas, elimination of vehicles from scenic views such as Wai a Kanaloa and Kēʻē Lagoon, the reduction of wear and erosion along the highway, and the reduction of car fluids seeping into the ground particularly near sensitive cultural and natural resources. The potential negative impacts of removing the illegal parking include an increased demand for legal parking spaces within the park, the potential displacement of parking to the highway or other areas and communities outside the park (also illegal), increased visitor use at Hāʻena

Beach Park and other nearby coastal resources, and driver frustration at the park entry for those who do not plan ahead and check parking availability prior to driving to the park in the event parking is not available when they arrive. However, the reduction in the number of visitors ~~permitted~~ at the park on average during peak hours will serve to reduce the overall demand for parking and it is recommended that State Parks or the future management entity institute public information processes to inform visitors ahead of time whether parking is available or not. This can be done via social media, text messages and emails, the State Parks webpage, and daily information disseminated to the visitor industry and media outlets. The limited parking will also force visitors to plan their trips to Hā'ena ahead of time and may encourage visitors to use a shuttle, if available.

When visitors plan ahead, park managers will be better able to anticipate park operation needs and potential resource impacts. In addition, it could help reduce the number of drop-ins at the park and reduce general traffic along the highway through neighboring North Shore communities. Prior to instituting the proposed visitor limits, a public information campaign must be made far in advance so people are able to prepare for the changes proposed to the park.

### 4.3.3 PUBLIC TRANSIT AND SHUTTLE SERVICE

#### *Existing Conditions*

The County of Kaua'i Transportation Agency provides public transit service between Hanalei and Kekaha via the Kaua'i Bus. Service between Līhu'e and Hanalei is provided ~~six~~ seven days a week, ~~Monday through Saturday~~, between ~~6:20-5:25~~ a.m. and ~~8:00-10:40~~ p.m. Route ~~400/450~~ runs from the Hanalei Courthouse to Kaua'i Community College and Route 500 runs in the opposite direction. Fares are \$2.00 per trip for adults, \$1.00 per trip for seniors (60+ years) and youth (7–18 years). The County also offers monthly passes for ~~\$35.00~~ \$40.00 and annual passes for \$400.00. All buses are wheelchair accessible. Folding baby strollers, musical instruments, and body boards are permitted onboard. However, surfboards, large backpacks and other bulky items that block the aisle or seat are not permitted onboard. Currently, there is no public transportation service to Hā'ena. Private shuttles and taxis can be arranged for a fee.

In 2014, the County provided a \$75,000 grant to a private shuttle operator, Experience Kaua'i, to supplement the County's transit service between Princeville and Kē'ē in an experiment to see what the ridership potential would be and to reduce traffic along this stretch of the highway. In its first month of operation in November 2014, they had over 1,000 passengers. In January 2015, ridership peaked with nearly 1,900 riders and average monthly ridership was over 1,500. The shuttle used two 15-passenger vehicles and charged introductory fares of \$2 each way for visitors and \$1 each way for residents during its first two weeks. After that, the fares increased to \$4 and \$2, respectively. Between 41 and 50 percent of riders were residents.

The shuttle service runs ~~ran~~ from 6:00 AM until 7:00 PM originating at the Westin Princeville, stopping at major resorts, the Princeville Center, Hanalei Town, the Wainiha



Store, Hanalei Colony Resort, and Hā'ena Beach Park before heading to Kē'ē. The shuttle then ~~reverses~~reversed its route back to Hanalei Town. At 9:00 AM, the second shuttle ~~starts~~began running between Princeville and Hanalei, while the earlier shuttle ~~loops~~looped between Hanalei and Kē'ē to increase frequency of service. Funding to support the shuttle, however, was not provided in the 2015-2016 County budget approved by the County Council in June 2015.

### ***Potential Impacts and Mitigation Measures***

The preferred scenario described in the Master Plan proposes a combination of shuttle service to the park with ~~reduced~~ parking on-site as part of Phase I of implementation. While State Parks is unlikely to initiate its own shuttle service, several options for a shuttle system are identified in the Master Plan including extending the County public transit service to Kē'ē, contracting with a third-party operator to provide the service, or allowing independent private shuttles to stop at the park, or a combination of the above. The Master Plan identifies a shuttle stop in the proposed Master Plan with sheltered seating areas along the turnaround at the entry to the park. The turnaround should be designed to allow other vehicles to pass while shuttles are stopped at the shuttle stop in order to reduce backups and congestion along the highway. In order to encourage ridership, the shuttle service should be initiated in Phase I and the parking lot should be sized appropriately. Various management strategies including parking and entry fees, point of entry tickets ~~sales~~ are also discussed in the Master Plan report to provide a range of options to support the shuttle.

If the shuttle service is implemented, it has the potential benefit of serving multiple populations including residents and not just park visitors depending on the stop locations, frequency, cost, and quality of the service. Recent record rainfall events, mudslides, and highway closures have brought a new focus and opportunity to change how transportation operates on the North Shore as a whole. State Parks is actively working with the County and the community to discuss potential solutions to these issues. If shuttle service to the park is not implemented, the larger parking lot will need to be constructed to serve the park and a grass surface is not recommended since grass would require that the parking lot be uncovered for at least three days out of the week to receive adequate sun. If the parking spaces turn over two to three times during the peak hours, the 100 stalls are estimated to be sufficient if visitors are carpooling and arriving with an average of three people per vehicle. Green vehicles such as electric vehicles that can be charged with renewable energy sources such as solar PV or vehicles that use alternative fuels and have low or no emissions are recommended to reduce the impact to air quality and consumption of fossil fuels.

## **4.3.4 PEDESTRIAN AND BICYCLE FACILITIES**

### ***Existing Conditions***

Although primary access to the park is by car, people also walk, jog, and bicycle to the park; some of whom enjoy early morning or late afternoon treks to the beach when the park is not as crowded. There are currently no designated pedestrian or bicycle facilities within the park or en route to the park. Pedestrians and bicyclists typically share the vehicle travel lanes or along the narrow shoulders of the highway (Kennedy/Jenks 2011). However, there are many

areas where rock slopes, vegetation, guardrails, and illegal parking block the shoulder, dangerously pushing pedestrians and bicyclists further into the vehicle travel lanes, and forcing drivers to slow down creating potential conflicts and accidents.

### ***Potential Impacts and Mitigation Measures***

The Master Plan includes a combination of physical improvements and programmatic options that will have a positive impact on pedestrian and bicycle facilities.

Currently, the primary pedestrian flow through the park is along Kūhiō Highway from the main parking area or from illegal parking spots on the highway shoulders to Kēʻē Beach. The Master Plan proposes the construction of the Interpretive Pedestrian Path which will be a separated pedestrian- and possibly bicycle-only path between the Welcome Pavilion/ECC Hale and Kēʻē Beach. It will traverse the loʻi along the first berm separating the first two rows of loʻi and then turn north to avoid the wetlands. It will cross an ʻauwai over a footbridge and connect to a path through the hau tunnel. This path will then connect to the trail behind the dunes and turn south, leading visitors past the lifeguard tower to Kēʻē. Vehicle traffic will terminate at the main parking lot or at the special access parking lot via the limited access portion of the highway. Pedestrians and bicyclists will be discouraged from using this stretch of the highway due to the potential for rockfalls. The Interpretive Pedestrian Path as well as all other pedestrian paths recommended in the Master Plan are located outside of the modeled rockfall zone. The separation of vehicle traffic from pedestrian/bicycle traffic will improve safety by reducing the potential for conflicts between vehicles and pedestrians/bicyclists, and will reduce congestion at the park.

The new Interpretive Pedestrian Path will also provide increased educational opportunities via interpretive displays and greater visual access to the Agricultural Complex, Makana, wetlands, and loko for visitors. ~~Other loop paths for pedestrians are planned throughout the park as the Agricultural Complex is restored. This will also open up more recreational and education opportunities for visitors. However, the expansion of these paths will also require additional maintenance and oversight so the sensitive natural, cultural, and archaeological resources are not impacted negatively due to inadvertent damage, vandalism, or inappropriate use or activities.~~ Direct views and access to Wai a Kanaloa will be reduced as it will have to be viewed from a distance along the Interpretive Pedestrian Path. However, this also has the added benefit of removing visitors from one of the higher rockfall hazard areas.

With regards to construction, there are both beneficial and negative impacts anticipated. Construction of the Interpretive Pedestrian Path will involve setting footings for the elevated path in the loʻi and possible wetland areas. Care must be taken due to the proximity to natural and archaeological resources and loʻi walls and the potential of unearthing subsurface materials during construction. Coordination with the U.S. Army Corps of Engineers and archaeological surveying prior to path the detailed design and construction of the path and archaeological monitoring during construction are recommended.

Other negative impacts include the potential for disruption of community gardening activities in the loʻi and the physical bifurcation of the loʻi, complicating maintenance and operations.

Proposed mitigation measures were developed with recommendations from Hui leadership and include expanding restoration of the Agricultural Complex makai and eastward (Phases II and III) and allowing the lo'i between the highway and ~~Interpretive Pedestrian~~ Path to be used as an outdoor classroom for educational purposes and hands-on restoration activities ~~for visitor tours and school groups~~.

## 4.4 NOISE

### *Existing Conditions*

The predominant sources of noise in the park stem from automobile traffic accessing the park and idling cars waiting for parking spaces. Other sources of noise are from the visitors who recreate on the beach and in the ocean, at Cold Pond, and on the trails, and who congregate in areas around the Kalalau Trailhead, the comfort station, Wai a Kanaloa, and the parking areas. Natural sources of noise include wildlife and birds, the wind rustling vegetation, rain, Limahuli Stream, and ocean waves.

### *Potential Impacts and Mitigation Measures*

It is expected that the proposed reduction in the number of visitors during peak visitor hours and the removal of through traffic on the highway will have a positive impact on noise levels in the park as it will result in less vehicle and human-generated noise at the park's most popular recreation areas such as Kē'ē Beach and the Kalalau Trailhead and important cultural sites such as Ka Ulu a Paoa Heiau and Wai a Kanaloa. No further mitigation is proposed.

During construction, there will be temporary noise impacts associated with construction equipment. Similarly, restoration work and ongoing maintenance may require the use of motorized equipment, but these impacts are expected to be temporary and can be scheduled during park closures. As proposed mitigation for temporary construction noise, State Parks is ~~anticipated to will~~ work with contractors to ensure adherence to DOH regulations as required under Chapter 11-46, HAR, including obtaining noise permits as required and to ensure the use of proper equipment and regular vehicle maintenance. Equipment mufflers or other noise attenuating equipment may also be employed as additional mitigation. All construction activities will be limited to daylight work hours.

## 4.5 AIR QUALITY

### *Existing Conditions*

Regional and local climate, together with the amount and type of activity generally determine the air quality of a given location. At the project site, winds are predominantly trade winds, blowing from the northeast.

The main source of air emissions at the park is vehicle exhaust along Kūhiō Highway and in the parking areas. The remaining areas of the park have relatively good air quality as there is minimal development and activities with air emissions. There are no point sources of airborne emission registered with the U.S. Environmental Protection Agency (EPA) within proximity of the project site (EPA 2015). Pollutants that exist may be attributable to

automobile traffic accessing the park and idling vehicles waiting for parking spaces. Emissions from such sources are intermittent and are quickly dispersed by prevailing winds. The State of Hawai‘i is in attainment with all National Ambient Air Quality Standards.

### ***Potential Impacts and Mitigation Measures***

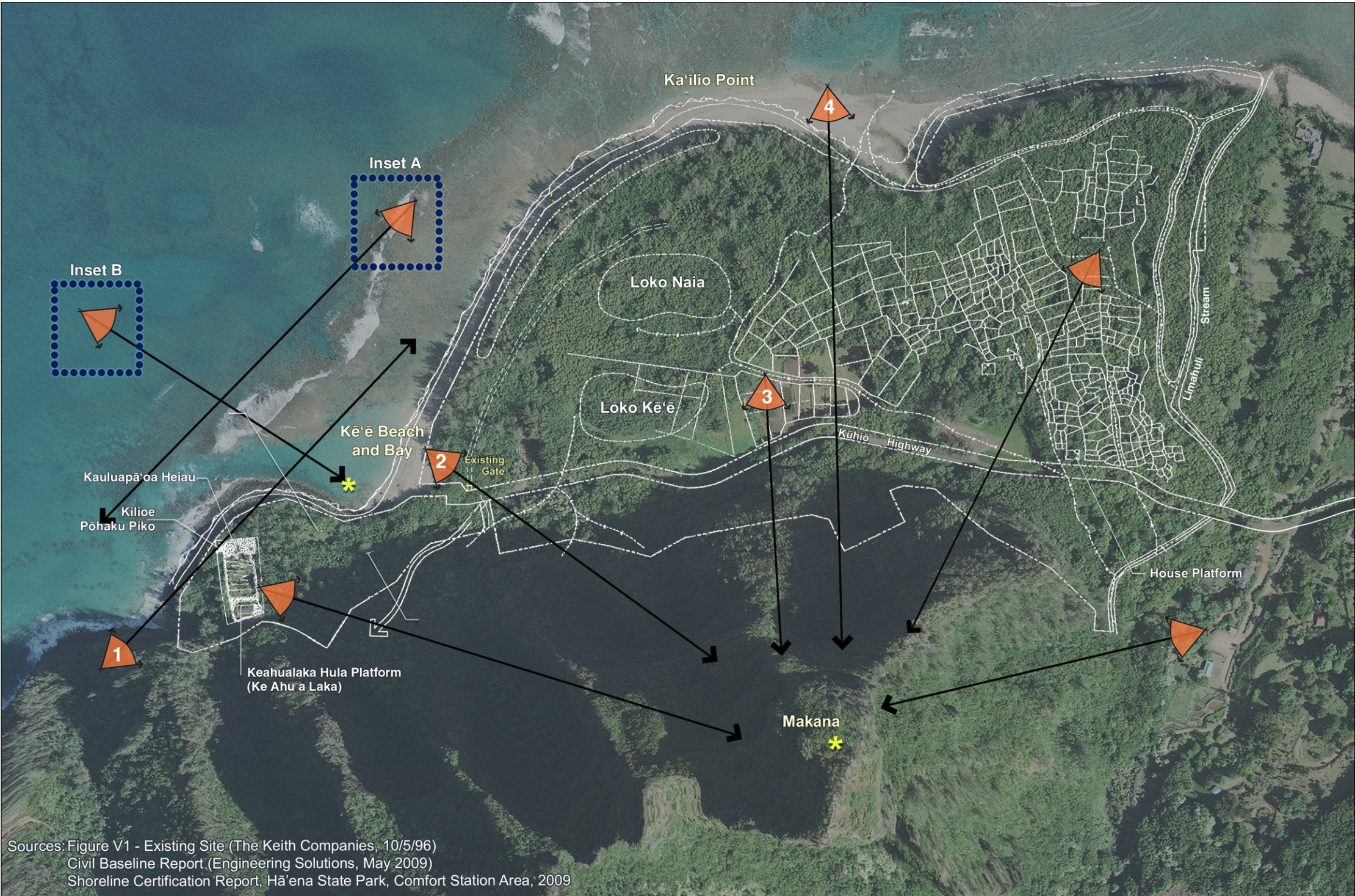
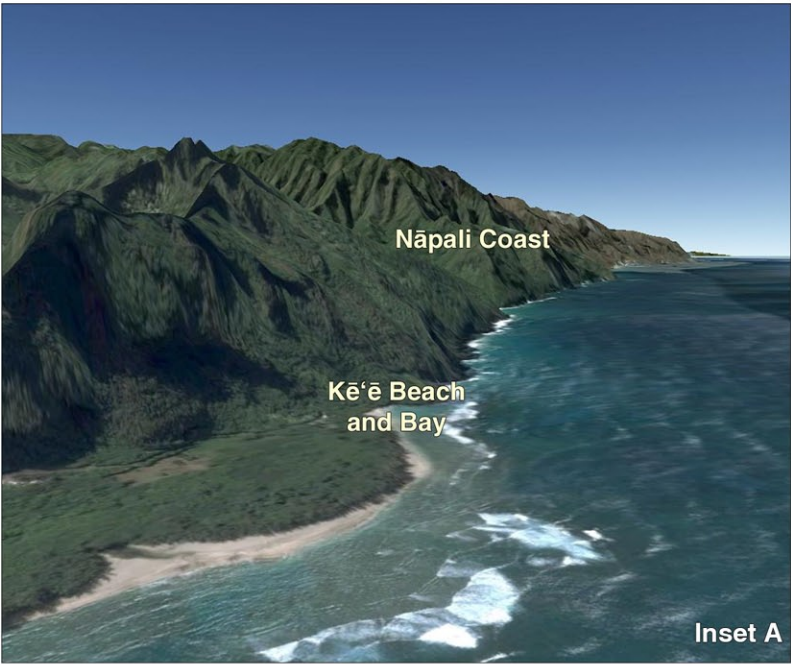
As with automobile noise, it is expected that the reduction in the number of vehicles driving along the highway to Kē‘ē will result in less automobile emissions and dust at the popular recreation sites and important cultural sites. Emissions from operation of construction equipment and other vehicles involved in construction, restoration, and maintenance activities may temporarily affect the ambient air quality in the immediate vicinity. However, these effects will be minimized through proper maintenance of construction equipment and vehicles and scheduling of such activity during park closures or in areas away from visitor activity whenever possible. In addition, there may be a temporary adverse impact on air quality attributable to dust generated during project construction, maintenance, and removal of invasive plant species particularly during earthmoving activity. Best management practices that meet DOH’s standards are anticipated to be employed as needed to mitigate dust during these activities. Construction activities will comply with the provisions of Section 11-60.1-33, Hawai‘i Administrative Rules (HAR) related to Fugitive Dust. Adequate measures to control dust during various phases of construction will be required to be implemented by any contractor employed by the DLNR to effect the project’s development. Example measures to control fugitive dust include: providing adequate water sources at the site prior to start-up of construction activities; minimizing dust from shoulders and access roads; providing adequate dust control measures during non-work hours and prior to daily start-up of construction activities; and controlling dust from debris being hauled to and from the project site.

## **4.6 SCENIC RESOURCES**

### ***Existing Conditions***

Hā‘ena State Park is well known for its scenic qualities and in particular, views of the rugged Nāpali coast. Kūhiō Highway’s present alignment provides access to many of the park’s varied scenic resources, ending at Kē‘ē, where the vista opens to the ocean and the beginning of the Nāpali coastline. At the park entrance, a single-lane bridge crosses Limahuli Stream, where views up- and downstream offer a rare view of a natural and relatively intact perennial stream. Under the shadow of Makana, which stands 1,280 feet above the park, the roadway passes the wet cave, Wai a Kanaloa, the Agricultural Complex, the seasonally-flooded wetlands of Loko Kē‘ē and ultimately terminates at Kē‘ē Beach. Wai a Kanaloa and the other wet caves in the area are both visually interesting to visitors and home to mo‘o in Hawaiian legend. From within the Agricultural Complex, Makana’s peak is visible and from this vantage point, the mountain’s prominence in Hā‘ena’s stories can be appreciated. For most of the park’s visitors, the white sand beach and lagoon at Kē‘ē are the primary destination. From here, one can observe important visual resources including the sea cliffs of the Nāpali Coast. Kē‘ē beach and lagoon are also valuable visual resources viewed from the air or points on the Kalalau Trail. Views of Kē‘ē and beyond from Ka Ulu a Paoa Heiau and the hula platform are also integral to these important cultural resources.





**LEGEND**

Historic and Scenic Resources

View Planes Documented in Current Study

**FIGURE 25**  
**Major Views**  
**HĀ'ENA STATE PARK**

Department of Land and Natural Resources  
 Island of Kaua'i

North  
 Linear Scale (Feet)

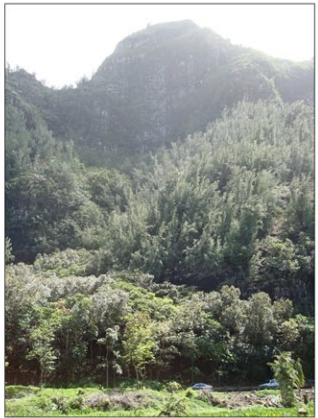
0 150 300 600



View 1: View of Kē'ē from 1/2 mile point on Kalalau Trail



View 2: Makana from Kē'ē



View 3: Makana from the cleared lo'i



View 4: Makana from 'auwai outlet near Ka'ilio Point





View 1: Hula Platform looking northeast



View 2: Kēʻē from Allerton Caretakers Cottage

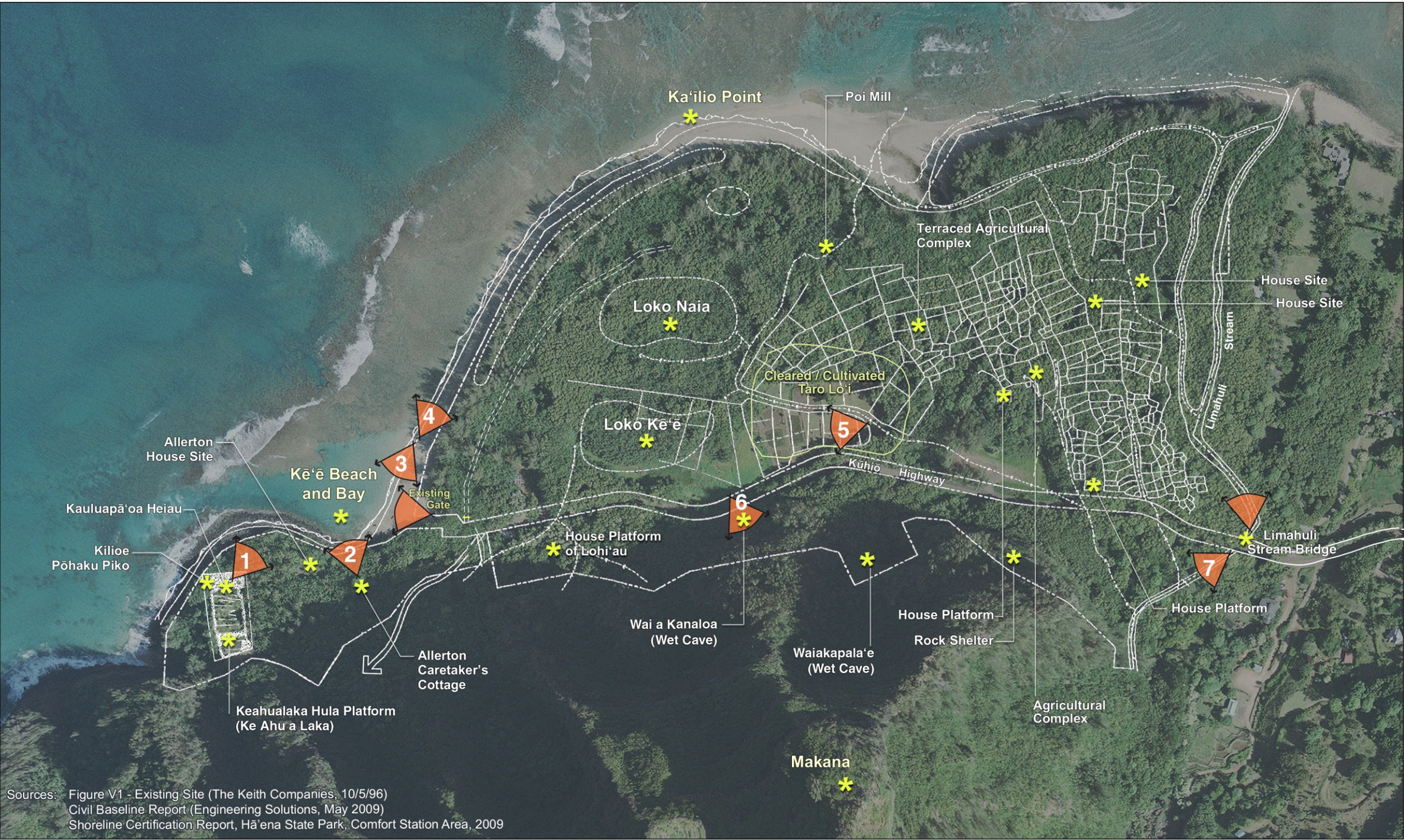
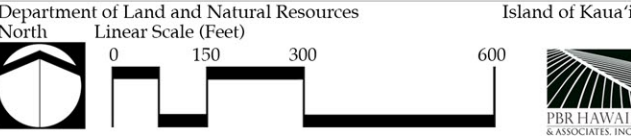


View 3: Kēʻē Beach

**LEGEND**

- Points of Interest
  - View Planes Documented in Current Study
- Note: View 7 photo credit to Kennedy Jenks.

**FIGURE 26**  
**Scenic Resources**  
**HĀʻENA STATE PARK**



Sources: Figure V1 - Existing Site (The Keith Companies, 10/5/96)  
 Civil Baseline Report (Engineering Solutions, May 2009)  
 Shoreline Certification Report, Hāʻena State Park, Comfort Station Area, 2009



View 4: Looking toward Kaʻilio Point



View 5: Cleared loʻi looking west



View 6: Wai a Kanaloa (Wet Cave)



View 7: Limahuli Stream looking upstream from crossing





Inset A: Non-native vegetation at Kilioe Pōhaku Piko as seen from Keahualaka Hula Platform



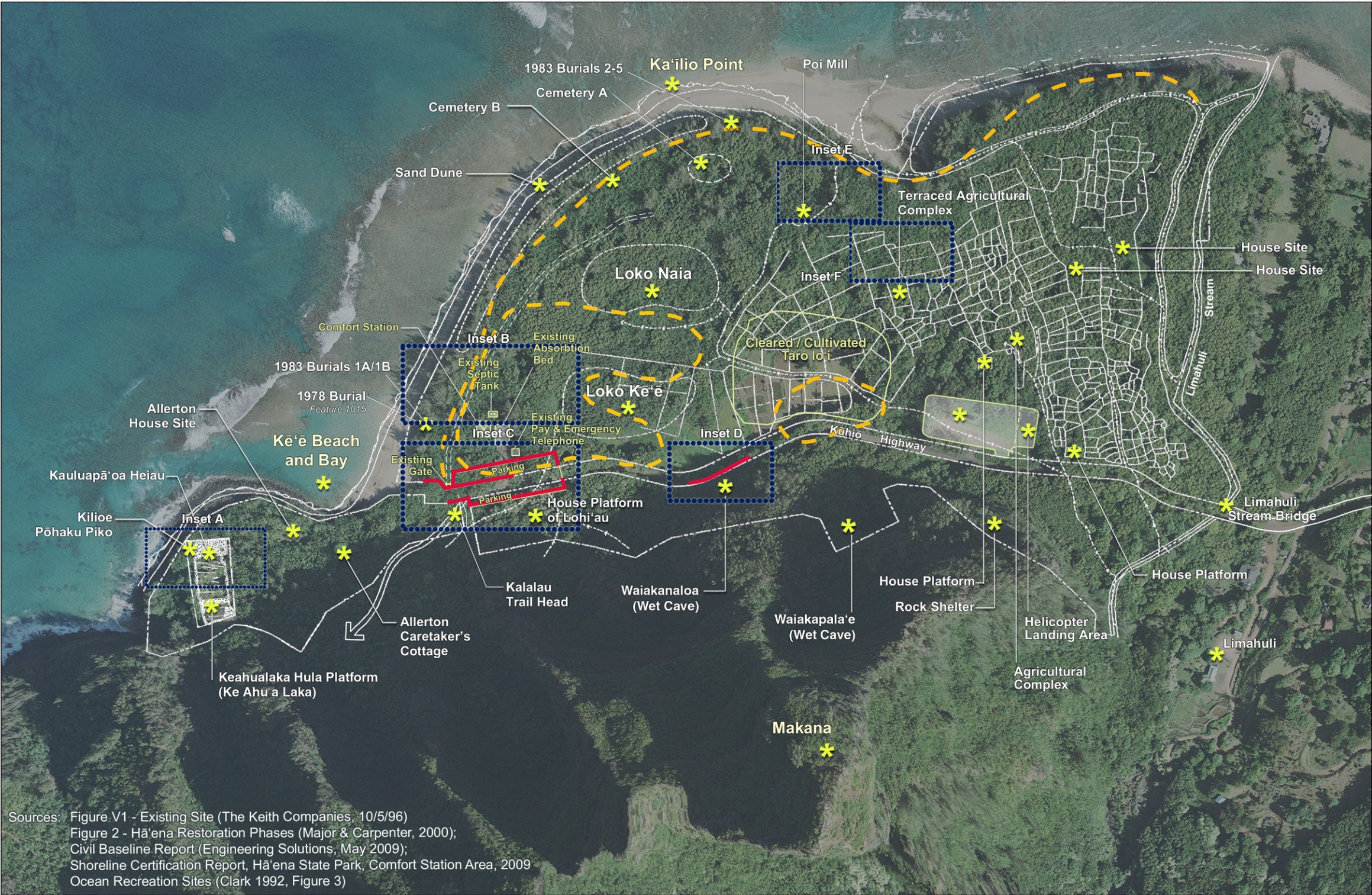
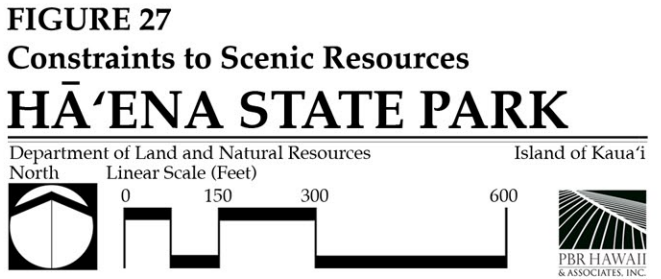
Inset B: Trees blocking views of Kē'e



Inset C: Cars and Trees at Kē'e Beach

**LEGEND**

- Non-Native Vegetation that obscures visual resources
- Parking (legal & illegal) that obscures visual resources



Inset D: Cars at Waiakanaloa



Inset E: Poi Mill site, hau trees



Inset F: View of Makana blocked by non-native vegetation



LEGEND

- Other Scenic Views and Lookouts:
- 1 Lo'i
  - 2 'Auwai
  - 3 Wetlands, Loko, Makana and Wai a Kanaloa
  - 4 Lo'i
  - 5 Lo'i
  - 6 Hau Tunnel
  - 7 Kē'ē Beach & Lagoon
  - 8 Makana and Ocean
  - 9 Ocean
  - 10 Lo'i and Entry Complex
  - 11 Makana
- Ocean Views

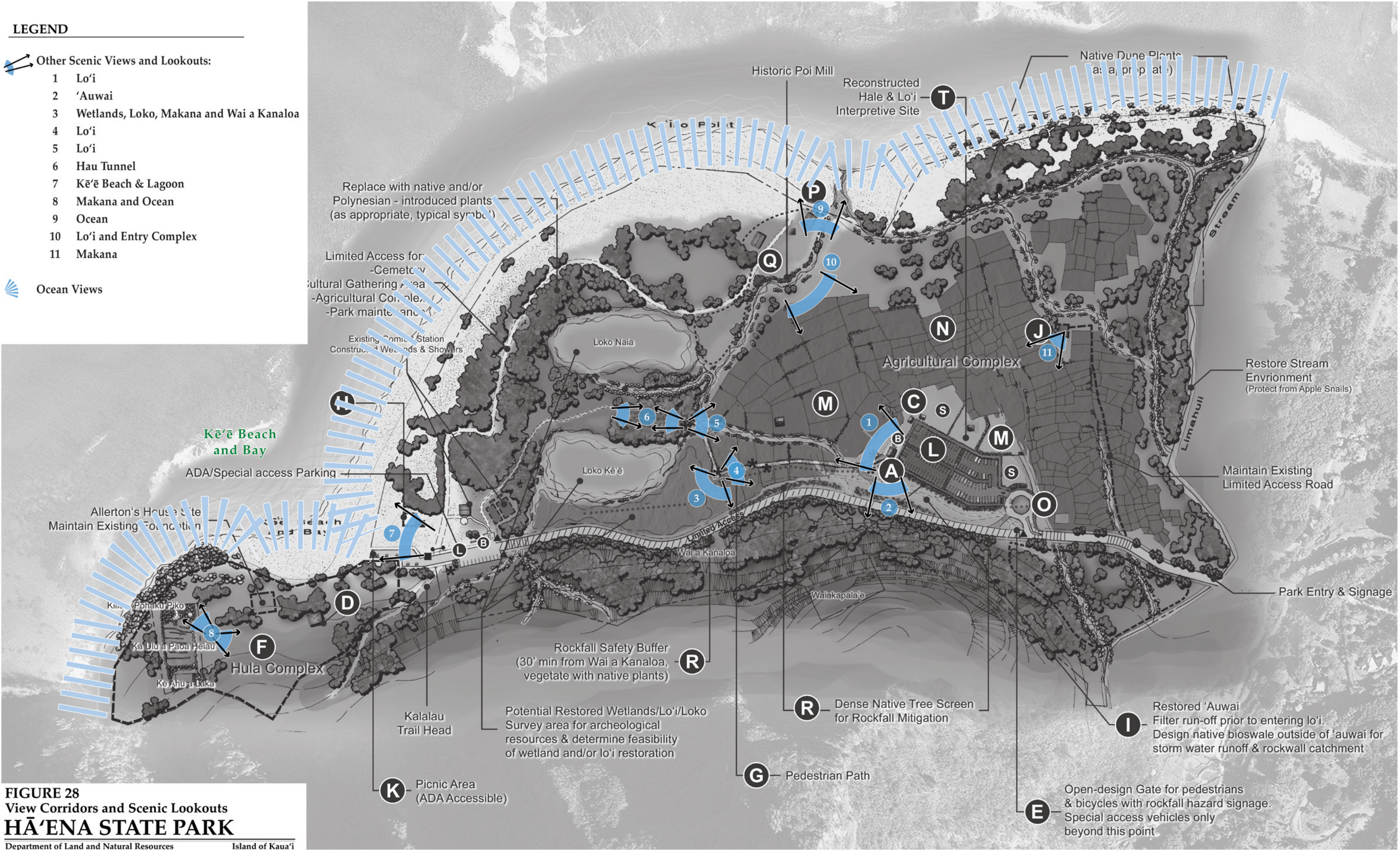
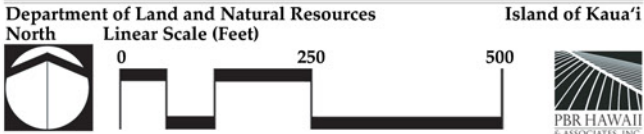


FIGURE 28  
View Corridors and Scenic Lookouts  
HĀ'ENA STATE PARK



Source: Based on 2001 Community Preferred Master Plan prepared by The Keith Companies  
Disclaimer: This graphic has been prepared for general Planning purposes only and should not be used for boundary interpretations or other spatial analysis beyond the limitations of the data.



Other areas rich with scenic resources are along the shoreline and Kalalau Trail. The park's major views and scenic resources are documented in Figure 25 and Figure 26.

Visual access to the park's scenic resources are currently diminished or outright impaired by the many cars parked illegally along the highway and the dense invasive tree canopy that covers much of the site's interior. Because Hā'ena is a major destination for visitors, hikers, and residents, parking is in high demand. Oftentimes people will park illegally directly in front of scenic resources blocking views wholesale or at best, altering the landscape with parked cars. The lifeguard stand at Kē'ē beach serves a vital function, however, its current location is directly in the line of sight as one approaches the beach from Kūhiō Highway. Scenic resources are also obscured by a heavy forest canopy dominated by alien vegetation. See Figure 27.

### ***Potential Impacts and Mitigation Measures***

Beneficial impacts to the park's scenic resources are anticipated due to various measures proposed in the Master Plan. New view corridors and lookouts proposed in the Master Plan are illustrated in Figure 28. First, clearing strategic areas of the dense interior of the park is recommended to be the focus of earlier phases of restoration and improvement. In addition, general vehicle access will be limited beyond the main parking area so the view of cars strewn along the highway at the base of the pali will be cleared. Visitors will access the park by foot or bicycle along the ~~Interpretive~~ Pedestrian Path, allowing views to the lo'i and Wai a Kanaloa without interruption by parked vehicles. Makana also will be visible from the ~~Interpretive~~ Pedestrian Path; it is currently not visible from the highway.

Interpretive displays will be installed along the ~~Interpretive~~ Pedestrian Path at key historical and cultural sites. As mitigation against potential negative impacts to views, such displays are recommended to be carefully designed so as not to impact the visually integrity and beauty of the park and its features. At Kē'ē, it is expected that elimination of the steady stream of vehicles waiting for parking and turnaround will serve as a beneficial impact and improve scenic views at this active area of the park.

The lifeguard stand is proposed to be moved northeast of its current location. This will serve to remove an obstruction of the view of the beach from Kūhiō Highway while also allowing better visual access of the entire lagoon for the lifeguards for public safety purposes.

New development in the park such as the ~~Welcome Pavilion, ECC, and Caretaker's Cottage Hale, main parking lot, and new restrooms~~ will be limited to areas of previous disturbance that do not obstruct any major or important viewplanes. Surrounded by forest, this location does not create an impact on any of the important views previously discussed and as shown in Figure 25. Similarly, the Hālau Wa'a proposed with the Cultural Gathering Place is located near the shoreline to create new scenic views of a Native Hawaiian structure in a restored coastal environment. Lastly, the restoration of the dune system, wetlands, and native forests and the removal of alien tree canopy in these areas will improve the park's scenic resources by restoring native ecosystems and inviting native wildlife back to the park.



## 4.7 INFRASTRUCTURE

Infrastructure and utilities serving the park are described in detail in the Civil Baseline Report (Appendix G) and the Wastewater Preliminary Engineering Report (Appendix H), which were prepared by Kennedy/Jenks Consultants.

### 4.7.1 WATER

#### *Existing Conditions*

According to Kennedy/Jenks, the County of Kauaʻi Department of Water (DOW) currently provides potable water to the park via a four-inch PVC pipe that terminates at the entrance to the park and has a one-inch meter. Water is gravity-fed from a 0.1 million gallon reservoir 1.1 miles away at a ground elevation of 126.5 feet above mean sea level. Within the park, a three-inch galvanized iron pipe runs along Kūhiō Highway in an east-west direction and serves the comfort station and associated shower at Kēʻē Beach. Most of the three-inch pipe is installed above ground and buried pipe depths are unknown. Recorded water usage from October 2003 to November 2006 averages 2,125 gpd. More efficient fixtures were added when the comfort station was upgraded in 2008. It is expected that the new fixtures will decrease water demand from 25 gallons per minute to 21 gallons per minute.

As a condition of the SMA permit for the existing comfort station, the Kauaʻi County DOW required that a backflow prevention device be installed (County permit number(s) SMA(U)-2007-2 and SMA(U)-2010-3). A backflow prevention device was installed in 2009 with the comfort station construction.

Limahuli Stream water is diverted for irrigation and residential purposes by multiple landowners. According to the CWRM, there were seven separate diversions from Limahuli Stream, six of which are still active. Of the six active diversions, three supply Limahuli Garden and Preserve and three serve private residences. All consist of PVC pipes and none pump water from the stream. Two of the diversions serve domestic uses and the rest are for agricultural, landscaping, or other irrigation purposes. The total diversion amount for five of the diversions is 0.8822 cfs, or just over 570,000 gpd. The amount diverted for one of the private residences is unknown.

A portion of the water (average of 760,000 gpd) diverted for Limahuli Garden is conveyed to the loʻi at Hāʻena State Park by PVC pipe. The intake is located on the south side (mauka) of the highway and the water flows by gravity through an HDPE pipe to and into the loʻi. The line begins as an eight-inch HDPE line at an elevation of 95.9 feet amsl and transitions to a six-inch HDPE line at 57.5 feet amsl. It crosses the highway through one of the 18-inch drainage culverts (Kennedy/Jenks 2011).

There is no fire protection water system within the park. Collected catchment water can be used and if needed, seawater is—could be airlifted to the site of any fire. The last fire hydrant/standpipe is located outside of the park, roughly 75 feet away, and is connected to the County's potable water system.

***Potential Impacts and Mitigation Measures***

The existing 3-inch water main within the park is expected to be sufficient for the proposed Master Plan improvements. This is due to the anticipated reduction in number of daily visitors recommended by the Master Plan. Comments from the County DOW, found in Section 11.0, indicate that water will be limited to the existing water meter until adequate water system facilities are available. To minimize demand and impacts on the County water system, the Master Plan recommends designing the new facilities to be as water efficient as possible and suggests using treated wastewater and collected rainwater for irrigating the landscaping ~~around the new facilities such as the Welcome Pavilion/ECC, picnic area, Caretaker's Cottage and Baseyard~~ as well as for toilet flushing wherever possible, at the Welcome Pavilion/ECC, Allerton Caretaker's Cottage, Montgomery House, and Caretaker's Cottage. The proposed integrated water system will involve dual water systems, which will be carefully designed and operated to prevent the cross-connection of the two systems including backflow prevention. Both systems including any non-potable spigots and irrigated areas will be clearly labeled. The two systems must be physically separated by air gaps or reduced-pressure backflow prevention devices to avoid contaminating the potable water supply. Backflow devices must be tested periodically and will comply with Chapter 11-21, HAR, Cross-Connection and Backflow Control.

As additional traditional lo'i are cleared, there may be more demand for irrigation water. More efficient use of the site's historic 'auwai, may help capture and divert precipitation to desired locations. The Master Plan suggests redesigning the Kūhiō Highway culverts so that rainwater that passes beneath it flows more naturally and can be filtered and used in the 'auwai system.

Additional diversion from Limahuli Stream should be reduced as much as possible by collecting, storing, and using rainwater. However, should additional volumes be desired from Limahuli Stream, effects on the stream's function and the biological resources it supports will need to be taken into consideration and permits may be required from the CWRM. The CWRM provided a pre-consultation response letter to this effect on August 25, 2008 (Section 11.0) noting that approvals required from the CWRM may include Stream Channel Alteration Permit; Stream Diversion Works and/or Petition to Amend In-stream Flow Standards.

An additional mitigation measure under consideration to minimize or avoid additional stream water diversion or demands on potable water is diversification of agricultural crops to include the addition of dryland crops within the Agricultural Complex. One request of the MPAC was to allow for community gardening activities to include other culturally relevant crops to be planted in addition to kalo. It is generally thought that complex was known to be flexible, allowing dryland cultivation to be done by simply redirecting water through different paths. 'Uala, or sweet potatoes, were grown in sandy areas and mai'a (bananas), kō (sugar cane), and 'awa (*Piper methysticum*) were grown in the valleys. If this mitigation measure is employed, close coordination with State Parks archaeologists and staff will be critical to ensure that the lo'i walls or other archaeological sites are not disturbed.

## 4.7.2 WASTEWATER

### *Existing Conditions*

Hā‘ena State Park’s first comfort station was built in 1979 at Kē‘ē Beach by DLNR and wastewater previously emptied into a six by eight-foot diameter cesspool. In 2001, a 2,500-gallon individual wastewater system including a 2,500 gallon septic tank and 2,700 s.f. leach field was built for the comfort station to comply with EPA’s large capacity cesspool closures.

In 2008, the original comfort station was demolished and replaced by a new one built in the same location. It maintains the same number of fixtures as the original – three water closets, one urinal, and two lavatories (sinks). These fixtures are estimated to generate 2,016 gpd (Kennedy/Jenks 2011). According to DOH standards for picnic parks, this equates to approximately 403 visitors per day based on an average 5 gpd per person (toilet wastes only). An outdoor shower with multiple shower heads and spigots is located to the south of the comfort station and runoff water is allowed to drain and infiltrate into the surrounding soils.

In the years 2007-2010, DLNR and members of the Hā‘ena community collaborated on the design of an alternate individual wastewater system to mitigate impacts to cultural and archaeological resources beneath the existing leach field. The preferred design of a more natural system, or constructed wetland, was installed in 2011. The constructed wetland is a subsurface flow-based wastewater treatment system, or one where the constructed wetland is contained within a liner, but the wastewater flows beneath the surface of a gravel medium within the liner so there is no exposed water under normal operating conditions. Native plants such as makaloa (*Cyperus laevigatus*) and ahu‘awa (*Cyperus javanicus*), two perennial sedges, are native species that were planted within the constructed wetland. Wastewater is first treated within a primary treatment tank. Then, the effluent flows to the constructed wetland where it is further treated by having the plants take up nitrogen and more importantly, create an environment where organisms that thrive in the root systems can feed on bacteria in the wastewater, further improving water quality before discharging it into the leaching chambers. The new infiltration field is located to the east of the archaeological site but west of the delineated natural wetlands of the two loko. The new comfort station and treatment facilities are sized to manage the same amount of wastewater, 2,016 gpd, or roughly 403 visitors per day, based on DOH standards (Kennedy/Jenks 2011). The existing septic tank and leach field will continue to serve as an emergency backup system in the event the constructed wetlands system is not operational.

Greywater from the outdoor shower at Kē‘ē is allowed to infiltrate into the surrounding ground.

In addition to the existing comfort station wastewater system, an abandoned cesspool was found at the Montgomery House. The existing Allerton House and Caretaker’s Cottage also likely have abandoned cesspools.

***Potential Impacts and Mitigation Measures***

Due to the remoteness of the park, Kennedy/Jenks does not propose connection to any public sanitary sewer systems and recommends that all wastewater be treated with an aerobic system with aeration to a minimum of R-2 water quality and disposed of on-site. As noted by the DOH, the project is located in a critical wastewater disposal area as determined by the Kaua'i County Wastewater Advisory Committee and no new cesspools are permitted. All individual wastewater systems proposed for the park will be set back as required from State surface waters such as wetlands. All wastewater plans must conform to applicable provisions of the DOH Administrative Rules Chapter 11-62, "Wastewater Systems" and the DOH reserves the right to review the detailed wastewater plans for conformance to applicable rules.

The addition of the ~~Welcome Pavilion/ECC, Caretaker's Cottage, and Hale at the Cultural Gathering Place~~ new restrooms near the Welcome Hale as well as the restoration of the Allerton Caretaker's Cottage and Montgomery House will include additional restroom facilities. However, as noted, the actual number of people using the facilities will decrease with the recommended reduction in daily visitor counts. In addition, toilets and water fixtures are becoming more efficient, which will also contribute to the reduction of projected water use per person. Therefore the overall volume of projected wastewater generated at the park will be less than current conditions.

The availability of new restroom facilities ~~at~~ near the Welcome ~~Hale Pavilion/ECC~~ is anticipated to help reduce the use of the Kē'ē comfort stations and therefore lessen the impact to nearby cultural and archaeological sites. Due to the remoteness of the Allerton Caretaker's Cottage and Montgomery House, they will require individual wastewater systems, which should also consider using natural systems to treat and improve water quality to minimize potential impacts and allow the effluent to be reused.

Based on strong community preference, the Master Plan proposes that any new wastewater systems include an aerobic wastewater treatment system that brings wastewater to an R-2 water quality level at a minimum and to reuse the effluent as much as possible to minimize impacts to the sensitive natural and cultural resources at the park. The following details the suite of mitigation measures under consideration to offset any impacts that could be caused by wastewater treatment and disposal:

- Treatment for wastewater should be with aerobic systems to a minimum R-2 water quality, with aeration and non-chlorine treatment such as UV disinfection to improve effluent quality. Consider using renewable energy sources to provide power.
- To minimize the footprint of wastewater facilities on ecological, cultural and archaeological resources, locate effluent absorption beds under parking lots and driveways if permitted. DOH requires the use of aerobic treatment units certified by NSF/ANSI 245 for systems that discharge directly into the groundwater.
- Add aeration to the existing constructed wetlands primary treatment tanks, powered by a PV system and replace the plants at the constructed wetlands to high-nutrient removing plants to improve water quality.

- For remote, low-use facilities, such as the Cultural Gathering Place, Montgomery House, and the Hula Complex, utilize composting toilets or ~~temporary/portable facilities as needed~~ innovative wastewater technologies.
- Use non-chemical disinfectants and cleaning products for maintenance, particularly in composting toilets, to minimize impacts to wastewater treatment processes and effluent quality. Use environmentally-safe soaps that contain plant nutrients and biocompatible cleaners.
- ~~Since the proposed wastewater facilities are currently not standard according to the DOH,~~ Include maintenance manuals and provide instruction to ensure proper upkeep of all wastewater systems at the park.
- Reuse effluent for irrigation, dust control, or toilet flushing rather than disposal.
- As an alternative, vault systems, which are fully contained and can be pumped and treated at an off-site facility are also being considered should effluent reuse not be possible onsite.

Kennedy/Jenks also provides a matrix of design alternatives in their Wastewater Preliminary Engineering Report (Appendix H), which will assist State Parks in selecting the appropriate wastewater treatment system at the time of building design. Beyond recommending that secondary treatment be provided at a minimum, the Master Plan does not prescribe the specific type of systems to be employed, allowing maximum flexibility for building designers to take advantage of emerging technologies in wastewater management. If defunct cesspools are located during the construction process, they will be abandoned in accordance with current regulations.

### 4.7.3 DRAINAGE

#### *Existing Conditions*

Kennedy/Jenks notes in their Civil Baseline Report that the drainage facilities at the park consist of five 18-inch reinforced concrete drain culverts that allow storm water to cross beneath Kūhiō Highway from south to north. Three have at-grade three-by-four-foot drain inlets and the other two have headwalls. Drainage calculations are provided in the Civil Baseline Report (Appendix G). It is estimated that approximately 56.8 cfs and 37.9 cfs of runoff from approximately 14.2 acres above Kūhiō Highway flows downslope into the culverts during the ten-year and two-year storm, respectively.

The drain culverts satisfy the requirements set forth in the County of Kauaʻi Department of Public Works Storm Drainage Standard. However, during a 50-year storm, an estimated 7,300 cfs of runoff flows directly to the ocean. This includes runoff from the west end of Makana that flows over Kūhiō Highway as well as the entire area of the park below Kūhiō Highway. During heavy rain storm events, the entire park is inundated with rushing waters from this surge of rainwater. The existing drainage improvements do not have the capacity and were not designed to handle the larger storm events (Kennedy/Jenks 2011).



**FIGURE 29: KĒ'Ē BEACH  
DAMAGE FOLLOWING HEAVY  
RAINS, MARCH 2012**

Also noted by Kennedy/Jenks, stormwater runoff is typically full of sediment, soil, plant and animal material and other debris during heavy rains, which causes muddy plumes at the outfalls. The two main outfalls are Limahuli Stream and Poholokeiki Channel (see Figure 11). However, the Kē'ē lifeguards and community members have also witnessed heavy runoff flowing from the end of the highway across the beach, eroding the sand and emptying into Kē'ē Lagoon. In March 2012, there was a major washout of the beach during heavy rains which required emergency repairs (see Figure 29).



*Photo courtesy of Kawika Winter*

### ***Potential Impacts and Mitigation Measures***

The addition of impervious surfaces to a site can result in a decrease in water quality and an increase in surface water volume during rain events. Water quality can be impacted by rainwater sheet flowing across impervious surfaces, collecting pollutants, sediment and trash and delivering the pollutants to natural drainages and streams. These same impervious areas, can also impact the quantity of water and the speed in which it is delivered to natural drainages and streams because there is no opportunity for water to infiltrate in place.

To mitigate increase in impervious surfaces and related impacts, the Master Plan proposes to develop an integrated water/wastewater/drainage system to maximize efficiencies of water use given the available resources on-site and to minimize surface runoff while improving water quality to the greatest extent practicable. This includes the installation of rainwater catchment cisterns on all the major ~~facilities—rooftops~~ including the Welcome Hale Pavilion/ECC, ~~Caretaker's Cottage~~, Allerton Caretaker's Cottage, Montgomery House, Cultural Gathering Area Hale, new restrooms, shuttle stop shelters (if not constructed only with PV panels), and existing comfort station at Kē'ē. The collected water is recommended to be used for nonpotable water uses such as irrigation or toilet flushing. In addition, the parking areas and its pedestrian paths will be paved with pervious surfaces. This will allow water to infiltrate more easily on-site, minimizing sheet flows of water during normal rain events and any accompanying pollutants, sediment or trash. Bioswales will be installed downslope of the parking areas to allow runoff to be detained and filtered naturally by native and/or Polynesian-introduced landscaping before percolating into the ground and serving the dual purpose of creating an aesthetically pleasing environment while managing rainwater runoff. If the 'auwai are able to be restored, this will further divert rainwater runoff to the lo'i, reducing the total amount of water draining from the site. The area mauka of the main parking lot can also be designed to serve multiple purposes including the restored 'auwai (if

feasible), overflow drainage and natural remediation and filtration of mauka runoff prior to entering the loko and lo'i areas, as well as rockfall catchment. Drainage improvements should also be made along the highway to filter and redirect runoff to prevent further washouts of Kē'ē Beach.

As very little activity occurs in or adjacent to the stream, sediment sources at the mouth of Limahuli Stream are assumed to be bank erosion due to the riparian conditions within the park as well as the condition of the forest and riparian area upstream. Riparian restoration is recommended as part of the Master Plan, including stream bank stabilization, clearing of invasive species, all of which are anticipated to have beneficial impacts to the stream biota and reduce sedimentation in the stream. Also, careful design of the park's lo'i and 'auwai restoration will be required so as not to allow a hydrologic connection between the park's lo'i and Limahuli Stream to prevent the spread of apple snails to the stream.

Best management practices during construction will be implemented to control sedimentation, erosion, and dust, and green design of the facilities will help prevent the runoff of contaminants to streams and coastal waters. Efforts will be made to minimize all large-scale grading, grubbing, and stockpiling of soil and limit such activity to the dry season whenever possible. NPDES permits will be sought as necessary. All discharges related to the construction and operation of the proposed project will comply with the State's Water Quality requirements contained in Chapters 11-54 and 11-55, HAR.

#### **4.7.4 ELECTRICAL AND COMMUNICATION SYSTEMS**

##### ***Existing Conditions***

The KIUC is the major electric utility for the Island of Kaua'i. There is no electricity service at the park, however, as KIUC's service terminates at the park entry. A ~~3/4-inch Hawaiian Telecom~~ DLNR-owned 11 pair cable telephone line runs along Kūhiō Highway to the pay phone ~~near the comfort station and emergency phone~~ at Kē'ē Beach and parallels the existing three-inch water line.

##### ***Potential Impacts and Mitigation Measures***

Due to the park's limited access to infrastructure and the dispersed locations of some of the proposed facilities, all facilities requiring power are recommended to be designed to be as energy efficient as possible and to use renewable energy resources to fill the remaining demand wherever feasible.

A cursory review of the potential renewable energy resources that may be available at Hā'ena State Park was conducted based on readily available information. Solar hot water heaters and solar PV energy are well-established technologies that have been installed widely throughout the islands. According to data from the Hawai'i Sugar Planters Association collected in 1985, an estimated 350 solar calories per square centimeter falls on the park area per day. The higher the intensity, the better the resource is. The average for the island is 350 cal/cm<sup>2</sup>/day, with ranges from 0 to 500 cal/cm<sup>2</sup>/day. A solar hot water heater can be installed at ~~the Caretaker's Cottage, the Welcome Pavilion/ECC, and any of the other~~ facilities that may

require hot water such as the Cultural Gathering Area, or Montgomery House and Allerton Caretaker's Cottage, once they are restored. Solar PV panels could also be installed at all of these locations to provide a renewable source of power as well as at the shuttle stop at the entry turnaround. The panels could be designed to double as a shade structure over the seating areas. Solar PV could also be installed at the comfort station at Kē'ē to power any new equipment needed for an upgraded wastewater treatment system.

Microwind and microhydropower are other sources of renewable energy that should be considered in addition to solar. There are smaller wind turbines that can be installed on rooftops at the park or those that rotate on a vertical instead of horizontal axis to minimize any impact to birds. There are also evolving wind technologies, such as the Humdinger Windbelt developed by a Hawai'i-based company, that does not have rotating airfoils but captures energy from aeroelastic flutter (<http://www.humdingerwind.com>). As technology evolves, State Parks and DLNR should continue to look into viable alternatives as improvements are phased in and developed.

A microhydropower system needs a consistently running source of water (as little as two gallons per minute) and a relatively small elevation change (as little as two to three feet of head) to turn a turbine to create power. However, more of each will increase output. Microhydropower systems are more efficient the closer they are to the energy source and therefore Limahuli Stream, the only perennial stream at the park, could be investigated to provide a source for microhydropower. Neighboring Limahuli Gardens uses a microhydropower system to power their entire visitor center which runs on a 24V system and includes lights, a computer, and cash register (Winter, personal communication 2011). No water is diverted for a microhydropower system. However, care must still be taken to size and locate the microhydropower to minimize impacts to the stream biota and to account for periods of low stream flow if installed. These potential impacts include decreased water quality, loss of habitat, and entrainment and impingement and associated mortality of migratory fishes, such as native Hawaiian amphidromous stream fauna made up of goby fishes ('o'opu), prawns or shrimp ('ōpae) and snails (hīhīwai and hapawai). To minimize the impacts of microhydropower systems on native Hawai'i amphidromous biota, the diversion intakes must be designed to have low-velocity intakes placed subsurface in relatively deep pool in the center of the stream in order to minimize entrainment of larval or post-larval stream animals. Also, as a potential in-stream use, any microhydropower system should be integrated with a public trust use such as taro lo'i production should it be pursued.

In order to maintain communications and provide for public safety during emergencies, the existing hardline pay phone and emergency phone at Kē'ē Beach ~~is proposed to should~~ be maintained. For similar reasons, hardline telephone service is proposed to be provided at the ~~Caretaker's Cottage and Welcome Pavilion/ECC Hale~~. ~~A second pay phone or at least a closed-circuit phone which connects to the Caretaker is also proposed to be provided on the outside of the Welcome Pavilion/ECC so that emergency calls can be made when the ECC is closed and hikers who need assistance can contact the Caretaker.~~ The remote and mountainous location limits wireless communications but wireless services should also be

considered for visitor convenience and emergency situations. It also may be required for certain parking management technologies.

#### **4.7.5 SOLID WASTE DISPOSAL**

##### ***Existing Conditions***

Trash receptacles and recycle bins are stationed throughout the Kēʻē Beach area. State Parks staff provides trash removal on a daily basis.

##### ***Potential Impacts and Mitigation Measures***

Although fewer users to the park will likely result in less trash generated at the park, State Parks will also recommend that all visitors carry in what they carry out. In addition, new trash receptacles will be provided at the Welcome ~~Pavilion/ECC~~ Hale, picnic areas, ~~Caretaker's Cottage~~, Montgomery House, and Allerton Caretaker's Cottage so that waste disposal is convenient to park users. Recycle bins are recommended to be installed along with trash receptacles and all receptacles are proposed to have animal-proof lids to minimize foraging by feral cats, dogs, rats and chickens and reduce the potential for windblown debris. Daily maintenance and removal of trash and recyclables is recommended to be continued at the park to minimize the amount of solid waste at the park that may be windblown or washed into the ocean, stream, and other sensitive natural and cultural environments. There may be hazardous substances, pollutants, or contaminants to be present in the soils in the areas where there were abandoned vehicles. However, no work is anticipated in these areas at this time. State Parks will work with the State HEER Office to determine the appropriate actions to comply with the relevant environmental laws if applicable should any work occur in those areas.

### **4.8 SOCIO-ECONOMIC CHARACTERISTICS**

#### **4.8.1 COMMUNITY CHARACTER**

##### ***Existing Conditions***

Hāʻena State Park is located at the terminus of Kūhiō Highway, in the ahupuaʻa of Hāʻena, District of Hanalei, Island of Kauaʻi. The area is characterized by its rural residential communities, traditional agriculture, cultural and recreational amenities, including Limahuli Garden and Preserve, the Kalalau Trail, and Hāʻena County Park.

##### ***Potential Impacts and Mitigation Measures***

The proposed Master Plan does not change the use of Hāʻena State Park. It will continue to be a State Park and therefore is not anticipated to have any impact to the rural character of the area. The reduction in the number of ~~daily~~ visitors on average during peak hours may help improve the quiet and reduce congestion in this rural community in the long-term.

## 4.8.2 POPULATION

### *Existing Conditions*

According to the 2010 United States Census, the population of the Hā‘ena Census Designated Place (CDP) was 431. The median age of Hā‘ena residents in 2010 was 42.6 years of age with just over a fifth of the population under the age of 18 and just under a fifth of the population over the age of 60. A significant proportion of the population identified themselves as white (66.8%) and 16.7% identified themselves as two or more races. Native Hawaiians and other Pacific Islanders were the next most populous ethnic group at 13.2%. The average household size was 2.6 persons compared with 2.84 for all of Kaua‘i (Table 8).

**TABLE 8: 2010 CENSUS DATA**

	<b>HĀ‘ENA CENSUS DESIGNATED PLACE (CDP)</b>	<b>KAUA‘I</b>	<b>HAWAI‘I</b>
Total Population	431	67,091	1,360,301
Median Age	42.6	41.3	38.6
% Population under 18	21.6%	22.7%	22.3%
% Population 60 Years and Over	18.3%	21.9%	20.4%
% of Total Population that Identifies as One Race	83.3%		
<i>White</i>	66.8%	33%	24.7%
<i>Black or African American</i>	0%	.4%	1.6%
<i>Am. Indian and Alaska Native</i>	.2%	.4%	.3%
<i>Asian</i>	1.6%	31.3%	38.6%
<i>Native Hawaiian and Other Pacific Islander</i>	13.2%	9%	10%
<i>Some other Race</i>	1.4%	.9%	1.2%
<i>Two or more races</i>	16.7%	24.9%	23.6%
Average Household Size (persons per household)	2.6	2.84	2.89
Total Housing Units	332	29,793	519,508
Occupied Housing Units	166	23,240	455,338
Vacant Housing Units	166	6,553	64,170
% Vacant Housing Units that are for Seasonal/Recreational/Occasional Use	84.9%	63.7%	46.9%

### *Potential Impacts and Mitigation Measures*

It is not expected that the proposed Master Plan will have any effect on the age, population, or racial distribution in the Hā‘ena CDP or Kaua‘i ~~except for the singular increase of an on-site caretaker and his/her family if permitted to live on-site with the caretaker, if they are not from Hā‘ena.~~ No mitigation measures are ~~planned as the potential impacts are anticipated to be minimal proposed~~ due to the overall reduction in the number of people at the park on a daily basis and the improved facilities proposed in the Master Plan would help to mitigate any negative impacts.



### 4.8.3 ECONOMY

#### *Existing Conditions*

According to the 2013 State of Hawai‘i Data Book, the average annual number of employed members of the civilian labor force was 617,850 statewide. The average annual number of employed civilians on Kaua‘i was 30,550. The greatest number of wage and salaried jobs was in the leisure and hospitality industry (9,100), followed by trade, transportation and utilities (5,800), government (4,500), professional and business services (2,700) and education (2,700). As of March 2014, the 2013 annual average statewide unemployment rate (not seasonally adjusted) was 4.8%. Kaua‘i’s average unemployment rate (not seasonally adjusted) reported in March 2014 for the year of 2013 was 5.7%, a significant improvement over 2012 in which unemployment was at 7.2%. It was as high as 9.3% in 2009.

The Kaua‘i GP also recognizes the visitor industry to be the driving force of the County’s economy. While the GP highlights the need to diversify the economy, it also recommends that existing facilities require regular maintenance and upgrades to support the industry.

For the Hā‘ena CDP, 2010 Census data on income and employment has high margin of errors due to the relatively low number of responses. However, according to what was reported, the average household income was estimated to be \$48,882 with a mean household income of \$75,915. Of the 187 people who responded to the occupation questions, roughly half were in management, business, science and arts occupations and another 30% worked in service occupations. Thirteen percent worked in sales and office occupations and 10% worked in natural resources, construction, and maintenance occupations. All 187 drove alone to work. No information was available on the amount of families or people living below the poverty level.

#### *Potential Impacts and Mitigation Measures*

The proposed limit on the number of people entering the park may reduce the number of people who visit the North Shore and may therefore negatively impact the local economy and North Shore businesses. However, the economic impact could be mitigated by visitors who plan their visit to the North Shore in advance and potentially take greater advantage of other North Shore attractions when the park is at capacity. They may also shift their time to other areas on Kaua‘i which will benefit businesses in other parts of the island.

The recommendation for an increase in ~~interpretive and caretaking activities in the park~~ staff and shuttle operations may stimulate additional employment with the proposed new fees for visitor entry, parking, and shuttle tickets recommended to generate enough new income to support these activities respectively. Construction of facilities will stimulate purchase of materials (generating excise tax revenues) and employment for labor (generating income tax revenues). However, the timing of the improvements is subject to CIP funding through the state budget process and will be temporary.

The reduction in the number of daily visitors during peak visitor hours at the park may also reduce the number of lifeguards required at Kē‘ē Beach. However, as noted, the overall

employment at the park is recommended to be increased in other areas, or may shift the requirements for lifeguards to the County beach park, which may help offset the loss.

## **4.9 PUBLIC SERVICES AND FACILITIES**

### **4.9.1 POLICE AND FIRE PROTECTION**

#### ***Existing Conditions***

The Kauaʻi Police Department has three stations located approximately 25 miles apart. The station nearest the park is co-located with a fire station just north of the Princeville Shopping Center. The main police station and administrative headquarters are located in Līhuʻe at the County facility off Kaʻana Street near Kapule Highway. The Kauaʻi County Fire Department has a temporary lifeguard stand at the end of the highway fronting Kēʻē Beach. There are typically three lifeguards stationed at the beach under a State contract with the County. A helicopter landing pad is also located in the park, in the event of emergencies.

#### ***Potential Impacts and Mitigation Measures***

The Master Plan will reduce the number of park users who may require police, fire and emergency rescue resources including the number of day hikers on the Kalalau Trail (hikers without camping permits). State Parks will work with the County Police and Fire Departments to comply with requirements of the Kauaʻi County Fire Code including emergency access by fire apparatus, ambulance, and other emergency vehicles as required. Due to the remote location of the park and the potential for hazardous conditions, emergency evacuation plans and rescue plans for various natural hazards should be developed as discussed in Sections 2.5.2 and 3.10 to help improve coordination of public safety and park staff response efforts in times of emergencies. Signs indicating where evacuation routes are located are also recommended to be installed at the park and information about what to do in different emergency situations should be included as part of the ~~required~~ visitor orientation ~~session~~ information.

The Master Plan calls for the lifeguard stand to be moved north of its current location, but this will be a positive impact as it will allow better visibility of the entire Kēʻē Lagoon for lifeguards. A helicopter landing area will be maintained at the park and can be used for emergency landings. However, the Fire Department prefers the open grassy area near the Hui's current shelter in the loʻi for emergency helicopter landings. This area may continue to be used as an emergency landing zone as it is unsuitable for loʻi restoration and proposed to remain as an open grassy field for educational and special events makai of the Welcome ~~Pavilion/ECC-Hale~~. However, the Fire Department has noted they will land wherever they need to as appropriate for the emergency situation.

The emergency evacuation drills should be performed with State Civil Defense, Kauaʻi fire and police departments annually at a minimum to ensure readiness. All park staff and others involved with the ongoing maintenance of the park such as volunteers, concessionaires/lessees and their staff, and specialists tending the Agricultural Complex and Hula Complex should be trained in the proper procedures for handling different emergency situations and participate in the annual drills.

## 4.9.2 SCHOOLS

### *Existing Conditions*

Public school education is under the direct supervision of the Hawai‘i State Department of Education. Kaua‘i’s public schools are divided into three school complexes, Kapa‘a, Kaua‘i, and Waimea. There are a total of ten elementary schools, three intermediate schools, four high schools, and four charter schools. A total of 9,505 students were enrolled in Kaua‘i’s public school system in the 2013–2014 school year. Higher education in Kaua‘i is provided through Kaua‘i Community College, which is part of the University of Hawai‘i system. This two-year college offers Associate degrees in Applied Science, Science, and Arts with a variety of concentrations as well as a number of certificates. Hā‘ena State Park is located in the Kapa‘a Complex and the closest public school is Hanalei Elementary School in Hanalei.

### *Potential Impacts and Mitigation Measures*

~~Because of the minimal increase of a single Caretaker on-site at the park who may or may not have a family permitted to stay on-site,~~ The proposed Master Plan is not anticipated to add a significant any demand on public school facilities. However, many of the proposed educational and interpretive programs are expected to support the area’s educational resources by providing opportunities for hands-on activities covering a range of topics spanning the natural, cultural, archaeologic realms of study. The park’s proposed facilities at the ECC interpretive displays and Cultural Gathering Area and the restoration of the dune system, Hula and Agricultural Complexes, wetlands and loko, riparian and forest environments will provide a variety of facilities for both indoor and outdoor learning experiences.

## 4.9.3 HEALTH CARE SERVICES

### *Existing Conditions*

There are three major hospitals on Kaua‘i. They are: the Kaua‘i Veterans Memorial Hospital in Waimea, the Samuel Mahelona Hospital in Kapa‘a, and the Wilcox Memorial Hospital in Līhu‘e. The closest health care facility to the park is the Samuel Mahelona Hospital in Kapa‘a, which has 24-hour emergency services available.

### *Potential Impacts and Mitigation Measures*

The Master Plan developments and management measures are not anticipated to create any greater demand on regional health care services. It is anticipated that the reduced number of visitors as well as improved visitor education, improved signage, and location of facilities away from the rockfall hazard area will result in beneficial impacts to public health and potentially required health care services.

## 4.9.4 RECREATIONAL FACILITIES

### *Existing Conditions*

Hā‘ena State Park is one of seven state parks on Kaua‘i. There are also two state recreational piers on the island. County facilities in the Princeville-Hā‘ena corridor include Hā‘ena Beach

Park, ‘Anini Beach Park, Hanalei Black Pot, and Hanalei Pavilion. The only nearby federal facility is the Hanalei National Wildlife Refuge, which includes a lookout at Hanalei and developed visitor facilities at Kīlauea.

Hā‘ena State Park is heavily utilized year round by as many as 2,000+ visitors per day during high-season months. The park is used for a variety of ocean-oriented recreational activities including, swimming, snorkeling, sunbathing, beachcombing and fishing. Land-based recreation within the park is primarily hiking on the Kalalau trail. The popularity of the park manifests itself in traffic congestion along Kūhiō Highway; illegal parking (inside and outside the park); and user group conflicts between fishers and those recreating in the nearshore waters. There is minimal interpretation of the park’s cultural, archaeological and ecological resources; thus, users of the park may not know the sensitivity of the resources, nor are they provided with any information on how to conscientiously interact with them. Minimal management of the park’s flora has resulted in an overgrowth of alien plants and trees, impacting the park’s ecological health and scenic resources.

### ***Potential Impacts and Mitigation Measures***

An objective of the Master Plan is to balance outdoor recreational uses with the protection and preservation of the park’s natural and cultural features, enriching the experience for all. Existing outdoor recreational opportunities such as swimming, sunbathing and snorkeling along with access to the Kalalau Trail are proposed to continue. In addition, a picnic area is proposed to be added ~~near the Welcome Pavilion/ECC and~~ at the end of the highway pavement at Kē‘ē. The ~~Interpretive-Pedestrian~~ Path will facilitate walking and sightseeing ~~and possibly bicycling~~ in the park. Table 9 provides a list of the existing and proposed recreational activities anticipated to be permitted at the park.

The probable reduction in total number of visitors per day will create both positive and potentially negative impacts if not mitigated. Limiting the number of visitors may have the positive effect of enhancing the recreational experiences within the park. As examples, nature viewing such as bird watching may be enhanced with fewer vehicles driving in the area and snorkelers may observe reef life without interference by other humans. ~~Picnicking near the ECC and overlooking~~ Views of the lo‘i may expose a visitor to traditional agricultural practices unanticipated at a visit to a beach park. Beach goers may find more room on the sand and less trash will generally be generated by fewer visitors.

However, negative effects may be the distribution of recreational demand to other facilities on the North Shore and island-wide. The 2003 Hawai‘i Tourism Authority’s Natural Resources Assessment identified both Hā‘ena State Park and its nearest neighboring public park, Hā‘ena Beach Park, to be “high use” parks and high priorities for improvements. Thus, if the number of visitors to Hā‘ena State Park, are restricted, it may serve to redistribute the demand in Hā‘ena to the County park, placing greater demand on the County facilities and further degrading its resources. State Parks should monitor visitor use of the County’s Hā‘ena Beach Park to judge if the recreational demand is shifted from one facility to the other. If so, an adjustment to the number of visitors allowed per day to Hā‘ena State Park might be considered as a mitigating measure. If a shuttle is employed, a mitigation measure



may be to include a stop at Hā'ena Beach Park to alleviate traffic and congestion at the County park as well.

**TABLE 9: EXISTING AND PROPOSED RECREATIONAL ACTIVITIES**

Activity	Existing	Proposed	Modifications
Kayak	x		Discourage kayak launching and landing
Paddling/Canoe		x	Launching only permitted near Hale Wa'a
SCUBA	x	x	
Snorkeling	x	x	
Surfing/Bodyboarding	x	x	Outside lagoon
Stand Up Paddleboarding	x	x	
Windsurfing/Kiteboarding	x	x	Outside lagoon
Swimming	x	x	
Fishing (shore)	x	x	
Fishing (boat)	x	x	
Beach Activities	x	x	
Kalalau Trailhead Access	x	x	
Camping		x	Scheduled events at the Cultural Gathering Area
Wilderness Camping Access	x	x	Require check-in/out
Bicycling		x	Interpretive Path
Picnicking	x	x	
Pavilion/Hale		x	traditional hale at Cultural Gathering Place and a traditional hale at Phase I lo'i
Walking/Jogging	x	x	
Comfort Station	x	x	Additional facilities at the Welcome Pavilion/ECC, Allerton House, and Montgomery House.
Concessions		x	To be permitted under an approved management entity
Nature Viewing	x	x	Increase interpretation of natural resources
Botanical Gardens		x	Demonstration Gardens at ECC, flora restoration along dunes, lo'i and wetland restoration
Scenic Lookout		x	Sites along Interpretive Path, trails, shoreline, entry complex, picnic areas
Historical/Cultural Interpretive Display	x	x	Include appropriate interpretation of archaeological, cultural and historic resources

## 5.0 CONFORMANCE WITH LAND USE PLANS, POLICIES, AND CONTROLS

The processing of various permits and approvals are prerequisites to the implementation of the Hā'ena State Park Master Plan. Relevant federal, state and county regulations, land use plans, policies, and ordinances are described below.

### 5.1 FEDERAL

#### 5.1.1 AMERICANS WITH DISABILITIES ACT (ADA) OF 1990, AS AMENDED

The Americans with Disabilities Act of 1990, as amended (ADA) is a civil rights law that prohibits discrimination on the basis of disability. The ADA requires that all buildings, facilities, and sites shall conform to applicable federal, State, and County accessibility guidelines and standards. Section 103-50, HRS, requires that all State of Hawai'i or County government buildings, facilities, and sites to be designed and constructed to conform to the ADA Accessibility Guidelines, the federal Fair Housing Amendments Act, and other applicable design standards, as adopted and amended by the Disability and Communication Access Board (DCAB).

All plans and specifications prepared for the construction of State of Hawai'i or County government buildings, facilities, and sites are to be reviewed by the DCAB for conformance to the ADA guidelines and standards. All new construction and alterations of buildings and facilities are required to comply with the Department of Justice's (DOJ) 2010 ADA Standards for Accessible Design. For accessible outdoor elements such as trails, picnic and camping areas, viewing areas, beach access routes, and other components of outdoor developed areas, the Final Guidelines, Architectural Barriers Act Accessibility Guidelines (ABAAG); Outdoor Developed Areas, published in September 26, 2013 will be referenced. Improvements to existing roadways, access roads, intersections, and other areas of the public right-of-way must comply with HRS §103-50.

Title II of the ADA requires that state and local government do not discriminate against persons with disabilities in the provision of government services. It is the policy of DLNR to pursue all reasonable efforts to ensure that its facilities, programs, and services are accessible to persons with disabilities.

**Discussion:** If feasible and appropriate, State Parks intends to provide ADA access to archaeological and cultural sites, historic properties, and wilderness areas while preserving each site's significant features. In such instances where outdoor facilities cannot be made ADA accessible, efforts will be made to provide an "equivalent experience." Equivalent experience may be in the form of an alternate facility that provides a similar environment, view, or interpretive encounter. Under the direction of DLNR's ADA Coordinator, State Parks will develop an accessibility plan to make as much of the park's visitor facilities accessible to persons with disabilities as appropriate. Although not required, State Parks may

also consider referring to the appropriate standards for outdoor areas and recreational facilities as adopted in Chapter 10 of the Architectural Barriers Act of 1968 Accessibility Standards for federal facilities in order to increase the accessibility of the park's outdoor areas, if economically feasible, and they do not impact the cultural, historic, and scenic resources of the park.

The new facilities will be designed to be compliant with ADA requirements. The recently constructed comfort station near Kē'ē Beach is constructed to ADA standards and the proposed Welcome Pavilion and ECC Hale and new restrooms will be as well. Parking areas and walkways have been laid out to accommodate the appropriate number of accessible stalls and dimensional requirements of the ADA. If electric vehicle parking and charging stations are provided, they must comply with DCAB Interpretive Opinion 2012-01, which states, 'Where EV charging stations are provided, 5%, but not less than one of each type of EV station shall be accessible. Any new shuttle service also must be accessible. The drop-off and boarding facilities at the park and any remote parking are considered passenger loading zone and must comply with the requirements for an accessible bus loading area. Bicycle racks must connect to an accessible route and a wheelchair clear floor space that is firm, stable, and slip resistant adjacent to the bike racks.

### 5.1.2 ENDANGERED SPECIES ACT

The Endangered Species Act of 1973 provides a program for the conservation of threatened and endangered plants and animals and their habitats. The lead federal agencies for implementing the Act are the USFWS and the NOAA Fisheries Service.

**Discussion:** Hā'ena's biological resources, along with mitigation measures are discussed in greater detail later in this report, in Sections 3.5-3.9. The USFWS provided a Technical Assistance letter in response to the pre-consultation process (see Section 11.0). The letter confirms that there is no federally-designated critical habitat within the park. However, endangered and threatened species are known to either frequent or to exist within the park. USFWS confirmed this in their subsequent comment letter on the EISPN (see Section 12.0). The letter provides additional recommendations to minimize impacts to protected species which have been incorporated into this DEIS and discussed further in Chapter 3.0. 'Īlio-holo-i-ka-uaua, the Hawaiian monk seal (*Monachus schauinslandi*), 'ōpe'ape'a or Hawaiian hoary bat (*Lasiurus cinereus semotus*), honu or native green sea turtle (*Chelonia mydas*), and honu 'ea or hawksbill turtle (*Eretmochelys imbricata*), along with a number of native Hawaiian waterbirds are listed by the Endangered Species Act as "Threatened" or "Endangered" and are among those that may frequent the park. In August 2015, the National Marine Fisheries Service (NMFS) issued a final rule revising the critical habitat for the Hawaiian monk seals to include the marine habitat fronting Hā'ena State Park from the 200-meter depth contour line, including the seafloor, through the water's edge and 5 meters into the terrestrial environment from the shoreline (50 Code of Federal Regulations Part 226). Therefore, any changes in these areas will require consultation with the NMFS. Also, if habitats are created within the park specifically for endangered or threatened wildlife, additional permits and approvals may be required such as a Habitat Conservation Plan. USFWS recognizes that the

proposed Master Plan is a programmatic project and recommends that State Parks contact them for technical assistance should any proposed actions be determined to affect federally-listed species.

### 5.1.3 LAND AND WATER CONSERVATION FUND (LWCF)

The National Park Service (NPS), Department of the Interior implements the Land and Water Conservation Fund Act of 1965 (Public Law 88-578). The Land and Water Conservation Fund (LWCF) program provides matching grants for the acquisition and development of public lands to meet the needs of all Americans for outdoor recreation and open space.

In 1977, grant monies from the LWCF were used to acquire the 65.7 acres that comprise Hā‘ena State Park. As a condition of this funding, any development or use in the park must follow the post-completion and stewardship requirements of this program. These requirements are specified in Section 8 of the LWCF State Assistance Program Manual (LWCF Manual, 2008).

**Discussion:** The proposed Master Plan and management strategies have been reviewed by the NPS and were found to be in compliance with LWCF requirements as set forth by U.S. Code of Federal Regulations, Title 36, Part 59, Section 6(f) as well as with the original intent of park acquisition, which included the state’s commitment to develop opportunities for “swimming, fishing, picnicking, camping, and other beach-oriented recreation opportunities” (LWCF Agreement, 1972). NPS commented in their letter dated June 6, 2014 (Section 11.0) that the draft Master Plan for the park shows:

*“some changes to the Park’s use [that] reflect contemporary sensitivities to cultural resources and the sensitive shoreline ecosystem....The recreation opportunities include a variety of ocean recreation, walking, picnicking, nature viewing, sight-seeing, and interpretive exhibits with the potential for camping and bicycling. These provide assurance that the ‘public beach park’ qualities that make this a valuable LWCF park are planned for the future.”*

The NPS letter also describes the restoration of the agricultural terraces as a “community gardening area.” In order to remain compliant with LWCF requirements, NPS states:

*“The Master Plan draft also shows that the park will encompass a significant community gardening area with the proposed restoration of the lo‘i kalo (wetlands). Although such an area is unusual within a state park and more common in local parks, such areas are not out of compliance with LWCF requirements. Community gardens are allowed in LWCF-protected parks with the understanding that they are accessible to the general public in an equitable manner and are not intended for any private or commercial use....Maintaining such a practice with an interpretive/educational component is clearly consistent with several goals within the 2008 SCORP...it is advisable to include trails and interpretive opportunities to ensure all members of the public – including visitors from afar and anyone not engaged in the community garden activities—can still understand what is happening there, the cultural significance, and generally not feel excluded from this public place...any*



*agricultural goods harvested within the community garden areas should be generally for park programs and personal use and not part of a formal commercial or for-profit farming organization.”*

The ~~Interpretive~~ Pedestrian Path which takes visitors safely through the lo‘i and the proposed community work days and ~~special guided tours in the lo‘i~~ interpretive materials will ensure consistency with LWCF requirements.

## 5.2 NATIONAL AND STATE REGISTERS OF HISTORIC PLACES

The National Register of Historic Places identifies those places over fifty years old that have the integrity and significance to be recognized nationally for preservation. Authorized by the National Historic Preservation Act of 1966, the National Register of Historic Places Program is administered by the National Park Service and is regulated by Title 36, Chapter 1, Section 60 of the Code of Federal Regulations (CFR). The State of Hawai‘i also maintains a state register called the Hawai‘i Register of Historic Places. It is authorized by Chapter 6E, HRS. The SHPD of the DLNR is charged with implementing the provisions of Chapter 6E, HRS.

The park includes the Hā‘ena Archaeological Complex, which stretches from Limahuli Stream to Kē‘ē (site number 30-02-1600), as well as Kūhiō Highway (Kaua‘i Belt Road, North Shore Section) between Princeville and Kē‘ē (site number 30-02-9396). The Nāpali Coast Archaeological District (site number 30-02-3200) overlaps the park within TMK: 5-9-01: 022 in the areas mauka of the highway. Both the Hā‘ena Archaeological Complex and Nāpali Coast Archaeological District are listed on both the State and National Registers of Historic Places. The Kaua‘i Belt Road, North Shore Section is listed on the National Register of Historic Places.

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 (Yent 1983). Grouped broadly by location and type, the complex includes: 1) subsurface cultural layers and features, including burials, found within sand dune and beach-derived deposits forming a band along the seaward edge of the coastal flat; 2) irrigated agricultural field systems and wetlands that dominate the alluvial flat between the sand dune and the talus slopes along the cliff base, and 3) the traditionally important sites located along the talus slope, including the cliff face itself, that are significant to native Hawaiians because of their association with various legends, customs, and beliefs.

The Kaua‘i Belt Road stretches ten miles from Princeville to Kē‘ē Beach and is considered the only remnant of the Belt Highway system on Kaua‘i to retain a high degree of integrity (Duensing 2003). It is characterized by its narrow lanes, winding road alignments, historic bridges and culverts, road cuts, and scenic settings. The stretch from the County’s Hā‘ena Beach Park to Kē‘ē was the last to be completed, probably in 1928. The concrete culvert crossing Limahuli Stream at the entrance to the Hā‘ena State Park is one of 13 bridges and culverts designated as contributing to the significance of the Belt Road.

**Discussion:** Consultation with SHPD has been initiated and is ongoing. The location, layout, and design of the proposed park elements have been planned to highlight the importance of—while minimizing the impacts to—those archaeological and cultural sites that contribute to the significance of the historic sites. Archaeological testing for prior projects provided information on the probable distribution and nature of intact subsurface archaeological deposits and burials (McEldowney and Yent 2007; Major and Carpenter 2001; Yent and Carpenter, field notes, 2009). The Master Plan proposes to confine development primarily to areas that have been previously disturbed as shown in the archaeological sensitivity map prepared by State Park archaeologists (see Figure 23). To ensure that impacts to archaeological resources are avoided, archaeological surveys and coordination with State Park’s archaeologists and staff will be conducted prior to all ground-disturbing activities. Greater discussion regarding site archaeology, potential impacts and mitigation measures can be found in Section 4.1.

The project will not directly or indirectly affect the structural character or integrity of the Belt Highway segment within the project area. This segment has had minor alterations over the years to accommodate ADA parking near the terminus. However, several defining characteristics of the Belt Highway, such as its scenic setting and narrow pavement width, have been retained. The Master Plan does not propose any changes to the highway but it does propose to limit public access along the stretch of highway within the park due to the potential for rockfalls. Therefore, the potential impacts to the highway are projected to be minimal and in fact less use of the highway will incur less wear. The scenic qualities of the highway will remain and will improve as the illegal parking will be removed. It will also be visible from the parallel ~~Interpretive-Pedestrian~~ Path although from a different perspective. No impacts are anticipated to the Nāpali Coast Archaeological District as there are no changes proposed to any of the features in the Master Plan. However, portions of the ancient lo‘i that remain on the mauka side of the highway have been identified on the Plan and recommended for further survey and restoration as appropriate.

## **5.3 STATE OF HAWAII**

### **5.3.1 STATE ENVIRONMENTAL REVIEW LAW (CHAPTER 343, HRS AND SECTION 11-200, HAR)**

The State Environmental Review Law (Chapter 343, HRS, Environmental Impact Statement Law and Chapter 11-200, HAR, Environmental Impact Statement Rules) requires an environmental review for any action that proposes the use of State or County lands and funds, or when an action is proposed within the Conservation District, shoreline area, or in a nationally or state registered historic place, or when a modification of an existing helicopter facility within the State may affect lands within a Conservation District, shoreline area, and registered historic site is proposed. Therefore the proposed Hā‘ena State Park Master Plan triggers Chapter 343, HRS, and State Parks has determined that an EIS is required.

**Discussion:** Section 1.6 discusses this document's compliance with Chapter 343, HRS and Chapter 11-200, HAR for the proposed Hā'ena State Park Master Plan. In summary, this the environmental review process started with pre-consultation, from which comment letter were received and responded to and are incorporated in this EIS in Section 11.0. The DEIS was preceded by an EISPN which was prepared in compliance with Chapter 343, HRS and under authority of Act 172-12. The EISPN was published on February 23, 2015 and a 30-day comment period closed on March 25, 2015. Comments received on the EISPN during the public comment period and the responses are incorporated throughout this EIS and attached in Section 12.0. Following the EISPN, State Parks submitted the DEIS to OEQC on July 13, 2015 and Notice of the availability of the Draft EIS was published in the July 23, 2015 edition of OEQC's *The Environmental Notice*. Copies of the DEIS were provided to appropriate government agencies, public officials, and other organizations and individuals (see Section 8.3.2). The official 45-day public comment period on the DEIS began on July 23, 2015 and ended on September 8, 2015. However, State Parks held a public meeting on August 19, 2015 to gather more input on the DEIS and extended the DEIS public comment period until October 8, 2015. Comments on the DEIS received during this public comment period and the responses to the comments are incorporated in this FEIS and copies of those letters are included in Section 13.0.

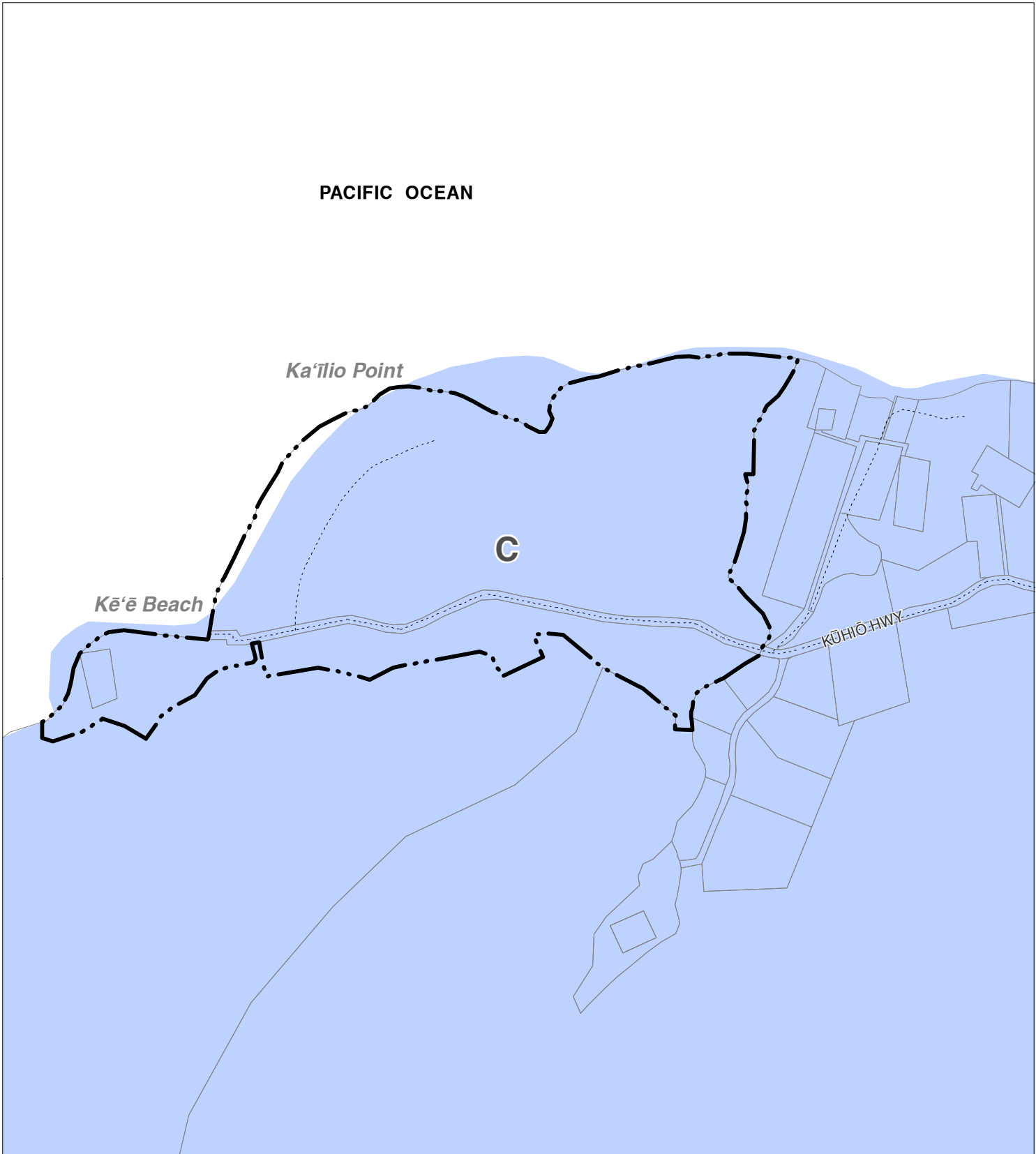
### 5.3.2 STATE LAND USE LAW (CHAPTER 205, HRS)

The State Land Use Law (Chapter 205, HRS), establishes the State Land Use Commission and authorizes this body to designate all lands in the State into one of four districts: Urban, Rural, Agricultural, or Conservation.

**Discussion:** Hā'ena State Park is located within the State Land Use Conservation District (Figure 30). This district is intended to protect watersheds and water sources; scenic and historical areas; parks; wilderness; open spaces; recreational areas; habitats of endemic plants; fish and wildlife; and all submerged lands seaward of the shoreline. The DLNR, Office of Conservation and Coastal Lands (OCCL) is responsible for implementation of land use policies in the Conservation District and the BLNR makes determinations on permit requests within the Conservation District.

Within the Conservation District, there are five subzones: Protective, Limited, Resource, General and Special. Excluding the Special Subzone, the four subzones are arranged hierarchically with regards to environmental sensitivity. The most sensitive areas are within the Protective Subzone and the least sensitive are within the General Subzone. The Special Subzone is applied only to certain areas to allow a unique land use on a specific site.

The majority of the terrestrial portions of Hā'ena State Park are located within the Resource Subzone, which includes state parklands as well as lands suitable for outdoor recreational uses, both of which are consistent with the proposed Master Plan. A small portion of the mauka area south of the highway near the entrance is classified as Limited Subzone and offshore areas of the park are within the Protective Subzone. (Figure 31).



## LEGEND

- Hā'ena State Park Project Boundary
- Road
- A - Agricultural
- C - Conservation
- R - Rural
- U - Urban

Source: State Land Use Commission (GIS, 2014)  
Disclaimer: This graphic has been prepared for general planning purposes only.

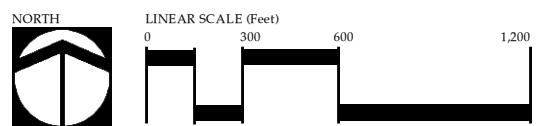
FIGURE 30

State Land Use District

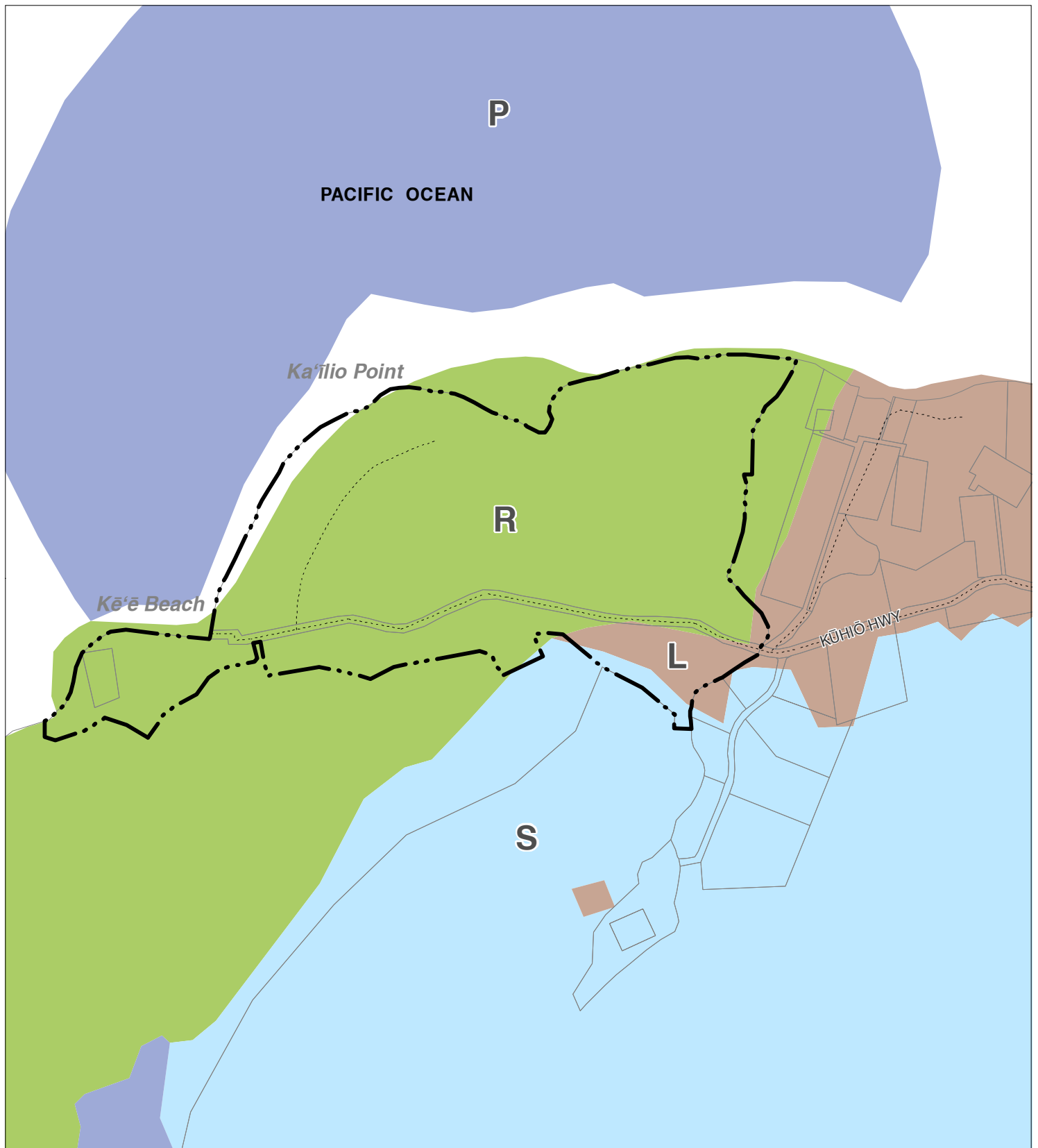
## HĀ'ENA STATE PARK

Department of Land and Natural Resources

Island of Kaua'i







## LEGEND

- Hā'ena State Park Project Boundary
- Road
- R - Resource Subzone
- L - Limited Subzone
- S - Special Subzone
- P - Protective Subzone

Source: Office of Planning and State Land Use Commission (2011)  
Disclaimer: This graphic has been prepared for general planning purposes only.

**FIGURE 31**

Conservation District Subzones

## HĀ'ENA STATE PARK

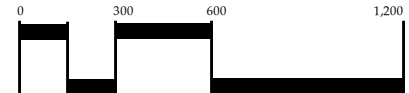
Department of Land and Natural Resources

Island of Kaua'i

NORTH



LINEAR SCALE (Feet)



The OCCL notes in their pre-consultation letter that a previous Conservation District Use Application (KA-1373) was granted by the BLNR for the park on March 12, 1982 (Section 11.0). In their subsequent EISP comment letter (Section 12.0), OCCL notes that they will review the DEIS and determine if a new Conservation District Use Application will be required prior to the implementation of the proposed Master Plan. If it does, State Parks will work with OCCL to seek the appropriate permit or approval prior to implementation.

### **5.3.3 COASTAL ZONE MANAGEMENT (CHAPTER 205A, HRS)**

Section 205A-1, HRS, defines the entire state as being within the coastal zone management (CZM) area, including the area extending seaward from the shoreline to the limit of the State's police power and management authority, including the United States territorial sea. Therefore the proposed project lies within the CZM Area. The project's conformity to CZM objectives and policies is discussed below.

#### **(1) Recreational resources;**

**(b)(1)(A)Objective:** *Provide coastal recreational opportunities accessible to the public.*

#### **(c)(1) Policies**

- (A) Improve coordination and funding of coastal recreational planning and management; and*
- (B) Provide adequate, accessible, and diverse recreational opportunities in the coastal zone management area by:*
  - (i) Protecting coastal resources uniquely suited for recreational activities that cannot be provided in other areas;*
  - (ii) Requiring replacement of coastal resources having significant recreational value including, but not limited to surfing sites, fishponds, and sand beaches, when such resources will be unavoidably damaged by development; or requiring reasonable monetary compensation to the State for recreation when replacement is not feasible or desirable;*
  - (iii) Providing and managing adequate public access, consistent with conservation of natural resources, to and along shorelines with recreational value;*
  - (iv) Providing an adequate supply of shoreline parks and other recreational facilities suitable for public recreation;*
  - (v) Ensuring public recreational uses of county, state, and federally owned or controlled shoreline lands and waters having recreational value consistent with public safety standards and conservation of natural resources;*
  - (vi) Adopting water quality standards and regulating point and nonpoint sources of pollution to protect, and where feasible, restore the recreational value of coastal waters;*
  - (vii) Developing new shoreline recreational opportunities, where appropriate, such as artificial lagoons, artificial beaches, and artificial reefs for surfing and fishing; and*
  - (viii) Encouraging reasonable dedication of shoreline areas with recreational value for public use as part of discretionary approvals or permits by the land use*

*commission, board of land and natural resources, and county authorities; and crediting such dedication against the requirements of section 46-6;*

**Discussion:** The Master Plan itself is an effort by State Parks to improve funding of coastal recreational planning and management. Completion of the plan and Chapter 343, HRS processing will enable State Parks to move forward with capital improvement projects to improve coastal recreation at the park. No coastal resources are anticipated to be damaged by the plan; in fact the Master Plan proposes to help restore and better manage coastal resources within the park. Therefore, the requiring of the replacement of such resources are not applicable to the proposed project.

Hā'ena State Park is culturally and ecologically significant, and its beaches and scenic resources make it a popular visitor attraction. Public access will remain available at the park and will be better managed by instituting the daily visitor limit during peak hours ~~and entry control points~~ in order to help conserve the park's natural, historic, and cultural resources. The daily visitor limit will be managed as an average and may be adjusted over time and does not include cultural practitioners, special user groups such as hālau, lo'i workgroups, cemetery caretakers, or school groups. It also does not include the 60 hikers who obtain valid camping permits for the Kalalau Trail or the 30 hunters who obtain valid hunting permits for Nāpali Coast State Wilderness Park Hunting Unit G. The proposed ~~Interpretive-Pedestrian~~ Path also incorporates public safety and conservation of natural resources into the plan as current public access along the highway has the potential to be impacted by rockfall hazards. Efforts to protect water quality will primarily focus on best management practices during construction to control sedimentation, erosion, and dust, and green design including filtering and capturing rainwater runoff in the parking lots using bioswales and pervious paving, grading and designing improvements to prevent the runoff of contaminants to streams and coastal waters. An integrated water/wastewater/drainage system is also recommended to maximize the potential use and reuse of on-site waters.

New interpretive trails and facilities, including the Welcome ~~Pavilion and ECC Hale~~, the restoration of historic sites, construction of the Hālau Wa'a, and new picnic areas, bicycle facilities, garden areas ~~and demonstration gardens~~ as proposed in the plan will expand recreational opportunities at the park. The quality of nearshore waters is critical to the recreational value of the park. Finally, dedication of shoreline areas is not necessary as the park is already publicly owned.

**(2) Historic resources;**

**(b)(2)(A)Objective:** *Protect, preserve and, where desirable, restore those natural and manmade historic and prehistoric resources in the coastal zone management area that are significant in Hawaiian and American history and culture.*

**(c)(2) Policies**

- (A) Identify and analyze significant archaeological resources;*
- (B) Maximize information retention through preservation of remains and artifacts or salvage operations; and*

- (C) *Support State goals for protection, restoration, interpretation, and display of historic resources.*

**Discussion:** One of the main purposes of the current master planning effort is to incorporate cultural and historic preservation priorities into the plan while balancing the park's provision of quality outdoor recreation. Several archaeological inventory studies have been performed at the park over the years and an archaeological sensitivity map (Figure 23) was developed early in the process to help locate new facilities in previously disturbed areas and to identify areas for preservation and restoration. While continuing its commitment to offer outdoor recreational activities at Hā'ena State Park, State Parks will employ both programmatic as well as physical mitigation measures to avoid and minimize impacts to archaeological and historic resources. The primary programmatic action to mitigate impacts to archaeological resources will be to establish a Cultural Advisory Group, whose oversight is expected to improve interpretation of the park's archaeological resources, to help guide management of all aspects of the park, and to provide input on proposed improvement projects and educational programs. The Master Plan also anticipates that there will be continued restoration and interpretation of the park's archaeological and historic resources, such as the Hula Complex and Agricultural Complex (including the 'auwai where feasible or desired), the dunes, the historic cottages and house sites, the cemeteries, the loko, the native forests and stream habitats, and various archaeological sites scattered throughout the park. Educational programs and interpretive materials will also be developed to highlight the rich historical resources at the park and educate visitors. Barring a catastrophic event, active management of these historic resources will mitigate against their loss to the elements, improper treatment or inadvertent damage by visitors, and overgrowth of invasive vegetation. More detail on the archaeological and historic resources of the park can be found in Section 4.1.

**(3) *Scenic and open space resources;***

**(b)(3)(A)Objective:** *Protect, preserve and, where desirable, restore or improve the quality of coastal scenic and open space resources.*

**(c)(3) Policies:**

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

**Discussion:** The Master Plan will protect, preserve, restore, and improve the quality of coastal scenic and open space resources in the park. Various measures proposed in the Master Plan are anticipated to improve scenic and open space views such as the restoration of the



Agricultural Complex, the dunes, loko and wetlands, and stream environment. Shifting the main visitor traffic to the ~~Interpretive~~ Pedestrian Path will provide visitors with unique views of the lo‘i, the wetlands and loko, Makana, and the shoreline as they emerge from the hau tunnel. At Kē‘ē, it is expected that elimination of the steady stream of vehicles waiting for parking and turnaround will further improve scenic views. The lifeguard stand is proposed to be moved northeast of its current location to remove an obstruction of the view of the beach from Kūhiō Highway while also allowing better visual access of the entire lagoon for the lifeguards for public safety purposes. Finally, new development in the park will be limited to areas of previous disturbance so that the development does not obstruct any important viewplanes. More detail on the scenic and open space resources of the park can be found in Section 4.6 with new view corridors and lookouts highlighted in Figure 28.

**(4) Coastal ecosystems;**

**(b)(4)(A)Objective:** *Protect valuable coastal ecosystems, including reefs, from disruption and minimize adverse impacts on all coastal ecosystems.*

**(c)(4) Policies:**

- (A) Exercise an overall conservation ethic, and practice stewardship in the protection, use, and development of marine and coastal resources;*
- (B) Improve the technical basis for natural resource management;*
- (C) Preserve valuable coastal ecosystems, including reefs, of significant biological or economic importance;*
- (D) Minimize disruption or degradation of coastal water ecosystems by effective regulation of stream diversions, channelization, and similar land and water uses, recognizing competing water needs; and*
- (E) Promote water quantity and quality planning and management practices that reflect the tolerance of fresh water and marine ecosystems and maintain and enhance water quality through the development and implementation of point and nonpoint source water pollution control measures.*

**Discussion:** The proposed Master Plan takes a conservation ethic in its recommendations and focuses on improved stewardship of the park’s extensive natural, cultural, and historic resources, including the coastal ecosystem. The proposed visitor limit of 900 people per day during peak visitor hours is less than half of the number of visitors per day during the summer. Additionally, it is recommended that all visitors ~~attend an educational session~~ receive visitor orientation information prior to park entry that would provide an overview of the park’s extensive but sensitive natural and cultural resources and instruct visitors of the appropriate activities and behaviors allowed at the park, such as not walking on the reefs or applying sunscreen right before entering the ocean, nor harassing marine life. The significant reduction in visitor use and better education on the park’s resources will have a net positive impact compared to current conditions for the park’s valuable coastal ecosystems, which people rely on for recreation as well as for sustenance. The visitor limit may also be adjusted depending on future studies such as impact studies, particularly if harmful impacts to the natural, cultural, and archaeological resources arise.

Several elements of the Master Plan specifically seek to reduce the quantity and improve the water quality of the land-based runoff that enters coastal waters. These include a reduction in the number of motor vehicles driving the length of Kūhiō Highway and idling and turning around at Kēʻē Beach; restoration of the loʻi, loko, and wetlands; installation of rainwater catchment cisterns, bioswales and rain gardens to help capture and filter rainwater runoff; use of pervious paving materials in parking areas to prevent the runoff of contaminants to streams and coastal waters; and use and reuse of collected rainwater and treated effluent for flushing toilets, irrigation, and other nonpotable uses. Pollution of marine resources is proposed to be further minimized by secondary treatment of effluent and increased treatment such as UV disinfection, at comfort stations. An integrated water/wastewater/drainage system is also recommended for the park. The quality of nearshore waters is critical to the recreational and cultural values of the park. All discharges related to the construction and operation of the proposed project will comply with the State's Water Quality requirements contained in Chapters 11-54 and 11-55, HAR.

**(5) Economic uses;**

**(b)(5)(A)Objective:** *Provide public or private facilities and improvements important to the State's economy in suitable locations.*

**(c)(5) Policies:**

- (A) Concentrate coastal dependent development in appropriate areas;*
- (B) Ensure that coastal dependent development such as harbors and ports, and coastal related development such as visitor industry facilities and energy generating facilities, are located, designed, and constructed to minimize adverse social, visual, and environmental impacts in the coastal zone management area; and*
- (C) Direct the location and expansion of coastal dependent developments to areas presently designated and used for such developments and permit reasonable long-term growth at such areas, and permit coastal dependent development outside of presently designated areas when:
  - (i) Use of presently designated locations is not feasible;*
  - (ii) Adverse environmental effects are minimized; and*
  - (iii) The development is important to the State's economy.**

**Discussion:** The park is an important natural, cultural, and recreational resource for the state and for Kauaʻi. Home to one of the few sheltered bays on Kauaʻi's scenic North Shore and the trailhead for the renown Kalalau Trail, the park has become a popular tourist destination and one of the State's most visited parks. Many of the park's main attractions and important resources are coast-dependent. Therefore, proposed Master Plan improvements are planned to be located, designed, and constructed in such a way as to have beneficial economic, social, visual, and environmental impacts.

**(6) Coastal hazards;**

**(b)(6)(A)Objective:** *Reduce hazard to life and property from tsunami, storm waves, stream flooding, erosion, subsidence, and pollution.*

**(c)(6) Policies:**

- (A) Develop and communicate adequate information about storm wave, tsunami, flood, erosion, subsidence, and point and non-point source pollution hazards;*
- (B) Control development in areas subject to storm wave, tsunami, flood, erosion, hurricane, wind, subsidence, and point and non-point source pollution hazards;*
- (C) Ensure that developments comply with requirements of the Federal Flood Insurance Program; and*
- (D) Prevent coastal flooding from inland projects.*

**Discussion:** Due to the remote location of the park and the potential for hazardous coastal conditions, an emergency evacuation plan and rescue plans should be developed for various scenarios, including, but not limited to locally-generated and remotely-generated tsunami, flooding, high winds, and storms. Coordination, training, and regular drills with State Civil Defense and Kaua'i Fire and Police Departments should be performed annually at a minimum to ensure readiness. The State DOT recently installed updated tsunami evacuation signs along the highway; however, none were installed within the park. Currently, there are no State Civil Defense sirens in the park. However, the 25 s.f. requested for a new siren by State Civil Defense in their pre-consultation letter (Section 11.0) can be accommodated in the park, most likely in the main parking area. A subsequent letter from the Office of State Emergency Management/Civil Defense noted that siren coverage exists for the project site, but requested the existing siren to be upgraded to a 121db(c) omni-directional siren. State Parks will work with the Hawai'i Emergency Management Agency to ensure adequate siren coverage at the park.

The proposed reduction in the number of visitors permitted daily in the park during peak visitor hours and along the Kalalau Trail will mitigate evacuations and rescue operations whenever coastal hazards arise. The orientation ~~session in~~ information which all visitors ~~must participate will receive~~ should also include ~~information directions~~ on what to do during evacuations and emergency situations, as well as up-to-the-minute weather and ocean conditions to help educate visitors on the coastal hazards that they may encounter while visiting the park.

To facilitate evacuations in the event they are necessary, a helicopter landing area is proposed to be retained in the park. Emergency evacuation routes should also be planned and indicated on visitor brochures and materials. They can also be described and shown on maps during the visitor orientation sessions. ~~The loop paths through the lo'i can be used as an emergency route between Kē'ē and the Welcome Pavilion/ECC. An emergency phone is expected to be retained. Additionally, the presence of an on-site caretaker is expected to improve emergency warning communications and evacuation coordination within the park when necessary. The hardline phone at Kē'ē should be retained for emergencies and an additional emergency phone could be located at the Welcome Hale.~~ If a shuttle system is developed (as described

in Section 4.3.1), an emergency evacuation plan will need to be developed specifically for the shuttle passengers.

Except for the lifeguard tower, all proposed structures are planned to be outside the 100-year flood zone and areas subjected to wave action as indicated on the Federal Flood Insurance Rate Maps, thus minimizing any potential impacts to proposed facilities. Impacts to floodplain are further avoided by focusing development away from Limahuli Stream and its riparian zone. Where applicable, the Master Plan improvements will adhere to the regulations of the National Flood Insurance Program.

**(7) *Managing development;***

**(b)(7)(A)Objective:** *Improve the development review process, communication, and public participation in the management of coastal resources and hazards.*

**(c)(7) Policies:**

- (A) Use, implement, and enforce existing law effectively to the maximum extent possible in managing present and future coastal zone development;*
- (B) Facilitate timely processing of applications for development permits and resolve overlapping or conflicting permit requirements; and*
- (C) Communicate the potential short and long-term impacts of proposed significant coastal developments early in their life cycle and in terms understandable to the public to facilitate public participation in the planning and review process.*

**Discussion:** The Master Plan improvements to the park will follow the existing state, county, and federal laws related to coastal zone development. Relatively little development has occurred in the park since its inception. The major improvements completed recently are the renovated comfort station and showers and constructed wetlands for which the appropriate permits and approvals were obtained.

For the current Master Plan process, State and County agencies as well as Hā'ena kūpuna and family members, community groups, organizations, businesses, and interested individuals have been engaged in the development of the Master Plan from the beginning of the project. At the ~~onset~~ beginning of the project, pre-consultation letters were issued to various government agencies and community members soliciting input into the Master Plan and environmental documents. The thirty-two member MPAC provided thoughtful insights and critical feedback throughout the process and helped the project team develop solutions to complex and often conflicting issues. Later, the HSPCAC was created and also helped refine the master plan. Their input was integral to development of the proposed physical plan and park management strategies. Periodically throughout the process, open houses and public meetings were held and kept the greater community informed of the concepts being considered for the park. Appendix A includes ~~a record of information from~~ the public meetings held for the project and materials presented at the meetings. Section 11.0 contains pre-consultation correspondence. Section 12.0 includes the EISPN comment letters and respective responses. Section 13.0 includes the DEIS comment letters and respective



responses including the comment cards received from the public meeting held for the DEIS on August 19, 2015.

**(8) Public participation;**

**(b)(8)(A)Objective:** *Stimulate public awareness, education, and participation in coastal management.*

**(c)(8) Policies:**

- (A) Promote public involvement in coastal zone management processes;*
- (B) Disseminate information on coastal management issues by means of educational materials, published reports, staff contact, and public workshops for persons and organizations concerned with coastal issues, developments, and government activities; and*
- (C) Organize workshops, policy dialogues, and site-specific mediations to respond to coastal issues and conflicts.*

**Discussion:** As noted above, the State and County agencies as well as community groups, organizations and individuals have been engaged throughout the development of the Master Plan and EIS processes. Regular MPAC and HSPCAC meetings were held throughout the process with general public meetings and open houses held to keep the greater community informed of the concepts being considered for the park. Appendix A includes a record of information from the public meetings held for the project and materials presented at the meetings. Section 11.0 contains pre-consultation correspondence. Section 12.0 includes the EISPN comment letters and respective responses. Section 13.0 includes the DEIS comment letters and respective responses including the comment cards received from the public meeting held for the DEIS on August 19, 2015.

In addition, the Master Plan improvements and changes in management policies were developed based on input received from the community to help encourage the community to return to the park and increase the educational value of the park. New facilities such as the ECC will house auditorium/classroom space, and meeting rooms where workshops, meetings, and classes can be held. Interpretive displays and other materials will help educate the public on coastal resources and hazards at the park. Signs will also be posted on evacuation routes, as well as for ocean safety and rockfall hazards. The required orientation information and education session all visitors must attend prior to entering the park materials will inform visitors of appropriate behavior and interaction with the varied resources and of the cultural uses and protocols at the park in order to help minimize conflicts. ~~These sessions would also provide safety information and instruct visitors what to do in emergency situations.~~

**(9) Beach protection;**

**(b)(9)(A)Objective:** *Protect beaches for public use and recreation.*

**(c)(9) Policies:**

- (A) *Locate new structures inland from the shoreline setback to conserve open space, minimize interference with natural shoreline processes, and minimize loss of improvements due to erosion;*
- (B) *Prohibit construction of private erosion-protection structures seaward of the shoreline, except when they result in improved aesthetic and engineering solutions to erosion at the sites and do not interfere with existing recreational and waterline activities;*
- (C) *Minimize the construction of public erosion-protection structures seaward of the shoreline;*
- (D) *Prohibit private property owners from creating a public nuisance by inducing or cultivating the private property owner's vegetation in a beach transit corridor; and*
- (E) *Prohibit private property owners from creating a public nuisance by allowing the private property owner's unmaintained vegetation to interfere or encroach upon a beach transit corridor.*

**Discussion:** With the exception of the lifeguard tower, no permanent structures in the Master Plan are recommended within the shoreline setback or within the VE coastal flood zone, which is the 100-year flood area subject to velocity hazards due to wave action as identified on the FIRM (Figure 20). Restoration of the coastal sand dunes for natural and cultural purposes was also highlighted as one of the priorities identified by the MPAC for the Master Plan improvements. This will include clearing of invasive species or cutting trees where appropriate and planting natives to help restore the natural dune building processes. If carefully planned and executed, this may help reduce coastal erosion as well. In addition, drainage improvements are proposed near the end of the historic highway pavement at Kēʻē to prevent ponding, soil erosion, and beach washouts as has happened during heavy rainfall events. No shoreline hardening or protection structures are recommended within the park. Instead, restoration of the natural beach processes is part of the preferred alternative.

**(10) Marine resources;**

**(b)(10)(A)Objective:** *Promote the protection, use, and development of marine and coastal resources to assure their sustainability.*

**(c)(10) Policies:**

- (A) *Ensure that the use and development of marine and coastal resources are ecologically and environmentally sound and economically beneficial;*
- (B) *Coordinate the management of marine and coastal resources and activities to improve effectiveness and efficiency;*
- (C) *Assert and articulate the interests of the State as a partner with Federal agencies in the sound management of ocean resources within the United States exclusive economic zone;*
- (D) *Promote research, study, and understanding of ocean processes, marine life, and other ocean resources in order to acquire and inventory information necessary to*

*understand how ocean development activities relate to and impact upon ocean and coastal resources; and*

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

**Discussion:** The proposed Master Plan improvements will better protect and improve education of visitors about the park’s marine and coastal resources. Currently, nearshore waters are managed through the HCBSF, which was established through the State’s rulemaking process. The Master Plan improvements will not impact HCBSF’s management efforts. It is also recommended that State Parks defers to the management rules and protocols for the Hā‘ena Community-Based Subsistence Fishery Area.

Because the Master Plan proposes a limit on the number of visitors to the park per day during peak visitor hours, the reduced human impact is anticipated to have a net positive effect on the park’s marine environment and resources, including improved ocean water quality and health of the coral reef. In addition, visitors will be ~~required to attend an educational orientation session provided with visitor orientation information~~ prior to entering the park which will inform visitors of the sensitive marine resources and appropriate activities and behaviors that will help reduce the impact and harm caused during ocean recreation activities. The Master Plan also recommends improvements such as bioswales and rain gardens to reduce and filter stormwater runoff. Secondary wastewater treatment and reuse of treated effluent for nonpotable water uses may in turn reduce the amount of effluent that may seep or spill into the ocean. Stream, native forest, and ‘auwai restoration activities can also help prevent soil erosion.

Based on community concern about how ocean development activities relate to and impact ocean and coastal resources, the Master Plan also recommends that State Parks establish a program of long-term scientific monitoring of fish and invertebrate populations trends within the park’s marine waters.

### **5.3.4 HAWAI‘I STATE PLAN (CHAPTER 226, HRS)**

The Hawai‘i State Plan (Chapter 226, HRS) sets forth the goals, objectives, policies, and priority guidelines for growth, development, and allocation of limited resources throughout the State. It contains diverse policies and objectives on topics of state interest including but not limited to, the economy, agriculture, the visitor industry, federal expenditure, the physical environment, facility systems, socio-cultural advancement, and sustainability. Conformity with applicable provisions of the State Plan are discussed below. The State Plan is divided into three parts: Part I (Overall Theme, Goals, Objectives and Policies); Part II (Planning, Coordination and Implementation); and Part III (Priority Guidelines). Part II elements of the State Plan pertain primarily to the administrative structure and implementation process of the Plan. As such, comments regarding the applicability of Part II to the Master Plan are not appropriate and are therefore not included. Parts I and III are provided in matrix format below and the checked boxes indicate whether the individual objectives and policies are

supported, not supported, or not applicable. Applicable goals and policies of the Hawai‘i State Plan are discussed below.

### 5.3.4.1 Part I: Overall Theme, Goals, Objectives and Policies

HAWAI‘I STATE PLAN, CHAPTER 226, HRS – PART I. OVERALL THEME, GOALS, OBJECTIVES AND POLICIES (Key: S = Supportive, N/S = Not Supportive, N/A = Not Applicable)	S	N/S	N/A
<b>HRS § 226-1: Findings and Purpose</b>			
<b>HRS § 226-2: Definitions</b>			
<b>HRS § 226-3: Overall Theme.</b>			
<p><i>Hawai‘i’s people, as both individuals and groups, generally accept and live by a number of principles or values which are an integral part of society. This concept is the unifying theme of the State Plan. The following principles or values are established as the overall theme of the Hawai‘i State Plan:</i></p> <ol style="list-style-type: none"> <li><i>(1) Individual and family self-sufficiency refers to the rights of people to maintain as much self-reliance as possible. It is an expression of the value of independence, in other words, being able to freely pursue personal interests and goals. Self-sufficiency means that individuals and families can express and maintain their own self-interest so long as that self-interest does not adversely affect the general welfare. Individual freedom and individual achievement are possible only by reason of other people in society, the institutions, arrangements and customs that they maintain, and the rights and responsibilities that they sanction.</i></li> <li><i>(2) Social and economic mobility refers to the right of individuals to choose and to have the opportunities for choice available to them. It is a corollary to self-sufficiency. Social and economic mobility means that opportunities and incentives are available for people to seek out their own levels of social and economic fulfillment.</i></li> <li><i>(3) Community or social well-being is a value that encompasses many things. In essence, it refers to healthy social, economic, and physical environments that benefit the community as a whole. A sense of social responsibility, of caring for others and for the well-being of our community and of participating in social and political life, are important aspects of this concept. It further implies the aloha spirit--attitudes of tolerance, respect, cooperation and unselfish giving, within which Hawai‘i’s society can progress.</i></li> </ol> <p><i>One of the basic functions of our society is to enhance the ability of individuals and groups to pursue their goals freely, to satisfy basic needs and to secure desired socio-economic levels. The elements of choice and mobility within society’s legal framework are fundamental rights. Society’s role is to encourage conditions within which individuals and groups can approach their desired levels of self-reliance and self-determination. This enables people to gain confidence and self-esteem; citizens contribute more when they possess such qualities in a free and open society.</i></p> <p><i>Government promotes citizen freedom, self-reliance, self-determination, social and civic responsibility and goals achievement by keeping order, by increasing cooperation among many diverse individuals and groups, and by fostering social and civic responsibilities that affect the general welfare. The greater the number and activities of individuals and groups, the more complex government’s role becomes. The function of government, however, is to assist citizens in attaining their goals. Government provides for meaningful participation by the people in decision-making and for effective access to authority as well as an equitable sharing of benefits. Citizens have a responsibility to work with their government to contribute to society’s improvement. They must also conduct their activities within an agreed-upon legal system that protects human rights.</i></p>			
<p><b>Discussion:</b> The Hā‘ena State Park Master Plan seeks to fulfill basic elements of the State Plan’s overall theme in allowing cultural practices such as fishing, agriculture, hula, and caring for ancestral remains to continue at the park. The management strategies also seek to encourage cooperation and partnerships among the State and other government agencies, the local community and Hā‘ena families, and visitors in the ongoing maintenance and care of the park so that it and its varied natural, cultural, and historic resources can be enjoyed for generations.</p>			



HAWAI'I STATE PLAN, CHAPTER 226, HRS – PART I. OVERALL THEME, GOALS, OBJECTIVES AND POLICIES	S	N/S	N/A
(Key: S = Supportive, N/S = Not Supportive, N/A = Not Applicable)			
<b>HRS § 226-4: State Goals.</b>			
<p><i>In order to guarantee, for the present and future generations, those elements of choice and mobility that insure that individuals and groups may approach their desired levels of self-reliance and self-determination, it shall be the goal of the State to achieve:</i></p> <ol style="list-style-type: none"> <li><i>(1) A strong, viable economy, characterized by stability, diversity and growth that enables fulfillment of the needs and expectations of Hawai'i's present and future generations.</i></li> <li><i>(2) A desired physical environment, characterized by beauty, cleanliness, quiet, stable natural systems, and uniqueness, that enhances the mental and physical well-being of the people.</i></li> <li><i>(3) Physical, social and economic well-being, for individuals and families in Hawai'i, that nourishes a sense of community responsibility, of caring and of participation in community life.</i></li> </ol>			
<p><b>Discussion:</b> Several aspects of the proposed Master Plan seek to achieve the stated goals of the Hawai'i State Plan. The reduction in <u>average daily visitors during peak visitor hours</u>, restoration of cultural and archaeological sites, restoration of the dunes, wetlands, and varied ecosystems, consolidation of parking and transportation facilities, and green design of the park facilities will help restore the park's beauty, cleanliness, quiet, natural systems, and unique historic, cultural and natural resources. The restoration and proper management of the park will in turn improve the mental and physical well-being of those from the area or those with ancestral ties to the area or who participate in cultural activities here as there is a deep connection between them and this place. Improved conditions at the park will also enrich the experience for all those who visit. The local community, Hā'ena families, and cultural and scientific experts are encouraged to continue participating in the ongoing implementation and care for the park via the Cultural Advisory Group and broader community advisory group as well as participation in future events and activities at the park such as educational programs and volunteer work days which will strengthen the sense of community responsibility and caring for the park. The various management options provide a mix of potential economic opportunities such as the creation of a non-profit hui which could be contracted by State Parks to manage the park as a whole as well as individual aspects of park management or operation such as visitor education, research, habitat and ecosystem restoration, shuttle service, and construction.</p>			
<b>HRS § 226-5: Objectives and policies for population.</b>			
<p><b>(a) Objective:</b> <i>It shall be the objective in planning for the State's population to guide population growth to be consistent with the achievement of physical, economic and social objectives contained in this chapter.</i></p>			
<b>(b) Policies:</b>			
(1) <i>Manage population growth statewide in a manner that provides increased opportunities for Hawai'i's people to pursue their physical, social and economic aspirations while recognizing the unique needs of each county.</i>			X
(2) <i>Encourage an increase in economic activities and employment opportunities on the neighbor islands consistent with community needs and desires.</i>	X		
(3) <i>Promote increased opportunities for Hawai'i's people to pursue their socio-economic aspirations throughout the islands.</i>	X		
(4) <i>Encourage research activities and public awareness programs to foster an understanding of Hawai'i's limited capacity to accommodate population needs and to address concerns resulting from an increase in Hawai'i's population.</i>	X		
(5) <i>Encourage federal actions and coordination among major governmental agencies to promote a more balanced distribution of immigrants among the states, provided that such actions do not prevent the reunion of immediate family members.</i>			X

<b>HAWAI'I STATE PLAN, CHAPTER 226, HRS – PART I. OVERALL THEME, GOALS, OBJECTIVES AND POLICIES</b> (Key: S = Supportive, N/S = Not Supportive, N/A = Not Applicable)	<b>S</b>	<b>N/S</b>	<b>N/A</b>
(6) <i>Pursue an increase in federal assistance for states with a greater proportion of foreign immigrants relative to their state's population.</i>			<b>X</b>
(7) <i>Plan the development and availability of land and water resources in a coordinated manner so as to provide for the desired levels of growth in each geographic area.</i>			<b>X</b>
<b>Discussion:</b> The proposed Master Plan improvements and potential activities provide opportunities for Kaua'i residents and more specifically natives and descendants of those from Hā'ena and the neighboring communities to participate and potentially be employed in the restoration and ongoing care of the park, reconnecting the people to the place and welcoming them to share their knowledge and teach current and future generations about this storied place. The Master Plan recommends conducting research studies to help State Parks better understand how the varied resources are impacted by the proposed change in visitor numbers over time. Other research studies could be initiated to study the effects of habitat and wildlife restoration, wetland and stream restoration, archaeological restoration, renewable energy production and use in remote locations, productivity of native agricultural complexes, and recovery of marine resources in an area managed by a community-based subsistence fishery area. The information could then be incorporated into educational and interpretive programs and shared throughout the State.			
<b>HRS § 226-6: Objectives and policies for the economy in general.</b>			
<b>(a) Objectives:</b> <i>Planning for the State's economy in general shall be directed toward achievement of the following objectives:</i>			
(1) <i>Increased and diversified employment opportunities to achieve full employment, increased income and job choice, and improved living standards for Hawai'i's people, while at the same time stimulating the development and expansion of economic activities capitalizing on defense, dual-use, and science and technology assets, particularly on the neighbor islands where employment opportunities may be limited.</i>	<b>X</b>		
(2) <i>A steadily growing and diversified economic base that is not overly dependent on a few industries, and includes the development and expansion of industries on the neighbor islands.</i>	<b>X</b>		
<b>(b) Policies:</b>			
(1) <i>Promote and encourage entrepreneurship within Hawai'i by residents and nonresidents of the State.</i>			<b>X</b>
(2) <i>Expand Hawai'i's national and international marketing, communication, and organizational ties, to increase the State's capacity to adjust to and capitalize upon economic changes and opportunities occurring outside the State.</i>			<b>X</b>
(3) <i>Promote Hawai'i as an attractive market for environmentally and socially sound investment activities that benefit Hawai'i's people.</i>			<b>X</b>
(4) <i>Transform and maintain Hawai'i as a place that welcomes and facilitates innovative activity that may lead to commercial opportunities.</i>			<b>X</b>
(5) <i>Promote innovative activity that may pose initial risks, but ultimately contribute to the economy of Hawai'i.</i>	<b>X</b>		
(6) <i>Seek broader outlets for new or expanded Hawai'i business investments.</i>			<b>X</b>
(7) <i>Expand existing markets and penetrate new markets for Hawai'i's products and services.</i>			<b>X</b>
(8) <i>Assure that the basic economic needs of Hawai'i's people are maintained in the event of disruptions in overseas transportation.</i>			<b>X</b>
(9) <i>Strive to achieve a level of construction activity responsive to, and consistent with, state growth objectives.</i>			<b>X</b>

<b>HAWAI'I STATE PLAN, CHAPTER 226, HRS – PART I. OVERALL THEME, GOALS, OBJECTIVES AND POLICIES</b> (Key: S = Supportive, N/S = Not Supportive, N/A = Not Applicable)	<b>S</b>	<b>N/S</b>	<b>N/A</b>
(10)Encourage the formation of cooperatives and other favorable marketing arrangements at the local or regional level to assist Hawai'i's small scale producers, manufacturers, and distributors.			<b>X</b>
(11)Encourage labor-intensive activities that are economically satisfying and which offer opportunities for upward mobility.			<b>X</b>
(12)Encourage innovative activities that may not be labor-intensive, but may otherwise contribute to the economy of Hawai'i.	<b>X</b>		
(13)Foster greater cooperation and coordination between the government and private sectors in developing Hawai'i's employment and economic growth opportunities.	<b>X</b>		
(14)Stimulate the development and expansion of economic activities which will benefit areas with substantial or expected employment problems.	<b>X</b>		
(15)Maintain acceptable working conditions and standards for Hawai'i's workers.	<b>X</b>		
(16)Provide equal employment opportunities for all segments of Hawai'i's population through affirmative action and nondiscrimination measures.	<b>X</b>		
(17)Stimulate the development and expansion of economic activities capitalizing on defense, dual-use, and science and technology assets, particularly on the neighbor islands where employment opportunities may be limited.	<b>X</b>		
(18)Encourage businesses that have favorable financial multiplier effects within Hawai'i's economy, particularly with respect to emerging industries in science and technology.			<b>X</b>
(19)Promote and protect intangible resources in Hawai'i, such as scenic beauty and the aloha spirit, which are vital to a healthy economy.	<b>X</b>		
(20)Increase effective communication between the educational community and the private sector to develop relevant curricula and training programs to meet future employment needs in general, and requirements of new, potential growth industries in particular.			<b>X</b>
(21)Foster a business climate in Hawai'i--including attitudes, tax and regulatory policies, and financial and technical assistance programs--that is conducive to the expansion of existing enterprises and the creation and attraction of new business and industry.			<b>X</b>
<p><b>Discussion:</b> The proposed expansion of programs, increased maintenance, and restoration of various areas within the park will provide innovative and culturally enriching employment opportunities. The proposed improvements seek to improve visitor experience for both residents and nonresidents and to better coordinate and to support the multiple values and uses of the wahi pana. These varied uses and values include recreation, cultural practices, relaxation, natural habitats and ecosystems, and education—all of which can contribute to various economic activities both within and beyond the park's boundaries.</p> <p>State Parks and all contractors hired by State Parks must abide by current labor laws which include maintaining acceptable working conditions and providing equal employment opportunities.</p> <p>The proposed Master Plan seeks to improve intangibles such as the scenic qualities of the park by restoring and protecting its natural, cultural, and historic resources and to reduce user conflicts at the park which will engender the aloha spirit for those who visit the park. Interpretive materials and the orientation <del>sessions</del> <u>information</u> will help educate visitors of the sensitive and varied resources at the park, of the behaviors and activities that are appropriate, and to respect cultural activities that may be occurring within the park.</p>			

<b>HAWAI'I STATE PLAN, CHAPTER 226, HRS – PART I. OVERALL THEME, GOALS, OBJECTIVES AND POLICIES</b> (Key: S = Supportive, N/S = Not Supportive, N/A = Not Applicable)	<b>S</b>	<b>N/S</b>	<b>N/A</b>
<b>HRS § 226-7: Objectives and policies for the economy – agriculture</b>			
<b>(a) Objectives:</b> <i>Planning for the State's economy with regard to agriculture shall be directed towards achievement of the following objectives:</i>			
<i>(1) Viability of Hawai'i's sugar and pineapple industries.</i>			<b>X</b>
<i>(2) Growth and development of diversified agriculture throughout the State.</i>			<b>X</b>
<i>(3) An agriculture industry that continues to constitute a dynamic and essential component of Hawai'i's strategic, economic, and social well-being.</i>			<b>X</b>
<b>(b) Policies:</b>			
<i>(1) Establish a clear direction for Hawai'i's agriculture through stakeholder commitment and advocacy.</i>			<b>X</b>
<i>(2) Encourage agriculture by making best use of natural resources.</i>	<b>X</b>		
<i>(3) Provide the governor and the legislature with information and options needed for prudent decision making for the development of agriculture.</i>			<b>X</b>
<i>(4) Establish strong relationships between the agricultural and visitor industries for mutual marketing benefits.</i>	<b>X</b>		
<i>(5) Foster increased public awareness and understanding of the contributions and benefits of agriculture as a major sector of Hawai'i's economy.</i>	<b>X</b>		
<i>(6) Seek the enactment and retention of federal and state legislation that benefits Hawai'i's agricultural industries.</i>			<b>X</b>
<i>(7) Strengthen diversified agriculture by developing an effective promotion, marketing, and distribution system between Hawai'i's food producers and consumers in the State, nation, and world.</i>			<b>X</b>
<i>(8) Support research and development activities that strengthen economic productivity in agriculture, stimulate greater efficiency, and enhance the development of new products and agricultural by-products.</i>			<b>X</b>
<i>(9) Enhance agricultural growth by providing public incentives and encouraging private initiatives.</i>			<b>X</b>
<i>(10) Assure the availability of agriculturally suitable lands with adequate water to accommodate present and future needs.</i>	<b>X</b>		
<i>(11) Increase the attractiveness and opportunities for an agricultural education and livelihood.</i>	<b>X</b>		
<i>(12) In addition to the State's priority on food, expand Hawai'i's agricultural base by promoting growth and development of flowers, tropical fruits and plants, livestock, feed grains, forestry, food crops, aquaculture, and other potential enterprises.</i>			<b>X</b>
<i>(13) Promote economically competitive activities that increase Hawai'i's agricultural self-sufficiency, including the increased purchase and use of Hawai'i-grown food and food products by residents, businesses, and governmental bodies as defined under section 103D-104.</i>			<b>X</b>
<i>(14) Promote and assist in the establishment of sound financial programs for diversified agriculture.</i>			<b>X</b>
<i>(15) Institute and support programs and activities to assist the entry of displaced agricultural workers into alternative agricultural or other employment.</i>			<b>X</b>
<i>(16) Facilitate the transition of agricultural lands in economically nonfeasible agricultural production to economically viable agricultural uses.</i>			<b>X</b>
<b>Discussion:</b> Although the Agricultural Complex within the park cannot be used for economic purposes, it does provide an important educational and experiential resource promoting native agricultural practices and increasing the knowledge base of best-practices related to the restoration and activation of prehistoric agricultural complexes so that other similar sites can be made productive again. The Agricultural Complex is also highlighted as an educational feature of the park, where visitors can learn about native agricultural practices and participate in special tours or volunteer work days in the lo'i.			



<b>HAWAI'I STATE PLAN, CHAPTER 226, HRS – PART I. OVERALL THEME, GOALS, OBJECTIVES AND POLICIES</b> (Key: S = Supportive, N/S = Not Supportive, N/A = Not Applicable)	<b>S</b>	<b>N/S</b>	<b>N/A</b>
<b>HRS § 226-8: Objectives and policies for the economy – visitor industry</b>			
<b>(a) Objectives:</b> Planning for the State's economy with regard to the visitor industry shall be directed towards the achievement of the objective of a visitor industry that constitutes a major component of steady growth for Hawai'i's economy.			
<b>(b) Policies:</b>			
(1) Support and assist in the promotion of Hawai'i's visitor attractions and facilities.	<b>X</b>		
(2) Ensure that visitor industry activities are in keeping with the social, economic, and physical needs and aspirations of Hawai'i's people.	<b>X</b>		
(3) Improve the quality of existing visitor destination areas by utilizing Hawai'i's strengths in science and technology.	<b>X</b>		
(4) Encourage cooperation and coordination between the government and private sectors in developing and maintaining well-designed, adequately serviced visitor industry and related developments which are sensitive to neighboring communities and activities.	<b>X</b>		
(5) Develop the industry in a manner that will continue to provide new job opportunities and steady employment for Hawai'i's people.			<b>X</b>
(6) Provide opportunities for Hawai'i's people to obtain job training and education that will allow for upward mobility within the visitor industry.			<b>X</b>
(7) Foster a recognition of the contribution of the visitor industry to Hawai'i's economy and the need to perpetuate the aloha spirit.	<b>X</b>		
(8) Foster an understanding by visitors of the aloha spirit and of the unique and sensitive character of Hawai'i's cultures and values.	<b>X</b>		
<b>Discussion:</b> The proposed Master Plan embodies many of the policies identified above. As one of the most popular visitor destinations on the island, Hā'ena State Park has become a victim of its success, becoming overcrowded and experiencing conflicts between the varied recreational and cultural uses of the park. The new facilities, educational and interpretive materials and programs, and changes in management and maintenance will improve the conditions at the park, better protecting and caring for the natural, cultural, historic, and scenic resources that are valued at the park. The <u>visitor orientation session</u> <del>all visitors must attend</del> <u>information and materials</u> will help educate visitors on the unique and sensitive resources at the park and appropriate behavior, protocols, and activities which will in turn engender a greater sense of respect and aloha visitors have while at the park. The proposed educational programs and interpretive materials will also enrich the visitor experience as they learn about the varied and multilayered resources of this storied place.			
<b>HRS § 226-9: Objective and policies for the economy – federal expenditures</b>			
<b>(a) Objective:</b> Planning for the State's economy with regard to federal expenditures shall be directed towards achievement of the objective of a stable federal investment base as an integral component of Hawai'i's economy.			
<b>(b) Policies:</b>			
(1) Encourage the sustained flow of federal expenditures in Hawai'i that generates long-term government civilian employment.			<b>X</b>
(2) Promote Hawai'i's supportive role in national defense, in a manner consistent with Hawai'i's social, environmental, and cultural goals by building upon dual-use and defense applications to develop thriving ocean engineering, aerospace research and development, and related dual-use technology sectors in Hawai'i's economy.			<b>X</b>
(3) Promote the development of federally supported activities in Hawai'i that respect state-wide economic concerns, are sensitive to community needs, and minimize adverse impacts on Hawai'i's environment.	<b>X</b>		
(4) Increase opportunities for entry and advancement of Hawai'i's people into federal government service.			<b>X</b>

<b>HAWAI'I STATE PLAN, CHAPTER 226, HRS – PART I. OVERALL THEME, GOALS, OBJECTIVES AND POLICIES</b> (Key: S = Supportive, N/S = Not Supportive, N/A = Not Applicable)	<b>S</b>	<b>N/S</b>	<b>N/A</b>
(5) <i>Promote federal use of local commodities, services, and facilities available in Hawai'i.</i>			<b>X</b>
(6) <i>Strengthen federal-state-county communication and coordination in all federal activities that affect Hawai'i.</i>	<b>X</b>		
(7) <i>Pursue the return of federally controlled lands in Hawai'i that are not required for either the defense of the nation or for other purposes of national importance, and promote the mutually beneficial exchanges of land between federal agencies, the State, and the counties.</i>			<b>X</b>
<b>Discussion:</b> Communication and coordination between federal, State, and County agencies will continue through the implementation of the Master Plan, particularly in managing the natural, cultural, and historic resources at the park. Support from federal agencies and resources are welcome especially when they align with the protection, restoration, and management of the park's varied resources. For example, the representative from the Hawaiian Islands Humpback Whale Marine Sanctuary has offered to support educational efforts at the park by providing materials and installing interpretive displays to further both the park's and Sanctuary's missions of educating the public about endangered and threatened species.			
<b>HRS § 226-10: Objectives and policies for the economy – potential growth and innovative activities.</b>			
<b>(a) Objective:</b> <i>Planning for the State's economy with regard to potential growth and innovative activities shall be directed towards achievement of the objective of development and expansion of potential growth and innovative activities that serve to increase and diversify Hawai'i's economic base.</i>			
<b>(b) Policies:</b>			
(1) <i>Facilitate investment and employment in economic activities that have the potential to expand and diversify Hawai'i's economy, including but not limited to diversified agriculture, aquaculture, renewable energy development, creative media, health care, and science and technology-based sectors.</i>	<b>X</b>		
(2) <i>Facilitate investment in innovative activity that may pose risks or be less labor-intensive than other traditional business activity, but if successful, will generate revenue in Hawai'i through the export of services or products or substitution of imported services or products.</i>			<b>X</b>
(3) <i>Encourage entrepreneurship in innovative activity by academic researchers and instructors who may not have the background, skill, or initial inclination to commercially exploit their discoveries or achievements.</i>	<b>X</b>		
(4) <i>Recognize that innovative activity is not exclusively dependent upon individuals with advanced formal education, but that many self-taught, motivated individuals are able, willing, sufficiently knowledgeable, and equipped with the attitude necessary to undertake innovative activity.</i>	<b>X</b>		
(5) <i>Increase the opportunities for investors in innovative activity and talent engaged in innovative activity to personally meet and interact at cultural, art, entertainment, culinary, athletic, or visitor-oriented events without a business focus.</i>			<b>X</b>
(6) <i>Expand Hawai'i's capacity to attract and service international programs and activities that generate employment for Hawai'i's people.</i>			<b>X</b>
(7) <i>Enhance and promote Hawai'i's role as a center for international relations, trade, finance, services, technology, education, culture, and the arts.</i>	<b>X</b>		
(8) <i>Accelerate research and development of new energy- related industries based on wind, solar, ocean, and underground resources and solid waste.</i>	<b>X</b>		
(9) <i>Promote Hawai'i's geographic, environmental, social, and technological advantages to attract new economic activities into the State.</i>			<b>X</b>
(10) <i>Provide public incentives and encourage private initiative to attract new industries that best support Hawai'i's social, economic, physical, and environmental objectives.</i>			<b>X</b>

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(11) Increase research and the development of ocean-related economic activities such as mining, food production, and scientific research.			<b>X</b>
(12) Develop, promote, and support research and educational and training programs that will enhance Hawai'i's ability to attract and develop economic activities of benefit to Hawai'i.			<b>X</b>
(13) Foster a broader public recognition and understanding of the potential benefits of new, or innovative growth-oriented industry in Hawai'i.			<b>X</b>
(14) Encourage the development and implementation of joint federal and state initiatives to attract federal programs and projects that will support Hawai'i's social, economic, physical, and environmental objectives.			<b>X</b>
(15) Increase research and development of businesses and services in the telecommunications and information industries.			<b>X</b>
(16) Foster the research and development of nonfossil fuel and energy efficient modes of transportation.	<b>X</b>		
(17) Recognize and promote health care and health care information technology as growth industries.			<b>X</b>
<p><b>Discussion:</b> Innovative technologies such as renewable energy and green design are encouraged in the Master Plan. Since funding for improvements may be limited, the park could support research on these technologies by being a testing ground for similar remote facilities. The proposed shuttles could also be electric vehicles charged with renewable energy resources. The new <del>ECC</del> <u>Welcome Hale</u> and Cultural Gathering Area <u>as well as the entire park itself</u> are also envisioned as centers for learning and places where workshops and other educational programs can be held <u>outdoors within this wahi pana</u>, covering a wide variety of topics such as ecosystem restoration, endangered species, native Hawaiian agriculture and fishery maintenance, ocean and marine resources, renewable energy and innovative technologies, culture and the arts, and water reuse.</p>			
<b>HRS § 226-10.5: Objectives and policies for the economy – information industry</b>			
<b>(a) Objective:</b> Planning for the State's economy with regard to telecommunications and information technology shall be directed toward recognizing that broadband and wireless communication capability and infrastructure are foundations for an innovative economy and positioning Hawai'i as a leader in broadband and wireless communications and applications in the Pacific Region.			
<b>(b) Policies:</b>			
(1) Promote efforts to attain the highest speeds of electronic and wireless communication within Hawai'i and between Hawai'i and the world, and make high speed communication available to all residents and businesses in Hawai'i.	<b>X</b>		
(2) Encourage the continued development and expansion of the telecommunications infrastructure serving Hawai'i to accommodate future growth and innovation in Hawai'i's economy.	<b>X</b>		
(3) Facilitate the development of new or innovative business and service ventures in the information industry which will provide employment opportunities for the people of Hawai'i.			<b>X</b>
(4) Encourage mainland- and foreign-based companies of all sizes, whether information technology-focused or not, to allow their principals, employees, or contractors to live in and work from Hawai'i, using technology to communicate with their headquarters, offices, or customers located out-of-state.			<b>X</b>
(5) Encourage greater cooperation between the public and private sectors in developing and maintaining a well-designed information industry.			<b>X</b>
(6) Ensure that the development of new businesses and services in the industry are in keeping with the social, economic, and physical needs and aspirations of Hawai'i's people.	<b>X</b>		

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(7) <i>Provide opportunities for Hawai'i's people to obtain job training and education that will allow for upward mobility within the information industry.</i>			<b>X</b>
(8) <i>Foster a recognition of the contribution of the information industry to Hawai'i's economy.</i>			<b>X</b>
(9) <i>Assist in the promotion of Hawai'i as a broker, creator, and processor of information in the Pacific.</i>			<b>X</b>
<b>Discussion:</b> Hā'ena State Park is not directly related to the information technology (IT) industry; therefore, most of the above objective and policies are not applicable. However, State Parks will utilize IT services to disseminate up-to-the-minute information regarding ticket availability, parking and shuttle information, and weather and ocean conditions to the general public as well as in coordination with rescue and emergency services as necessary. Therefore, improved accessibility to reliable wireless communication services at Hā'ena will be critical.			
<b>HRS § 226-11: Objectives and policies for the physical environment – land-based, shoreline, and marine resources.</b>			
<b>(a) Objectives:</b> Planning for the State's physical environment with regard to land-based, shoreline, and marine resources shall be directed towards achievement of the following objectives:			
(1) <i>Prudent use of Hawai'i's land-based, shoreline, and marine resources.</i>	<b>X</b>		
(2) <i>Effective protection of Hawai'i's unique and fragile environmental resources.</i>	<b>X</b>		
<b>(b) Policies:</b>			
(1) <i>Exercise an overall conservation ethic in the use of Hawai'i's natural resources.</i>	<b>X</b>		
(2) <i>Ensure compatibility between land-based and water-based activities and natural resources and ecological systems.</i>	<b>X</b>		
(3) <i>Take into account the physical attributes of areas when planning and designing activities and facilities.</i>	<b>X</b>		
(4) <i>Manage natural resources and environs to encourage their beneficial and multiple use without generating costly or irreparable environmental damage.</i>	<b>X</b>		
(5) <i>Consider multiple uses in watershed areas, provided such uses do not detrimentally affect water quality and recharge functions.</i>	<b>X</b>		
(6) <i>Encourage the protection of rare or endangered plant and animal species and habitats native to Hawai'i.</i>	<b>X</b>		
(7) <i>Provide public incentives that encourage private actions to protect significant natural resources from degradation or unnecessary depletion.</i>			<b>X</b>
(8) <i>Pursue compatible relationships among activities, facilities, and natural resources.</i>	<b>X</b>		
(9) <i>Promote increased accessibility and prudent use of inland and shoreline areas for public recreational, educational, and scientific purposes.</i>	<b>X</b>		
<b>Discussion:</b> In general, the Master Plan improvements will improve the protection of the park's unique and sensitive environmental resources over existing conditions. The proposed visitor limit of <del>900 people per day</del> is less than half of the current number of visitors per day. Additionally, it is recommended that all visitors <del>attend an educational session</del> <u>receive visitor orientation information prior to park entry</u> that would provide an overview of the park's natural and cultural resources and instruct visitors of the appropriate activities and behaviors allowed at the park.			
The Master Plan includes potential measures to minimize polluted runoff to protect marine species from the land-based pollution to which they are sensitive. Relocating the bulk of general visitor parking to the entrance will reduce the number of motor vehicles driving the			



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<p>length of Kūhiō Highway and idling and turning around at Kē‘ē Beach. Pollution of marine resources is proposed to be further minimized by secondary treatment (or higher) of effluent at comfort stations. The quality of nearshore waters is critical to the recreational value of the park. Efforts to protect water quality will primarily focus on best management practices during construction and green design of facilities, such as bioswales and pervious paving in the parking lots, to reduce and filter the runoff of contaminants before they enter streams and coastal waters and an integrated water/wastewater/drainage system (Section 2.5.3.1) to better manage water needs and resources and mitigate runoff. <u>All discharges related to the construction and operation of the proposed project will comply with the State’s Water Quality requirements contained in Chapters 11-54 and 11-55, HAR.</u></p> <p>Hā‘ena’s biological resources, along with mitigation measures are discussed in greater detail in Sections 3.5-3.9. The USFWS provided a Technical Assistance letter in response to the pre-consultation process (see Section 11.0). The letter confirms that there is no federally designated critical habitat within the park. The letter identifies species in the area that are protected under the Act and recommends that surveys of the park’s flora and fauna be conducted to document the presence of listed species. As the Master Plan is a programmatic project, State Parks will coordinate with the USFWS as recommended in their letter to determine if any proposed actions will adversely impact federally-listed species.</p>			
<b>HRS § 226-12: Objective and policies for the physical environment – scenic, natural beauty, and historic resources.</b>			
<b>(a) Objective:</b> <i>Planning for the State’s physical environment shall be directed towards achievement of the objective of enhancement of Hawai‘i’s scenic assets, natural beauty, and multi-cultural/historical resources.</i>			
<b>(b) Policies:</b>			
(1) <i>Promote the preservation and restoration of significant natural and historic resources.</i>	X		
(2) <i>Provide incentives to maintain and enhance historic, cultural, and scenic amenities.</i>			X
(3) <i>Promote the preservation of views and vistas to enhance the visual and aesthetic enjoyment of mountains, ocean, scenic landscapes, and other natural features.</i>	X		
(4) <i>Protect those special areas, structures, and elements that are an integral and functional part of Hawai‘i’s ethnic and cultural heritage.</i>	X		
(5) <i>Encourage the design of developments and activities that complement the natural beauty of the islands.</i>	X		
<p><b>Discussion:</b> One of the main objectives of the Master Plan is to provide opportunities for quality outdoor recreation, with sensitivity to the park’s natural and cultural resources. While continuing its commitment to offer outdoor recreational activities at Hā‘ena State Park, the State will employ both programmatic as well as physical mitigation measures to avoid and minimize impacts to archaeological and historic resources and prioritize the cultural heritage of the park. The primary programmatic action to mitigate impacts to archaeological resources will be to establish a Cultural Advisory Group, whose input will improve interpretation of the park’s cultural, archaeological, and historic resources and to help guide all aspects of park management, educational and interpretive programs, and Master Plan implementation. The Master Plan also recommends the restoration of the park’s archaeological and historic resources, specifically, the dune system, Hula Complex, and</p>			

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<p>Agricultural Complex (including the 'auwai if feasible). New park facilities will be limited to areas of previous disturbance so that its potential impact to archaeological resources is minimized. More detail on the archaeological and historic resources of the park can be found in Section 4.1.</p> <p>The Master Plan will protect, restore, and improve the scenic views and vistas that provide the visual and aesthetic enjoyment of the park's mountains, ocean, scenic landscapes, and other natural features. Various measures in the Master Plan are anticipated to improve visual access such as the <del>Interpretive</del> <u>Pedestrian</u> Path which will open up new views of the Agricultural Complex, Makana, <u>lo'i</u>, and the Hau Tunnel. The Master Plan identifies proposed view corridors and lookouts (Figure 28). More detail on the scenic and open space resources of the park can be found in Section 4.6.</p>			
<b>HRS § 226-13: Objectives and policies for the physical environment – land, air, and water quality.</b>			
<b>(a) Objectives:</b> <i>Planning for the State's physical environment with regard to land, air, and water quality shall be directed towards achievement of the following objectives:</i>			
(1) <i>Maintenance and pursuit of improved quality in Hawai'i's land, air, and water resources.</i>	X		
(2) <i>Greater public awareness and appreciation of Hawai'i's environmental resources.</i>	X		
<b>(b) Policies:</b>			
(1) <i>Foster educational activities that promote a better understanding of Hawai'i's limited environmental resources.</i>	X		
(2) <i>Promote the proper management of Hawai'i's land and water resources.</i>	X		
(3) <i>Promote effective measures to achieve desired quality in Hawai'i's surface, ground, and coastal waters.</i>	X		
(4) <i>Encourage actions to maintain or improve aural and air quality levels to enhance the health and well-being of Hawai'i's people.</i>	X		
(5) <i>Reduce the threat to life and property from erosion, flooding, tsunamis, hurricanes, earthquakes, volcanic eruptions, and other natural or man-induced hazards and disasters.</i>	X		
(6) <i>Encourage design and construction practices that enhance the physical qualities of Hawai'i's communities.</i>	X		
(7) <i>Encourage urban developments in close proximity to existing services and facilities.</i>			X
(8) <i>Foster recognition of the importance and value of the land, air, and water resources to Hawai'i's people, their cultures and visitors.</i>	X		
<p><b>Discussion:</b> The Master Plan improvements seek to improve Hawai'i's land, air, and water resources while also creating greater public awareness and appreciation of Hawai'i's environmental resources. They include the restoration and improved maintenance of the park's dune system, Agricultural Complex, wetlands, native forests, and stream environment. Green building design for all facilities including maximizing energy efficiency, <u>improving wastewater treatment, water reuse and water quality</u>, and using renewable energy sources to power the remaining demand is recommended in the plan. Expanded interpretive programs, displays, and materials will help educate visitors of the importance and value of the natural and cultural resources at the park. The <del>required</del> visitor education and orientation <del>sessions</del> <u>information</u> will provide a brief overview of the park's extensive and sensitive natural and cultural resources, instruct visitors of the appropriate</p>			

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activities and behaviors allowed at the park so that long-term maintenance of the resources can be supported.			
<p>The proposed 900 persons per day visitor limit <u>during peak visitor hours</u> <del>and controlled entry point</del> will also help reduce the human impact on the park and its natural resources. It will also allow State Parks to better manage visitors in concert with conservation values and safety concerns. Efforts to protect water quality will include best management practices during construction to control sedimentation, erosion, and dust, and green design of the facilities, such as installing bioswales and pervious paving in the parking lots to collect and filter runoff. Pollution of marine resources is proposed to be further minimized by secondary treatment of effluent at comfort stations and developing an integrated water/wastewater/drainage system to increase the efficiency of water use, improve effluent water quality, and increase reuse and use of available nonpotable water resources. <u>All discharges related to the construction and operation of the proposed project will comply with the State's Water Quality requirements contained in Chapters 11-54 and 11-55, HAR.</u> It is expected that the reduction in the number of vehicles traversing the highway through the park and at Kē'ē will result in less automobile noise, exhaust fumes, and dust within the park. Additional descriptions of the proposed Master Plan and management strategies are provided in Section 2.5 and in full in <u>the master plan report available on the State Parks website (<a href="http://dlnr.hawaii.gov/dsp/parks/kauai/haena-state-park/">http://dlnr.hawaii.gov/dsp/parks/kauai/haena-state-park/</a>).</u> <del>Appendix I.</del></p> <p>Due to the remote location of the park and the potential for hazardous conditions, an emergency evacuation plan and rescue plans should be developed. Coordination and regular drills should be held annually at a minimum with State Civil Defense and the Kaua'i Fire and Police Departments to ensure readiness. Currently, there are no State Civil Defense sirens in the park and no tsunami evacuation signs on Kūhiō Highway within the park. The land area required for a new siren can be accommodated in the park, most likely in the main parking area. <u>A subsequent letter from the Office of State Emergency Management/Civil Defense noted that siren coverage exists for the project site, but requested the existing siren to be upgraded to a 121db(c) omni-directional siren. State Parks will work with the Hawai'i Emergency Management Agency to ensure adequate siren coverage at the park.</u> To facilitate evacuations in the event they are necessary, the helicopter landing pad is proposed to be retained with the Master Plan improvements. Emergency evacuation routes should also be planned and indicated on wayfinding signs installed at the park and printed in visitor brochures and materials. <del>The orientation session in which all visitors must participate information</del> <u>should also include information directions</u> on what to do during evacuations and emergency situations. <del>, as well as</del> <u>In addition,</u> up-to-the-minute weather and ocean conditions <u>can be sent out via text, email, or the website</u> to help educate visitors on the coastal hazards that they may encounter while visiting the park.</p>			

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<b>HRS § 226-14: Objective and policies for facility systems – in general.</b>				
<i>(a) Objective: Planning for the State's facility systems in general shall be directed towards achievement of the objective of water, transportation, waste disposal, and energy and telecommunication systems that support statewide social, economic, and physical objectives.</i>				
<b>(b) Policies:</b>				
<i>(1) Accommodate the needs of Hawai'i's people through coordination of facility systems and capital improvement priorities in consonance with state and county plans.</i>				X
<i>(2) Encourage flexibility in the design and development of facility systems to promote prudent use of resources and accommodate changing public demands and priorities.</i>				X
<i>(3) Ensure that required facility systems can be supported within resource capacities and at reasonable cost to the user.</i>				X
<i>(4) Pursue alternative methods of financing programs and projects and cost-saving techniques in the planning, construction, and maintenance of facility systems.</i>				X
<b>Discussion:</b> The proposed Master Plan does not involve planning for the State's facility systems; therefore, this objective and these policies are not applicable.				
<b>HRS § 226-15: Objectives and policies for facility systems – solid and liquid wastes.</b>				
<i>(a) Objectives: Planning for the State's facility systems with regard to solid and liquid wastes shall be directed towards the achievement of the following objectives:</i>				
<i>(1) Maintenance of basic public health and sanitation standards relating to treatment and disposal of solid and liquid wastes.</i>		X		
<i>(2) Provision of adequate sewerage facilities for physical and economic activities that alleviate problems in housing, employment, mobility, and other areas.</i>				X
<b>(b) Policies:</b>				
<i>(1) Encourage the adequate development of sewerage facilities that complement planned growth.</i>		X		
<i>(2) Promote re-use and recycling to reduce solid and liquid wastes and employ a conservation ethic.</i>		X		
<i>(3) Promote research to develop more efficient and economical treatment and disposal of solid and liquid wastes.</i>		X		
<b>Discussion:</b> The Master Plan recommends that an integrated water/wastewater/drainage system be developed for the park. It includes increasing the level of wastewater treatment to improve sanitation and to allow the effluent to be reused at the park for irrigation, toilet flushing, and other needs where nonpotable water can safely be used (Section 2.5.3.1). <del>The system should be appropriately designed to serve the full buildout of the Master Plan, and to allow for phasing and incremental sizing if appropriate to support the Near Term Plan initially and help reduce capital costs.</del>  For solid wastes, recycling will be encouraged and visitors will be asked to carry out whatever they bring into the park. State Parks should also regularly maintain an appropriate number of trash and recycling receptacles to encourage the appropriate placement of solid wastes and to reduce the amount of plastic and other waste that is blown or washed into the ocean. All trash and recycling receptacles should have fitted lids to discourage foraging by invasive animals such as cats, rats, and dogs. Regular maintenance of solid and liquid waste facilities is also recommended to reduce potential impacts to the natural, cultural, and scenic resources of the park.				



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<b>HRS § 226-16: Objective and policies for facility systems – water.</b>			
<i>(a) Objective: Planning for the State's facility systems with regard to water shall be directed towards achievement of the objective of the provision of water to adequately accommodate domestic, agricultural, commercial, industrial, recreational, and other needs within resource capacities.</i>			
<b>(b) Policies:</b>			
<i>(1) Coordinate development of land use activities with existing and potential water supply.</i>	<b>X</b>		
<i>(2) Support research and development of alternative methods to meet future water requirements well in advance of anticipated needs.</i>	<b>X</b>		
<i>(3) Reclaim and encourage the productive use of runoff water and wastewater discharges.</i>	<b>X</b>		
<i>(4) Assist in improving the quality, efficiency, service, and storage capabilities of water systems for domestic and agricultural use.</i>	<b>X</b>		
<i>(5) Support water supply services to areas experiencing critical water problems.</i>			<b>X</b>
<i>(6) Promote water conservation programs and practices in government, private industry, and the general public to help ensure adequate water to meet long-term needs.</i>	<b>X</b>		
<b>Discussion:</b> As noted above, an integrated water/wastewater/drainage system is recommended for the park to increase efficient use and reuse of water resources. The reduction in the number of visitors will also reduce the human impacts due to water demand and wastewater generation. However, as more areas of the Agricultural Complex are restored and brought back into production, water demands for agriculture will increase. Therefore, the Master Plan recommends restoring the 'auwai system wherever possible to allow surface waters to irrigate the Agricultural Complex. Rainwater catchment is also recommended at all the new facilities and the use of nonpotable water for toilet flushing and irrigation is encouraged to reduce overall potable water demand (see Section 2.5.3.1).			
<b>HRS § 226-17: Objectives and policies for facility systems – transportation.</b>			
<i>(a) Objective: Planning for the State's facility systems with regard to energy shall be directed toward the achievement of the following objectives:</i>			
<i>(1) An integrated multi-modal transportation system that services statewide needs and promotes the efficient, economical, safe, and convenient movement of people and goods.</i>			<b>X</b>
<i>(2) A statewide transportation system that is consistent with and will accommodate planned growth objectives throughout the State.</i>			<b>X</b>
<b>(b) Policies:</b>			
<i>(1) Design, program, and develop a multi-modal system in conformance with desired growth and physical development as stated in this chapter;</i>	<b>X</b>		
<i>(2) Coordinate state, county, federal, and private transportation activities and programs toward the achievement of statewide objectives;</i>			<b>X</b>
<i>(3) Encourage a reasonable distribution of financial responsibilities for transportation among participating governmental and private parties;</i>	<b>X</b>		
<i>(4) Provide for improved accessibility to shipping, docking, and storage facilities;</i>			<b>X</b>
<i>(5) Promote a reasonable level and variety of mass transportation services that adequately meet statewide and community needs;</i>	<b>X</b>		
<i>(6) Encourage transportation systems that serve to accommodate present and future development needs of communities;</i>	<b>X</b>		
<i>(7) Encourage a variety of carriers to offer increased opportunities and advantages to interisland movement of people and goods;</i>			<b>X</b>
<i>(8) Increase the capacities of airport and harbor systems and support facilities to effectively accommodate transshipment and storage needs;</i>			<b>X</b>

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(9) <i>Encourage the development of transportation systems and programs which would assist statewide economic growth and diversification;</i>	<b>X</b>		
(10) <i>Encourage the design and development of transportation systems sensitive to the needs of affected communities and the quality of Hawai'i's natural environment;</i>	<b>X</b>		
(11) <i>Encourage safe and convenient use of low-cost, energy-efficient, non-polluting means of transportation;</i>	<b>X</b>		
(12) <i>Coordinate intergovernmental land use and transportation planning activities to ensure the timely delivery of supporting transportation infrastructure in order to accommodate planned growth objectives; and</i>	<b>X</b>		
(13) <i>Encourage diversification of transportation modes and infrastructure to promote alternate fuels and energy efficiency.</i>			<b>X</b>
<b>Discussion:</b> The preferred scenario of having the bulk of visitors travel to and from the park via a shuttle service from Princeville is a multimodal solution that encourages the reduction of personal vehicle use and traffic congestion as well as a reduction in consumption of fossil fuel. For the shuttles, green vehicles such as electric vehicles that can be charged with renewable energy sources such as solar PV or vehicles that use alternative fuels and have low or no emissions are recommended. It is not clear whether the shuttle service would be provided by a private or public entity; however, State Parks is supportive of encouraging riders to and from the park should the County decide to extend its service on the North Shore. There is also the option for State Parks to offer a concession to potential shuttle service providers. The shuttle is recommended to be implemented in Phase I to encourage more efficient transportation to and from the park with the potential added benefit of providing visitor education and interpretive programs during the shuttle rides.			
<b>HRS § 226-18: Objectives and policies for facility systems – energy.</b>			
<b>(a) Objectives:</b> <i>Planning for the State's facility systems with regard to energy shall be directed toward the achievement of the following objectives, giving due consideration to all:</i>			
(1) <i>Dependable, efficient, and economical statewide energy systems capable of supporting the needs of the people;</i>			<b>X</b>
(2) <i>Increased energy self-sufficiency where the ratio of indigenous to imported energy use is increased;</i>	<b>X</b>		
(3) <i>Greater energy security in the face of threats to Hawai'i's energy supplies and systems; and</i>	<b>X</b>		
(4) <i>Reduction, avoidance, or sequestration of greenhouse gas emissions from energy supply and use.</i>			<b>X</b>
<b>(b) To achieve the energy objectives, it shall be the policy of this State to ensure the short- and long-term provision of adequate, reasonably priced, and dependable energy services to accommodate demand.</b>			<b>X</b>
<b>(c) Other Policies:</b>			
(1) <i>Support research and development as well as promote the use of renewable energy sources;</i>	<b>X</b>		
(2) <i>Ensure that the combination of energy supplies and energy-saving systems is sufficient to support the demands of growth;</i>	<b>X</b>		
(3) <i>Base decisions of least-cost supply-side and demand-side energy resource options on a comparison of their total costs and benefits when a least-cost is determined by a reasonably comprehensive, quantitative, and qualitative accounting of their long-term, direct and indirect economic, environmental, social, cultural, and public health costs and benefits;</i>	<b>X</b>		
(4) <i>Promote all cost-effective conservation of power and fuel supplies through measures including:</i>			

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(A) Development of cost-effective demand-side management programs;			<b>X</b>
(B) Education; and	<b>X</b>		
(C) Adoption of energy-efficient practices and technologies;	<b>X</b>		
(5) Ensure, to the extent that new supply-side resources are needed, that the development or expansion of energy systems uses the least-cost energy supply option and maximizes efficient technologies;	<b>X</b>		
(6) Support research, development, demonstration, and use of energy efficiency, load management, and other demand-side management programs, practices, and technologies;	<b>X</b>		
(7) Promote alternate fuels and transportation energy efficiency;	<b>X</b>		
(8) Support actions that reduce, avoid, or sequester greenhouse gases in utility, transportation, and industrial sector applications; and	<b>X</b>		
(9) Support actions that reduce, avoid, or sequester Hawai'i's greenhouse gas emissions through agriculture and forestry initiatives.	<b>X</b>		
(10) Provide priority handling and processing for all state and county permits required for renewable energy projects; and			<b>X</b>
(11) Promote the development of indigenous geothermal energy resources that are located on public trust land as an affordable and reliable source of firm power for Hawai'i.			<b>X</b>
<b>Discussion:</b> Due to the park's limited access to infrastructure and the dispersed locations of some of the proposed facilities, all facilities requiring power are recommended to be designed to be as energy efficient as possible and to use renewable energy resources to fill the remaining demand wherever feasible. The shuttle system is encouraged to use low or no emission vehicles and to use green vehicles such as electric vehicles that can be charged with renewable energy sources such as solar PV or vehicles that use alternative fuels. The restoration of the Agricultural Complex, native forest areas, and other garden areas are actions that have the potential to sequester greenhouse gas emissions.			
<b>HRS § 226-18.5: Objectives and policies for facility systems – telecommunications.</b>			
<b>(a) Objective:</b> Planning for the State's telecommunications facility systems shall be directed towards the achievement of dependable, efficient, and economical statewide telecommunications systems capable of supporting the needs of the people.			
<b>(b) To achieve the telecommunications objective, it shall be the policy of this State to ensure the provision of adequate, reasonably priced, and dependable telecommunications services to accommodate demand.</b>			
<b>(c) Other Policies:</b>			
(1) Facilitate research and development of telecommunications systems and resources;			<b>X</b>
(2) Encourage public and private sector efforts to develop means for adequate, ongoing telecommunications planning;			<b>X</b>
(3) Promote efficient management and use of existing telecommunications systems and services; and	<b>X</b>		
(4) Facilitate the development of education and training of telecommunications personnel.			<b>X</b>
<b>Discussion:</b> Coordination with the various communication companies will be undertaken and the current hardline telephone line at the park will be maintained. However State Parks is not involved with the planning of the State's telecommunications facility systems. Therefore, many of these objectives and policies are not applicable.			
<b>HRS § 226-19: Objectives and policies for socio-cultural advancement – housing.</b>			
<b>(a) Objectives:</b> Planning for the State's socio-cultural advancement with regard to housing shall be directed toward the achievement of the following objectives:			

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(1) Greater opportunities for Hawai'i's people to secure reasonably priced, safe, sanitary, and livable homes, located in suitable environments that satisfactorily accommodate the needs and desires of families and individuals, through collaboration and cooperation between government and nonprofit and for-profit developers to ensure that more affordable housing is made available to very low-, low- and moderate-income segments of Hawai'i's population.			<b>X</b>
(2) The orderly development of residential areas sensitive to community needs and other land uses.			<b>X</b>
(3) The development and provision of affordable rental housing by the State to meet the housing needs of Hawai'i's people.			<b>X</b>
<b>(b) Policies:</b>			
(1) Effectively accommodate the housing needs of Hawai'i's people.			<b>X</b>
(2) Stimulate and promote feasible approaches that increase housing choices for low-income, moderate-income, and gap-group households.			<b>X</b>
(3) Increase homeownership and rental opportunities and choices in terms of quality, location, cost, densities, style, and size of housing.			<b>X</b>
(4) Promote appropriate improvement, rehabilitation, and maintenance of existing housing units and residential areas.			<b>X</b>
(5) Promote design and location of housing developments taking into account the physical setting, accessibility to public facilities and services, and other concerns of existing communities and surrounding areas.			<b>X</b>
(6) Facilitate the use of available vacant, developable, and underutilized urban lands for housing.			<b>X</b>
(7) Foster a variety of lifestyles traditional to Hawai'i through the design and maintenance of neighborhoods that reflect the culture and values of the community.			<b>X</b>
(8) Promote research and development of methods to reduce the cost of housing construction in Hawai'i.			<b>X</b>
<b>Discussion:</b> The proposed Hā'ena State Park Master Plan does not <del>include</del> <u>add</u> any housing except for the Caretaker's Cottage; therefore the above objectives and policies do not apply to the project.			
<b>HRS § 226-20: Objectives and policies for socio-cultural advancement – health</b>			
<b>(a) Objectives:</b> Planning for the State's socio-cultural advancement with regard to health shall be directed towards achievement of the following objectives:			
(1) Fulfillment of basic individual health needs of the general public.			<b>X</b>
(2) Maintenance of sanitary and environmentally healthful conditions in Hawai'i's communities.	<b>X</b>		
(3) Elimination of health disparities by identifying and addressing social determinants of health.			<b>X</b>
<b>(b) Policies:</b>			
(1) Provide adequate and accessible services and facilities for prevention and treatment of physical and mental health problems, including substance abuse.			<b>X</b>
(2) Encourage improved cooperation among public and private sectors in the provision of health care to accommodate the total health needs of individuals throughout the State.			<b>X</b>
(3) Encourage public and private efforts to develop and promote statewide and local strategies to reduce health care and related insurance costs.			<b>X</b>
(4) Foster an awareness of the need for personal health maintenance and preventive health care through education and other measures.			<b>X</b>
(5) Provide programs, services, and activities that ensure environmentally healthful and sanitary conditions.	<b>X</b>		
(6) Improve the State's capabilities in preventing contamination by pesticides and other potentially hazardous substances through increased coordination, education,	<b>X</b>		



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<i>monitoring, and enforcement.</i>			
(7) <i>Prioritize programs, services, interventions, and activities that address identified social determinants of health to improve native Hawaiian health and well-being consistent with the United States Congress' declaration of policy as codified in title 42 United States Code section 11702, and to reduce health disparities of disproportionately affected demographics, including native Hawaiians, other Pacific Islanders, and Filipinos. The prioritization of affected demographic groups other than native Hawaiians may be reviewed every ten years and revised based on the best available epidemiological and public health data.</i>			<b>X</b>
<b>Discussion:</b> The proposed Master Plan supports health policies primarily by restoring the native ecosystems including the dunes, wetlands, loko, and riparian environments, improving maintenance of the park, and recommending <u>aerobic wastewater treatment with at minimum R-2 water quality for wastewater treatment so that the effluent can be reused for non-potable uses. The Master Plan also recommends utilizing non-chemical maintenance techniques and minimizing the use of chemical fertilizers and pesticides wherever feasible and the use environmentally-safe soaps that contain plant nutrients and biocompatible cleaners.</u>			
<b>HRS § 226-21: Objective and policies for socio-cultural advancement – education.</b>			
<b>(a) Objectives:</b> <i>Planning for the State's socio-cultural advancement with regard to education shall be directed towards achievement of the objective of the provision of a variety of educational opportunities to enable individuals to fulfill their needs, responsibilities, and aspirations.</i>			
<b>(b) Policies:</b>			
(1) <i>Support educational programs and activities that enhance personal development, physical fitness, recreation, and cultural pursuits of all groups.</i>	<b>X</b>		
(2) <i>Ensure the provision of adequate and accessible educational services and facilities that are designed to meet individual and community needs.</i>	<b>X</b>		
(3) <i>Provide appropriate educational opportunities for groups with special needs.</i>	<b>X</b>		
(4) <i>Promote educational programs which enhance understanding of Hawai'i's cultural heritage.</i>	<b>X</b>		
(5) <i>Provide higher educational opportunities that enable Hawai'i's people to adapt to changing employment demands.</i>			<b>X</b>
(6) <i>Assist individuals, especially those experiencing critical employment problems or barriers, or undergoing employment transitions, by providing appropriate employment training programs and other related educational opportunities.</i>			<b>X</b>
(7) <i>Promote programs and activities that facilitate the acquisition of basic skills, such as reading, writing, computing, listening, speaking, and reasoning.</i>			<b>X</b>
(8) <i>Emphasize quality educational programs in Hawai'i's institutions to promote academic excellence.</i>			<b>X</b>
(9) <i>Support research programs and activities that enhance the education programs of the State.</i>	<b>X</b>		
<b>Discussion:</b> The proposed Master Plan recommends the expansion of the educational and interpretive facilities and programs at Hā'ena State Park, including the Welcome Pavilion/ECC-Hale, <del>Interpretive Pedestrian</del> Path and various interpretive displays. All visitors will be <del>required to attend an orientation session</del> <u>provided with visitor orientation information prior to park entry</u> to increase sensitivity and awareness of the park's varied natural, cultural, and historic resources as well as appropriate behavior and protocols respecting active cultural uses. <del>Chapter 5 Appendix M</del> of the Master Plan report ( <del>Appendix I</del> <u>available at <a href="http://dlnr.hawaii.gov/dsp/parks/kauai/haena-state-park/">http://dlnr.hawaii.gov/dsp/parks/kauai/haena-state-park/</a></u> ) details the proposed			

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interpretive and educational programs that will be developed at the park. It is anticipated that the park and all its varied environments could become places of active research and should be envisioned as outdoor classrooms, providing learning opportunities for all visitors, including out-of-state and international visitors, Kaua'i and Hawai'i residents, school groups from preschool to college, field schools, families and interest groups/organizations, cultural practitioners and scientific researchers.			
<b>HRS § 226-22: Objective and policies for socio-cultural advancement – social services.</b>			
<i>(a) Objective: Planning for the State's socio-cultural advancement with regard to social services shall be directed towards the achievement of the objective of improved public and private social services and activities that enable individuals, families, and groups to become more self-reliant and confident to improve their well-being.</i>			
<b>(b) Policies:</b>			
(1) <i>Assist individuals, especially those in need of attaining a minimally adequate standard of living and those confronted by social and economic hardship conditions, through social services and activities within the State's fiscal capacities.</i>			X
(2) <i>Promote coordination and integrative approaches among public and private agencies and programs to jointly address social problems that will enable individuals, families, and groups to deal effectively with social problems and to enhance their participation in society.</i>			X
(3) <i>Facilitate the adjustment of new residents, especially recently arrived immigrants, into Hawai'i's communities.</i>			X
(4) <i>Promote alternatives to institutional care in the provision of long-term care for elder and disabled populations.</i>			X
(5) <i>Support public and private efforts to prevent domestic abuse and child molestation, and assist victims of abuse and neglect.</i>			X
(6) <i>Promote programs which assist people in need of family planning services to enable them to meet their needs.</i>			X
<b>Discussion:</b> The Hā'ena State Park Master Plan does not involve social services and therefore the social services objective and policies do not apply to the project.			
<b>HRS § 226-23: Objective and policies for socio-cultural advancement – leisure.</b>			
<i>(a) Objective: Planning for the State's socio-cultural advancement with regard to leisure shall be directed towards the achievement of the objective of the adequate provision of resources to accommodate diverse cultural, artistic, and recreational needs for present and future generations.</i>			
<b>(b) Policies:</b>			
(1) <i>Foster and preserve Hawai'i's multi-cultural heritage through supportive cultural, artistic, recreational, and humanities-oriented programs and activities.</i>	X		
(2) <i>Provide a wide range of activities and facilities to fulfill the cultural, artistic, and recreational needs of all diverse and special groups effectively and efficiently.</i>	X		
(3) <i>Enhance the enjoyment of recreational experiences through safety and security measures, educational opportunities, and improved facility design and maintenance.</i>	X		
(4) <i>Promote the recreational and educational potential of natural resources having scenic, open space, cultural, historical, geological, or biological values while ensuring that their inherent values are preserved.</i>	X		
(5) <i>Ensure opportunities for everyone to use and enjoy Hawai'i's recreational resources.</i>	X		
(6) <i>Assure the availability of sufficient resources to provide for future cultural, artistic, and recreational needs.</i>	X		
(7) <i>Provide adequate and accessible physical fitness programs to promote the physical and mental well-being of Hawai'i's people.</i>	X		

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(8) <i>Increase opportunities for appreciation and participation in the creative arts, including the literary, theatrical, visual, musical, folk, and traditional art forms.</i>			<b>X</b>
(9) <i>Encourage the development of creative expression in the artistic disciplines to enable all segments of Hawai'i's population to participate in the creative arts.</i>			<b>X</b>
(10) <i>Assure adequate access to significant natural and cultural resources in public ownership.</i>	<b>X</b>		
<p><b>Discussion:</b> As noted earlier, one of the main objectives of the Master Plan is to provide opportunities for quality outdoor recreation, with sensitivity to the park's natural and cultural resources. The Master Plan recommends the preservation and restoration of the park's rich cultural, historic, and natural resources and supports the enrichment of visitor experience through a range of educational programs and opportunities that will span cultural, historical, geological, and biological topics and values. The park's facilities will be designed to be accessible to the greatest extent possible and the continued recreational activities that will be permitted (Table 9) will support the community's continued mental and physical health. Although the number of daily visitors would be <del>limited to less than what is currently permitted</del> <u>reduced</u>, there will still be opportunity for the public to access this publicly-owned resource. Advanced planning may be required due to the demand. However, in order to improve the health and conditions of the park itself, the proposed visitor limit will be an initial limit that may be adjusted up or down in the future should studies show that the inherent scenic, open space, cultural, historical, geological, or biological values are able to be preserved or need further remediation.</p>			
<b>HRS § 226-24: Objective and policies for socio-cultural advancement – individual rights and personal well-being.</b>			
<i>(a) Objective: Planning for the State's socio-cultural advancement with regard to individual rights and personal well-being shall be directed towards achievement of the objective of increased opportunities and protection of individual rights to enable individuals to fulfill their socio-economic needs and aspirations.</i>			
<b>(b) Policies:</b>			
(1) <i>Provide effective services and activities that protect individuals from criminal acts and unfair practices and that alleviate the consequences of criminal acts in order to foster a safe and secure environment.</i>	<b>X</b>		
(2) <i>Uphold and protect the national and state constitutional rights of every individual.</i>			<b>X</b>
(3) <i>Assure access to, and availability of, legal assistance, consumer protection, and other public services which strive to attain social justice.</i>			<b>X</b>
(4) <i>Ensure equal opportunities for individual participation in society.</i>			<b>X</b>
<p><b>Discussion:</b> While incidences may still occur, the proposed increases in security and oversight of the park including the controlled entry <u>and</u> increased staff, <del>and on-site caretaker</del> are anticipated to help deter criminal acts such as vandalism and car break-ins that currently occur in the park's parking areas. Installation of the gates at the entrance will also help deter illegal activities such as rave parties that sometimes occur during overnight hours.</p>			
<b>HRS § 226-25: Objective and policies for socio-cultural advancement – culture.</b>			
<i>(a) Objective: Planning for the State's socio-cultural advancement with regard to culture shall be directed toward the achievement of the objective of enhancement of cultural identities, traditions, values, customs, and arts of Hawai'i's people.</i>			

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<b>(b) Policies:</b>			
(1) Foster increased knowledge and understanding of Hawai'i's ethnic and cultural heritages and the history of Hawai'i.	X		
(2) Support activities and conditions that promote cultural values, customs, and arts that enrich the lifestyles of Hawai'i's people and which are sensitive and responsive to family and community needs.	X		
(3) Encourage increased awareness of the effects of proposed public and private actions on the integrity and quality of cultural and community lifestyles in Hawai'i.	X		
(4) Encourage the essence of the aloha spirit in people's daily activities to promote harmonious relationships among Hawai'i's people and visitors.	X		
<p><b>Discussion:</b> The State will employ both programmatic as well as physical mitigation measures to avoid and minimize impacts to the rich cultural, archaeological, and historic resources and prioritize the cultural heritage of the park. The primary programmatic actions to mitigate impacts to archaeological resources will be to establish a Cultural Advisory Group, whose input will improve interpretation of the park's cultural, archaeological, and historic resources and to help guide all aspects of park management and Master Plan implementation. All visitors will be <del>required to attend an orientation session provided with</del> visitor orientation information prior to park entry to increase sensitivity and awareness of the park's varied cultural, archaeological, and historic resources as well as appropriate behavior and protocols respecting active cultural uses.</p> <p>The Master Plan also recommends the restoration of the park's cultural, archaeological, natural, and historic resources, specifically, the dune system, Hula Complex, and Agricultural Complex (including the 'auwai if feasible). New park facilities will be limited to areas of previous disturbance so that its potential impact to archaeological resources is minimized. More discussion on the archaeological, historic, and cultural resources of the park can be found in Sections 4.1 and 4.2.</p>			
<b>HRS § 226-26: Objectives and policies for socio-cultural advancement – public safety.</b>			
<b>Objectives:</b> Planning for the State's socio-cultural advancement with regard to public safety shall be directed towards the achievement of the following objectives:			
(1) Assurance of public safety and adequate protection of life and property for all people.	X		
(2) Optimum organizational readiness and capability in all phases of emergency management to maintain the strength, resources, and social and economic well-being of the community in the event of civil disruptions, wars, natural disasters, and other major disturbances.	X		
(3) Promotion of a sense of community responsibility for the welfare and safety of Hawai'i's people.	X		
<b>(b) Policies related to public safety:</b>			
(1) Ensure that public safety programs are effective and responsive to community needs.	X		
(2) Encourage increased community awareness and participation in public safety programs.	X		
<b>(c) Policies related to criminal justice:</b>			
(1) Support criminal justice programs aimed at preventing and curtailing criminal activities.			X
(2) Develop a coordinated, systematic approach to criminal justice administration among all criminal justice agencies.			X
(3) Provide a range of correctional resources which may include facilities and			X



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<i>alternatives to traditional incarceration in order to address the varied security needs of the community and successfully reintegrate offenders into the community.</i>			
<b>(d) Policies related to emergency management:</b>			
(1) <i>Ensure that responsible organizations are in a proper state of readiness to respond to major war-related, natural, or technological disasters and civil disturbances at all times.</i>	<b>X</b>		
(2) <i>Enhance the coordination between emergency management programs throughout the State.</i>	<b>X</b>		
<p><b>Discussion:</b> With regards to public safety, the proposed Master Plan recommends that emergency evacuation plans and rescue plans should be developed for all potential natural hazards (Section 2.5.2). Coordination and regular drills should be held annually at a minimum with State Civil Defense and the Kaua'i Fire and Police Departments to ensure readiness. Currently, there are no State Civil Defense sirens in the park and no tsunami evacuation signs on Kūhiō Highway within the park. However, the land area required for a new siren can be accommodated in the park, most likely in the main parking area. <u>A subsequent letter from the Office of State Emergency Management/Civil Defense noted that siren coverage exists for the project site, but requested the existing siren to be upgraded to a 121db(c) omni-directional siren. State Parks will work with the Hawai'i Emergency Management Agency to ensure adequate siren coverage at the park.</u> To facilitate evacuations in the event they are necessary, the helicopter landing pad is proposed to be retained with the Master Plan improvements. Emergency evacuation routes should also be planned and indicated on wayfinding signs installed at the park and printed in visitor brochures and materials. The orientation <del>session in</del> <u>information</u> which all visitors <del>must participate will receive</del> should also include <del>information</del> <u>directions</u> on what to do during evacuations and emergency situations, as well as up-to-the-minute weather and ocean conditions to help educate visitors on the coastal hazards that they may encounter while visiting the park.</p>			
<b>HRS § 226-27: Objectives and policies for socio-cultural advancement – government.</b>			
<b>(a) Objectives:</b> <i>Planning the State's socio-cultural advancement with regard to government shall be directed towards the achievement of the following objectives:</i>			
(1) <i>Efficient, effective, and responsive government services at all levels in the State.</i>	<b>X</b>		
(2) <i>Fiscal integrity, responsibility, and efficiency in the state government and county governments.</i>	<b>X</b>		
<b>(b) Policies:</b>			
(4) <i>Provide for necessary public goods and services not assumed by the private sector.</i>	<b>X</b>		
(5) <i>Pursue an openness and responsiveness in government that permits the flow of public information, interaction, and response.</i>	<b>X</b>		
(6) <i>Minimize the size of government to that necessary to be effective.</i>	<b>X</b>		
(7) <i>Stimulate the responsibility in citizens to productively participate in government for a better Hawai'i.</i>	<b>X</b>		
(8) <i>Assure that government attitudes, actions, and services are sensitive to community needs and concerns.</i>	<b>X</b>		
(9) <i>Provide for a balanced fiscal budget.</i>	<b>X</b>		
(10) <i>Improve the fiscal budgeting and management system of the State.</i>			<b>X</b>
(11) <i>Promote the consolidation of state and county governmental functions to increase the effective and efficient delivery of government programs and services and to eliminate duplicative services wherever feasible.</i>			<b>X</b>

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(Key: S = Supportive, N/S = Not Supportive, N/A = Not Applicable)			
<p><b>Discussion:</b> Because Hā'ena State Park is one of the State's most popular parks as well as a place of extreme cultural sensitivity and importance, the Master Plan proposes a variety of improvements and management strategies to better serve the varied communities who use the park as well as protect the natural, cultural, and historic resources. State Parks has reached out to a wide-range of stakeholders including community members, Hā'ena families and kūpuna, cultural and scientific experts, and federal, State, and County government agencies in the development of this Master Plan and incorporated their input. State Parks will also continue communicating and coordinating with relevant government agencies and community and cultural advisory committees as they move forward with implementation of the plan and ongoing maintenance and operation of the park.</p> <p>While the Master Plan proposes to potentially increase the number of people staffed at the park, many feel that the current level of staffing is inadequate to effectively protect and maintain the resources and therefore an increase is warranted. State Parks is considering options to have a third-party operator manage the park who as part of their responsibilities would be to operate the park in a fiscally responsible way and independent of State funding as much as possible.</p> <p>The educational session all visitors must attend will help encourage appropriate behavior and protocol at the park and engender a sense of responsibility and care for the varied and sensitive natural, cultural, and historic resources as well as any active cultural practices they may encounter at the park.</p>			

#### 5.3.4.2 Part III: Priority Guidelines

The purpose of this part of the Hawai'i State Plan is to establish overall priority guidelines to address areas of statewide concern. The Hawai'i State Plan notes that the State shall strive to improve the quality of life for Hawai'i's present and future population through the pursuit of desirable courses of action in five major areas of statewide concern which merit priority attention: 1) economic development; 2) population growth and land resource management; 3) affordable housing; 4) crime and criminal justice; and 5) quality education (§226-102). The priority guidelines applicable to the proposed Master Plan are discussed below.

HAWAI'I STATE PLAN, CHAPTER 226, HRS – PART III. PRIORITY GUIDELINES	S	N/S	N/A
(Key: S = Supportive, N/S = Not Supportive, N/A = Not Applicable)			
<b>HRS § 226-101: Purpose.</b> <i>The purpose of this part is to establish overall priority guidelines to address areas of statewide concern.</i>			
<b>HRS § 226-102: Overall direction.</b> <i>The State shall strive to improve the quality of life for Hawai'i's present and future present and future population through the pursuit of desirable courses of action in five major areas of statewide concern which merit priority attention: economic development, population growth and land resource management, affordable housing, crime and criminal justice, quality education, principles of sustainability, and climate change adaptation.</i>			
<b>HRS § 226-103: Economic priority guidelines.</b>			
<i>(a) Priority guidelines to stimulate economic growth and encourage business expansion and development</i>			

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<b><i>to provide needed jobs for Hawai'i's people and achieve a stable and diversified economy:</i></b>			
(1) <i>Seek a variety of means to increase the availability of investment capital for new and expanding enterprises.</i>			<b>X</b>
(A) <i>Encourage investments which:</i>			
(i) <i>Reflect long term commitments to the State;</i>			<b>X</b>
(ii) <i>Rely on economic linkages within the local economy;</i>	<b>X</b>		
(iii) <i>Diversify the economy;</i>	<b>X</b>		
(iv) <i>Reinvest in the local economy;</i>	<b>X</b>		
(v) <i>Are sensitive to community needs and priorities; and</i>	<b>X</b>		
(vi) <i>Demonstrate a commitment to provide management opportunities to Hawai'i residents; and</i>	<b>X</b>		
(B) <i>Encourage investments in innovative activities that have a nexus to the State, such as:</i>			
(i) <i>Present or former residents acting as entrepreneurs or principals;</i>	<b>X</b>		
(ii) <i>Academic support from an institution of higher education in Hawai'i;</i>	<b>X</b>		
(iii) <i>Investment interest from Hawai'i residents;</i>	<b>X</b>		
(iv) <i>Resources unique to Hawai'i that are required for innovative activity; and</i>	<b>X</b>		
(v) <i>Complementary or supportive industries or government programs or projects.</i>	<b>X</b>		
(2) <i>Encourage the expansion of technological research to assist industry development and support the development and commercialization of technological advancements.</i>			<b>X</b>
(3) <i>Improve the quality, accessibility, and range of services provided by government to business, including data and reference services and assistance in complying with governmental regulations.</i>			<b>X</b>
(4) <i>Seek to ensure that state business tax and labor laws and administrative policies are equitable, rational, and predictable.</i>			<b>X</b>
(5) <i>Streamline the processes for building and development permit and review and telecommunication infrastructure installation approval and eliminate or consolidate other burdensome or duplicative governmental requirements imposed on business, where scientific evidence indicates that public health, safety, and welfare would not be adversely affected.</i>			<b>X</b>
(6) <i>Encourage the formation of cooperatives and other favorable marketing or distribution arrangements at the regional or local level to assist Hawai'i's small-scale producers, manufacturers, and distributors.</i>			<b>X</b>
(7) <i>Continue to seek legislation to protect Hawai'i from transportation interruptions between Hawai'i and the continental United States.</i>			<b>X</b>
(8) <i>Provide public incentives and encourage private initiative to develop and attract industries which promise long-term growth potentials and which have the following characteristics:</i>			<b>X</b>
(A) <i>An industry that can take advantage of Hawai'i's unique location and available physical and human resources.</i>			<b>X</b>
(B) <i>A clean industry that would have minimal adverse effects on Hawai'i's environment.</i>			<b>X</b>
(C) <i>An industry that is willing to hire and train Hawai'i's people to meet the industry's labor needs at all levels of employment.</i>			<b>X</b>
(D) <i>An industry that would provide reasonable income and steady employment.</i>			<b>X</b>
(9) <i>Support and encourage, through educational and technical assistance programs and other means, expanded opportunities for employee ownership and participation in Hawai'i business.</i>			<b>X</b>
(10) <i>Enhance the quality of Hawai'i's labor force and develop and maintain career opportunities for Hawai'i's people through the following actions:</i>			

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(A) <i>Expand vocational training in diversified agriculture, aquaculture, information industry, and other areas where growth is desired and feasible.</i>	<b>X</b>		
(B) <i>Encourage more effective career counseling and guidance in high schools and post-secondary institutions to inform students of present and future career opportunities.</i>			<b>X</b>
(C) <i>Allocate educational resources to career areas where high employment is expected and where growth of new industries is desired.</i>			<b>X</b>
(D) <i>Promote career opportunities in all industries for Hawai'i's people by encouraging firms doing business in the State to hire residents.</i>	<b>X</b>		
(E) <i>Promote greater public and private sector cooperation in determining industrial training needs and in developing relevant curricula and on-the-job training opportunities.</i>			<b>X</b>
(F) <i>Provide retraining programs and other support services to assist entry of displaced workers into alternative employment.</i>			<b>X</b>
<b>(b) Priority guidelines to promote the economic health and quality of the visitor industry:</b>			
(1) <i>Promote visitor satisfaction by fostering an environment which enhances the Aloha Spirit and minimizes inconveniences to Hawai'i's residents and visitors.</i>	<b>X</b>		
(2) <i>Encourage the development and maintenance of well-designed, adequately serviced hotels and resort destination areas which are sensitive to neighboring communities and activities and which provide for adequate shoreline setbacks and beach access.</i>			<b>X</b>
(3) <i>Support appropriate capital improvements to enhance the quality of existing resort destination areas and provide incentives to encourage investment in upgrading, repair, and maintenance of visitor facilities.</i>			<b>X</b>
(4) <i>Encourage visitor industry practices and activities which respect, preserve, and enhance Hawai'i's significant natural, scenic, historic, and cultural resources.</i>	<b>X</b>		
(5) <i>Develop and maintain career opportunities in the visitor industry for Hawai'i's people, with emphasis on managerial positions.</i>			<b>X</b>
(6) <i>Support and coordinate tourism promotion abroad to enhance Hawai'i's share of existing and potential visitor markets.</i>			<b>X</b>
(7) <i>Maintain and encourage a more favorable resort investment climate consistent with the objectives of this chapter.</i>			<b>X</b>
(8) <i>Support law enforcement activities that provide a safer environment for both visitors and residents alike.</i>	<b>X</b>		
(9) <i>Coordinate visitor industry activities and promotions to business visitors through the state network of advanced data communication techniques.</i>	<b>X</b>		
<b>(c) Priority guidelines to promote the continued viability of the sugar and pineapple industries:</b>			
(1) <i>Provide adequate agricultural lands to support the economic viability of the sugar and pineapple industries.</i>			<b>X</b>
(2) <i>Continue efforts to maintain federal support to provide stable sugar prices high enough to allow profitable operations in Hawai'i.</i>			<b>X</b>
(3) <i>Support research and development, as appropriate, to improve the quality and production of sugar and pineapple crops.</i>			<b>X</b>
<b>(d) Priority guidelines to promote the growth and development of diversified agriculture and aquaculture:</b>			
(1) <i>Identify, conserve, and protect agricultural and aquacultural lands of importance and initiate affirmative and comprehensive programs to promote economically productive agricultural and aquacultural uses of such lands.</i>			<b>X</b>
(2) <i>Assist in providing adequate, reasonably priced water for agricultural activities.</i>			<b>X</b>
(3) <i>Encourage public and private investment to increase water supply and to improve transmission, storage, and irrigation facilities in support of diversified agriculture and aquaculture.</i>			<b>X</b>
(4) <i>Assist in the formation and operation of production and marketing associations and cooperatives to reduce production and marketing costs.</i>			<b>X</b>
(5) <i>Encourage and assist with the development of a waterborne and airborne freight and cargo system capable of meeting the needs of Hawai'i's agricultural community.</i>			<b>X</b>



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(6) <i>Seek favorable freight rates for Hawai'i's agricultural products from interisland and overseas transportation operators.</i>			<b>X</b>
(7) <i>Encourage the development and expansion of agricultural and aquacultural activities which offer long-term economic growth potential and employment opportunities.</i>			<b>X</b>
(8) <i>Continue the development of agricultural parks and other programs to assist small independent farmers in securing agricultural lands and loans.</i>			<b>X</b>
(9) <i>Require agricultural uses in agricultural subdivisions and closely monitor the uses in these subdivisions.</i>			<b>X</b>
(10) <i>Support the continuation of land currently in use for diversified agriculture.</i>			<b>X</b>
(11) <i>Encourage residents and visitors to support Hawai'i's farmers by purchasing locally grown food and food products.</i>			<b>X</b>
<b>(e) Priority guidelines for water use and development:</b>			
(1) <i>Maintain and improve water conservation programs to reduce the overall water consumption rate.</i>	<b>X</b>		
(2) <i>Encourage the improvement of irrigation technology and promote the use of nonpotable water for agricultural and landscaping purposes.</i>	<b>X</b>		
(3) <i>Increase the support for research and development of economically feasible alternative water sources.</i>	<b>X</b>		
(4) <i>Explore alternative funding sources and approaches to support future water development programs and water system improvements.</i>			<b>X</b>
<b>(f) Priority guidelines for energy use and development:</b>			
(1) <i>Encourage the development, demonstration, and commercialization of renewable energy sources.</i>	<b>X</b>		
(2) <i>Initiate, maintain, and improve energy conservation programs aimed at reducing energy waste and increasing public awareness of the need to conserve energy.</i>	<b>X</b>		
(3) <i>Provide incentives to encourage the use of energy conserving technology in residential, industrial, and other buildings.</i>			<b>X</b>
(4) <i>Encourage the development and use of energy conserving and cost-efficient transportation systems.</i>	<b>X</b>		
<b>(g) Priority guidelines to promote the development of the information industry:</b>			
(1) <i>Establish an information network, with an emphasis on broadband and wireless infrastructure and capability, that will serve as the foundation of and catalyst for overall economic growth and diversification in Hawai'i.</i>			<b>X</b>
(2) <i>Encourage the development of services such as financial data processing, a products and services exchange, foreign language translations, telemarketing, teleconferencing, a twenty-four-hour international stock exchange, international banking, and a Pacific Rim management center.</i>			<b>X</b>
(3) <i>Encourage the development of small businesses in the information field such as software development, the development of new information systems, peripherals, and applications; data conversion and data entry services; and home or cottage services such as computer programming, secretarial, and accounting services.</i>			<b>X</b>
(4) <i>Encourage the development or expansion of educational and training opportunities for residents in the information and telecommunications fields.</i>			<b>X</b>
(5) <i>Encourage research activities, including legal research in the information and telecommunications fields.</i>			<b>X</b>
(6) <i>Support promotional activities to market Hawai'i's information industry services.</i>			<b>X</b>
(7) <i>Encourage the location or co-location of telecommunication or wireless information relay facilities in the community, including public areas, where scientific evidence indicates that the public health, safety, and welfare would not be adversely affected.</i>			<b>X</b>
<b>Discussion:</b> All of the proposed improvements and management strategies are part of a Master Plan that lays the foundation and direction for future investment to help restore and manage a significant public asset that has multiple natural, cultural, historic, and educational values. The recommendation to have a third-party management hui with local			

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<p>knowledge and cultural expertise be the primary park management entity seeks to provide management opportunities for Hawai'i residents. Collaboration with local schools and the university on various educational programs and opportunities also support innovative activities which have a nexus to the State and allow the rich and varied cultural, natural, and historic resources of the park to support programs of interest to residents and visitors alike. Restoration of the Hula and Agricultural Complexes and the development of the Cultural Gathering Area also create places where culturally-based training can occur and the park provides the opportunity to share this knowledge among a wide audience.</p>			
<p>While the reduced number of daily visitors at the park may be an inconvenience at first to residents and visitors alike, it will require people to plan their visits in advance and will help to better maintain the sensitive natural, cultural, and historic resources at the park. Prior to instituting the <u>proposed</u> visitor limits, a significant public information campaign must be made for both residents and the visitor industry far in advance so people are able to plan their visit to the park and for the proposed changes. Social media, the Internet, and other information technologies <u>and news/media outlets</u> will also be used to disseminate information about the park and any park closures to minimize inconveniences to residents and visitors. Interpretive materials and the orientation <del>sessions</del> <u>information</u> will help educate visitors of the sensitive and varied resources at the park, of the behaviors and activities that are appropriate, and to respect cultural activities that may be occurring within the park.</p>			
<p>The integrated water/wastewater/drainage system proposed for the park will ensure the most efficient use of water resources and encourage reuse of catchment and recycled water for nonpotable uses such as irrigation, <u>dust control</u>, and toilet flushing. In addition, due to the remoteness of the park, all facilities will be designed to be as energy efficient as possible and to supply the remaining energy needs with renewable resources such as solar, microwind, and microhydropower. Access to the park will also encourage shuttle use and carpooling and energy-efficient technologies are encouraged for the shuttle system as part of the Master Plan.</p>			
<b>HRS § 226-104: Population growth and land resources priority guidelines.</b>			
<b>(a) <i>Priority guidelines to effect desired statewide growth and distribution:</i></b>			
(1) <i>Encourage planning and resource management to insure that population growth rates throughout the State are consistent with available and planned resource capacities and reflect the needs and desires of Hawai'i's people.</i>			<b>X</b>
(2) <i>Manage a growth rate for Hawai'i's economy that will parallel future employment needs for Hawai'i's people.</i>			<b>X</b>
(3) <i>Ensure that adequate support services and facilities are provided to accommodate the desired distribution of future growth throughout the State.</i>			<b>X</b>
(4) <i>Encourage major state and federal investments and services to promote economic development and private investment to the neighbor islands, as appropriate.</i>	<b>X</b>		
(5) <i>Explore the possibility of making available urban land, low-interest loans, and housing subsidies to encourage the provision of housing to support selective economic and population growth on the neighbor islands.</i>			<b>X</b>
(6) <i>Seek federal funds and other funding sources outside the State for research, program development, and training to provide future employment opportunities on the</i>			<b>X</b>

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<i>neighbor islands.</i>			
(7) <i>Support the development of high technology parks on the neighbor islands.</i>			<b>X</b>
<b>(b) Priority guidelines for regional growth distribution and land resource utilization:</b>			
(1) <i>Encourage urban growth primarily to existing urban areas where adequate public facilities are already available or can be provided with reasonable public expenditures, and away from areas where other important benefits are present, such as protection of important agricultural land or preservation of lifestyles.</i>			<b>X</b>
(2) <i>Make available marginal or nonessential agricultural lands for appropriate urban uses while maintaining agricultural lands of importance in the agricultural district.</i>			<b>X</b>
(3) <i>Restrict development when drafting of water would result in exceeding the sustainable yield or in significantly diminishing the recharge capacity of any groundwater area.</i>			<b>X</b>
(4) <i>Encourage restriction of new urban development in areas where water is insufficient from any source for both agricultural and domestic use.</i>			<b>X</b>
(5) <i>In order to preserve green belts, give priority to state capital-improvement funds which encourage location of urban development within existing urban areas except where compelling public interest dictates development of a noncontiguous new urban core.</i>			<b>X</b>
(6) <i>Seek participation from the private sector for the cost of building infrastructure and utilities, and maintaining open spaces.</i>			<b>X</b>
(7) <i>Pursue rehabilitation of appropriate urban areas.</i>			<b>X</b>
(8) <i>Support the redevelopment of Kaka'ako into a viable residential, industrial, and commercial community.</i>			<b>X</b>
(9) <i>Direct future urban development away from critical environmental areas or impose mitigating measures so that negative impacts on the environment would be minimized.</i>			<b>X</b>
(10) <i>Identify critical environmental areas in Hawai'i to include but not be limited to the following: watershed and recharge areas; wildlife habitats (on land and in the ocean); areas with endangered species of plants and wildlife; natural streams and water bodies; scenic and recreational shoreline resources; open space and natural areas; historic and cultural sites; areas particularly sensitive to reduction in water and air quality; and scenic resources.</i>	<b>X</b>		
(11) <i>Identify all areas where priority should be given to preserving rural character and lifestyle.</i>			<b>X</b>
(12) <i>Utilize Hawai'i's limited land resources wisely, providing adequate land to accommodate projected population and economic growth needs while ensuring the protection of the environment and the availability of the shoreline, conservation lands, and other limited resources for future generations.</i>	<b>X</b>		
(13) <i>Protect and enhance Hawai'i's shoreline, open spaces, and scenic resources.</i>	<b>X</b>		
<b>Discussion:</b> As one of the most popular and well-known State Parks, State investment in Hā'ena State Park will support a major resident as well as visitor resource on a neighbor island, Kaua'i. The park is rich in natural, cultural, scenic, recreational, and open space resources as discussed above. The Master Plan seeks to protect and restore these resources and to improve or reduce impacts on these resources as discussed above in Chapters 3.0 and 4.0.			
<b>HRS § 226-105: Crime and criminal justice.</b>			
<b>Priority guidelines in the area of crime and criminal justice:</b>			
(1) <i>Support law enforcement activities and other criminal justice efforts that are directed to provide a safer environment.</i>	<b>X</b>		
(2) <i>Target state and local resources on efforts to reduce the incidence of violent crime and on programs relating to the apprehension and prosecution of repeat offenders.</i>			<b>X</b>
(3) <i>Support community and neighborhood program initiatives that enable residents to assist law enforcement agencies in preventing criminal activities.</i>	<b>X</b>		
(4) <i>Reduce overcrowding or substandard conditions in correctional facilities through a</i>			<b>X</b>

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<i>comprehensive approach among all criminal justice agencies which may include sentencing law revisions and use of alternative sanctions other than incarceration for persons who pose no danger to their community.</i>			
(5) <i>Provide a range of appropriate sanctions for juvenile offenders, including community-based programs and other alternative sanctions.</i>			<b>X</b>
(6) <i>Increase public and private efforts to assist witnesses and victims of crimes and to minimize the costs of victimization.</i>			<b>X</b>
<b>Discussion:</b> Other than improving and increasing security and law enforcement at the park to deter illegal activities, the priority guidelines for crime and criminal justice are not applicable to the proposed Master Plan. Installation of the gates at the entrance will also help deter illegal activities such as rave parties that sometimes occur during overnight hours.			
<b>HRS § 226-106: Affordable housing.</b>			
<b>Priority guidelines for the provision of affordable housing:</b>			
(1) <i>Seek to use marginal or nonessential agricultural land and public land to meet housing needs of low- and moderate-income and gap-group households.</i>			<b>X</b>
(2) <i>Encourage the use of alternative construction and development methods as a means of reducing production costs.</i>			<b>X</b>
(3) <i>Improve information and analysis relative to land availability and suitability for housing.</i>			<b>X</b>
(4) <i>Create incentives for development which would increase home ownership and rental opportunities for Hawai'i's low- and moderate-income households, gap-group households, and residents with special needs.</i>			<b>X</b>
(5) <i>Encourage continued support for government or private housing programs that provide low interest mortgages to Hawai'i's people for the purchase of initial owner-occupied housing.</i>			<b>X</b>
(6) <i>Encourage public and private sector cooperation in the development of rental housing alternatives.</i>			<b>X</b>
(7) <i>Encourage improved coordination between various agencies and levels of government to deal with housing policies and regulations.</i>			<b>X</b>
(8) <i>Give higher priority to the provision of quality housing that is affordable for Hawai'i's residents and less priority to development of housing intended primarily for individuals outside of Hawai'i.</i>			<b>X</b>
<b>Discussion:</b> The proposed Master Plan does not <del>include</del> <u>add</u> any housing <del>except for the Caretaker's Cottage since it concerns a State park;</del> therefore none of the housing priority guidelines apply to the project.			
<b>HRS § 226-107: Quality education.</b>			
<b>Priority guidelines to promote quality education:</b>			
(1) <i>Pursue effective programs which reflect the varied district, school, and student needs to strengthen basic skills achievement;</i>	<b>X</b>		
(2) <i>Continue emphasis on general education "core" requirements to provide common background to students and essential support to other university programs;</i>			<b>X</b>
(3) <i>Initiate efforts to improve the quality of education by improving the capabilities of the education work force;</i>			<b>X</b>
(4) <i>Promote increased opportunities for greater autonomy and flexibility of educational institutions in their decision-making responsibilities;</i>			<b>X</b>
(5) <i>Increase and improve the use of information technology in education by the availability of telecommunications equipment for:</i>			<b>X</b>
(A) <i>The electronic exchange of information;</i>			<b>X</b>
(B) <i>Statewide electronic mail; and</i>			<b>X</b>
(C) <i>Access to the Internet.</i>			<b>X</b>



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<i>Encourage programs that increase the public's awareness and understanding of the impact of information technologies on our lives;</i>	<b>X</b>		
<i>(6) Pursue the establishment of Hawai'i's public and private universities and colleges as research and training centers of the Pacific;</i>	<b>X</b>		
<i>(7) Develop resources and programs for early childhood education;</i>	<b>X</b>		
<i>(8) Explore alternatives for funding and delivery of educational services to improve the overall quality of education; and</i>			<b>X</b>
<i>(9) Strengthen and expand educational programs and services for students with special needs.</i>			<b>X</b>
<b>Discussion:</b> Chapter 5 Appendix M of the Master Plan report ( <del>Appendix I</del> available at <a href="http://dlnr.hawaii.gov/dsp/parks/kauai/haena-state-park/">http://dlnr.hawaii.gov/dsp/parks/kauai/haena-state-park/</a> ) details the proposed interpretive and educational programs that will be developed at the park. It is anticipated that the park and all its varied environments could become places of active research and should be envisioned as outdoor classrooms, providing learning opportunities for all visitors, including out-of-state and international visitors, Kaua'i and Hawai'i residents, school groups from preschool to college, field schools, families and interest groups/organizations, cultural practitioners and scientific researchers.			
<b>HRS § 226-108: Sustainability.</b>			
<b>Priority guidelines and principles to promote sustainability shall include:</b>			
<i>(1) Encouraging balanced economic, social, community, and environmental priorities;</i>	<b>X</b>		
<i>(2) Encouraging planning that respects and promotes living within the natural resources and limits of the State;</i>	<b>X</b>		
<i>(3) Promoting a diversified and dynamic economy;</i>			<b>X</b>
<i>(4) Encouraging respect for the host culture;</i>	<b>X</b>		
<i>(5) Promoting decisions based on meeting the needs of the present without compromising the needs of future generations</i>	<b>X</b>		
<i>(6) Considering the principles of the ahupua'a system; and</i>	<b>X</b>		
<i>(7) Emphasizing that everyone, including individuals, families, communities, businesses, and government, has the responsibility for achieving a sustainable Hawai'i.</i>	<b>X</b>		
<b>Discussion:</b> One of the main objectives of the Master Plan is to provide opportunities for quality outdoor recreation, with sensitivity to the park's natural and cultural resources. The Master Plan improvements seek to improve Hawai'i's land, air, and water resources while also creating greater public awareness and appreciation of Hawai'i's environmental resources. They include the restoration and improved maintenance of the park's dune system, Agricultural Complex, wetlands, native forests, and stream environment. Green building design for all facilities including maximizing energy efficiency and using renewable energy sources to power the remaining demand is recommended in the plan. Expanded interpretive programs, displays, and materials will help educate visitors of the importance and value of the natural and cultural resources at the park. The <del>required</del> visitor <del>education and orientation sessions information</del> will provide a brief overview of the park's extensive and sensitive natural and cultural resources, instruct visitors of the appropriate activities and behaviors allowed at the park so that long-term maintenance of the resources can be supported and respect accorded to active cultural uses that may be occurring at the park. The Cultural Advisory Group will also help advise State Parks so that the proposed improvements, management strategies, and education and interpretive programs respect the			

HAWAI'I STATE PLAN, CHAPTER 226, HRS – PART III. PRIORITY GUIDELINES	S	N/S	N/A
(Key: S = Supportive, N/S = Not Supportive, N/A = Not Applicable)			
<p>host culture. The proposed 900 persons per day visitor limit <u>during peak visitor hours</u> <del>and controlled entry point</del> will also help reduce the human impact on the park and its natural resources. It will also allow State Parks to better manage visitors in concert with conservation values and safety concerns.</p>			
<b>HRS § 226-109: Climate change adaptation priority guidelines.</b>			
<p><i>Priority guidelines to prepare the State to address the impacts of climate change, including impacts to the areas of agriculture; conservation lands; coastal and nearshore marine areas; natural and cultural resources; education; energy; higher education; health; historic preservation; water resources; the built environment, such as housing, recreation, transportation; and the economy shall:</i></p>			
(1) <i>Ensure that Hawai'i's people are educated, informed, and aware of the impacts climate change may have on their communities;</i>	X		
(2) <i>Encourage community stewardship groups and local stakeholders to participate in planning and implementation of climate change policies;</i>	X		
(3) <i>Invest in continued monitoring and research of Hawai'i's climate and the impacts of climate change on the State;</i>	X		
(4) <i>Consider native Hawaiian traditional knowledge and practices in planning for the impacts of climate change;</i>	X		
(5) <i>Encourage the preservation and restoration of natural landscape features, such as coral reefs, beaches and dunes, forests, streams, floodplains, and wetlands, that have the inherent capacity to avoid, minimize, or mitigate the impacts of climate change;</i>	X		
(6) <i>Explore adaptation strategies that moderate harm or exploit beneficial opportunities in response to actual or expected climate change impacts to the natural and built environments;</i>	X		
(7) <i>Promote sector resilience in areas such as water, roads, airports, and public health, by encouraging the identification of climate change threats, assessment of potential consequences, and evaluation of adaptation options;</i>	X		
(8) <i>Foster cross-jurisdictional collaboration between county, state, and federal agencies and partnerships between government and private entities and other nongovernmental entities, including nonprofit entities;</i>	X		
(9) <i>Use management and implementation approaches that encourage the continual collection, evaluation, and integration of new information and strategies into new and existing practices, policies, and plans; and</i>	X		
(10) <i>Encourage planning and management of the natural and built environments that effectively integrate climate change policy.</i>	X		
<p><b>Discussion:</b> There are many aspects of the proposed Master Plan that support the State's goals related to climate change. Due to the remote location of the park and the potential for hazardous conditions and the potential for climate change to exacerbate those hazards, an emergency evacuation plan and rescue plans are recommended to be developed with coordination and regular drills held annually at a minimum with State Civil Defense and the Kaua'i Fire and Police Departments to ensure readiness. Currently, there are no State Civil Defense sirens in the park and no tsunami evacuation signs on Kūhiō Highway within the park. However, the land area required for a new siren can be accommodated in the park, most likely in the main parking area. <u>A subsequent letter from the Office of State Emergency Management/Civil Defense noted that siren coverage exists for the project site, but requested the existing siren to be upgraded to a 121db(c) omni-directional siren. State Parks will work with the Hawai'i Emergency Management Agency to ensure adequate siren coverage at the park.</u> To facilitate evacuations in the event they are necessary, the helicopter</p>			

HAWAI'I STATE PLAN, CHAPTER 226, HRS – PART III. PRIORITY GUIDELINES (Key: S = Supportive, N/S = Not Supportive, N/A = Not Applicable)	S	N/S	N/A
<p>landing pad is proposed to be retained with the Master Plan improvements. Emergency evacuation routes should also be planned and indicated on wayfinding signs installed at the park and printed in visitor brochures and materials. The orientation <del>session</del> <u>in information</u> which all visitors <del>must participate</del> <u>will receive</u> should also include <del>information</del> <u>directions</u> on what to do during evacuations and emergency situations, as well as up-to-the-minute weather and ocean conditions to help educate visitors on the coastal hazards that they may encounter while visiting the park.</p> <p>The new proposed facilities are recommended to be located away from flood and tsunami inundation areas and designed to be as energy efficient as possible and to use renewable energy resources to fill the remaining demand wherever feasible. The integrated water/wastewater/drainage system will also encourage efficient use of available on-site water resources. These will allow the facilities to be self-sufficient or nearly so should the park be isolated due to climate change impacts. The proposed dune restoration in the first phase of improvements could also help reduce coastal erosion if carefully planted and help protect the park against the impacts of climate change, particularly sea level rise.</p>			

### 5.3.5 STATE FUNCTIONAL PLANS

The Hawai'i State Plan directs State agencies to prepare functional plans for their respective program areas. There are 14 state functional plans that serve as the primary implementing vehicle for the goals, objectives, and policies of the Hawai'i State Plan. The functional plans applicability to the proposed Master Plan, along with each plan's applicable objectives, policies, and actions, are discussed in the matrix below.

HAWAI'I STATE FUNCTIONAL PLANS (Key: S = Supportive, N/S = Not Supportive, N/A = Not Applicable)	S	N/S	N/A
<b>AGRICULTURE FUNCTIONAL PLAN</b>			
<b>Objective A:</b> <i>Achievement of increased agricultural production and growth through cultural and management practices.</i>	X		
<b>Objective B:</b> <i>Achievement of an orderly agricultural marketing system through product promotion and industry organization.</i>			X
<b>Objective C:</b> <i>Achievement of increased consumption of and demand for Hawaii's agricultural products through consumer education and product quality.</i>			X
<b>Objective D:</b> <i>Achievement of optimal contribution by agriculture to the State's economy.</i>			X
<b>Objective E:</b> <i>Achievement of adequate capital, and knowledge of its proper management, for agricultural development.</i>			X
<b>Objective F:</b> <i>Achievement of increased agricultural production and growth through pest and disease controls.</i>			X
<b>Objective G:</b> <i>Achievement of effective protection and improved quality of Hawaii's land, water, and air.</i>	X		
<b>Objective H:</b> <i>Achievement of productive agricultural use of lands most suitable and needed for agriculture.</i>			X

<b>HAWAII STATE FUNCTIONAL PLANS</b> (Key: S = Supportive, N/S = Not Supportive, N/A = Not Applicable)		<b>S</b>	<b>N/S</b>	<b>N/A</b>
<b>Objective I:</b>	<i>Achievement of efficient and equitable provision of adequate water for agricultural use.</i>	<b>X</b>		
<b>Objective J:</b>	<i>Achievement of maximum degree of public understanding and support of agriculture in Hawaii.</i>	<b>X</b>		
<b>Objective K:</b>	<i>Achievement of adequate supply of properly trained labor for agricultural needs.</i>			<b>X</b>
<b>Objective L:</b>	<i>Achievement of adequate transportation services and facilities to meet agricultural needs.</i>			<b>X</b>
<b>Objective M:</b>	<i>Achievement of adequate support services and infrastructure to meet agricultural needs.</i>			<b>X</b>
<p><b>Discussion:</b> The proposed Master Plan concerns a State Park and therefore does not directly relate to agriculture in terms of economic development or resources and does not reduce the inventory of agriculturally significant lands. However, the plan is supportive in the continued culturally-based restoration of the park's historic Agricultural Complex and the expanded knowledge that can be gained and shared through its experience. It also promotes the improvement of the health of the park's air, water, and land-based resources through the proposed improvements and management strategies. Restoration of the 'auwai and the integrated water/wastewater/drainage system proposed in the plan will also help improve efficient use of on-site water resources and the educational and interpretive programs will support increased knowledge of the park's unique Agricultural Complex.</p>				
<b>CONSERVATION LANDS FUNCTIONAL PLAN</b>				
<b>Objective IA:</b>	<i>Establishment of data bases for inventories of existing lands and resources.</i>			<b>X</b>
<b>Objective IB:</b>	<i>Establishment of criteria for management of land and natural resources.</i>	<b>X</b>		
<b>Objective IIA:</b>	<i>Establishment of plans for natural resources and land management.</i>	<b>X</b>		
<b>Objective IIB:</b>	<i>Protection of fragile or rare natural resources.</i>	<b>X</b>		
<b>Objective IIC:</b>	<i>Enhancement of natural resources.</i>	<b>X</b>		
<b>Objective IID:</b>	<i>Appropriate development of natural resources.</i>	<b>X</b>		
<b>Objective IIE:</b>	<i>Promotion and marketing of appropriate natural resources designated for commercial development.</i>			<b>X</b>
<b>Objective IIF:</b>	<i>Increase enforcement of land and natural resource use laws and regulations.</i>	<b>X</b>		
<b>Objective IIIA:</b>	<i>Develop and implement conservation education programs for the general public and visitors.</i>	<b>X</b>		
<b>Objective IIIB:</b>	<i>Increase access to land and natural resource data by the public and increase cooperation between agencies by making access to land and natural resource information more efficient.</i>			<b>X</b>
<p><b>Discussion:</b> Hā'ena State Park is located on State conservation land and the proposed Master Plan improvements and management strategies will help improve the protection of the park's unique and sensitive environmental resources over existing conditions. They include the restoration and improved maintenance of the park's dune system, Agricultural Complex, wetlands, native forests, and stream environment. The additional staff and oversight of the park will improve enforcement and protection of the park's natural resources as visitors will be instructed on appropriate behavior, protocols, and activity at the park.</p>				



HAWAII STATE FUNCTIONAL PLANS (Key: S = Supportive, N/S = Not Supportive, N/A = Not Applicable)	S	N/S	N/A
<p>The proposed Master Plan also recommends the expansion of the educational and interpretive <del>facilities</del> <u>opportunities</u> and programs at Hā'ena State Park, including the <del>Welcome Pavilion/ECC</del>, Interpretive <u>Pedestrian</u> Path and various interpretive displays. All visitors will be <del>required to attend an orientation session</del> <u>provided with visitor orientation information prior to park entry</u> to increase sensitivity <u>to</u> and awareness of the park's varied natural, cultural, and historic resources. <del>Chapter 5</del> <u>Appendix M</u> of the Master Plan report (<del>Appendix I</del> <u>available at <a href="http://dlnr.hawaii.gov/dsp/parks/kauai/haena-state-park/">http://dlnr.hawaii.gov/dsp/parks/kauai/haena-state-park/</a></u>) details the proposed interpretive and educational programs that will be developed at the park. It is anticipated that the park and all its varied environments could become places of active research and should be envisioned as outdoor classrooms, providing learning opportunities for all visitors, including out-of-state and international visitors, Kaua'i and Hawai'i residents, school groups from preschool to college, families and interest groups/organizations, cultural practitioners and scientific researchers. Input from the Cultural Advisory Group will also help ensure that educational programs and management of the park's resources are steeped in culturally-based protocols and knowledge.</p>			
<b>EDUCATION FUNCTIONAL PLAN</b>			
<b>Objective A(1): Academic Excellence.</b> <i>Emphasize quality educational programs in Hawai'i's institutions to promote academic excellence.</i>	X		
<b>Objective A(2): Basic Skills.</b> <i>Promote programs and activities that facilitate the acquisition of basic skills, such as reading, writing, computing, listening, speaking, and reasoning. Pursue effective programs which reflect the varied district, school, and student needs to strengthen basic skills achievement.</i>			X
<b>Objective A(3): Education Workforce.</b> <i>Initiate efforts to improve the quality of education by improving the capabilities of the education workforce.</i>	X		
<b>Objective A(4): Services and Facilities.</b> <i>Ensure the provision of adequate and accessible educational services and facilities that are designed to meet individual and community needs.</i>	X		
<b>Objective B(1): Alternatives for Funding and Delivery.</b> <i>Explore alternatives for funding and delivery of educational services to improve the overall quality of education.</i>	X		
<b>Objective B(2): Autonomy and flexibility.</b> <i>Promote increased opportunities for greater autonomy and flexibility of educational institutions in their decision-making responsibilities.</i>			X
<b>Objective B(3): Increased Use of Technology.</b> <i>Increase and improve the use information technology in education and encourage programs which increase the public's awareness and understanding of the impact of information technologies on our lives.</i>			X
<b>Objective B(4): Personal Development.</b> <i>Support education programs and activities that enhance personal development, physical fitness, recreation, and cultural pursuits of all groups.</i>	X		
<b>Objective B(5): Students with Special Needs.</b> <i>Provide appropriate educational opportunities for groups with special needs.</i>	X		
<b>Objective C(1): Early Childhood Education.</b> <i>Develop resources and programs for early childhood education.</i>	X		
<b>Objective C(2): Hawai'i's Cultural Heritage.</b> <i>Promote educational programs which enhance understanding of Hawaii's cultural heritage.</i>	X		

<b>HAWAII STATE FUNCTIONAL PLANS</b> (Key: S = Supportive, N/S = Not Supportive, N/A = Not Applicable)		<b>S</b>	<b>N/S</b>	<b>N/A</b>
<b>Objective C(3): Research Programs and [Communication] Activities.</b> <i>Support research programs and activities that enhance the education programs of the State.</i>		<b>X</b>		
<b>Discussion:</b> As noted above, the Master Plan recommends that the park and all its varied environments become places of active research and should be envisioned as outdoor classrooms, providing educational opportunities for all visitors, including out-of-state and international visitors, Kaua'i and Hawai'i residents, school groups from preschool to college, families and interest groups/organizations, cultural practitioners and scientific researchers. The park will remain a recreational, educational, cultural, and open space resource for the benefit of residents and visitors and the proposed Master Plan seeks to do this in a culturally-based manner accessible to all ages and abilities. The Master Plan recommends the preservation and restoration of the park's rich cultural, historic, and natural resources and supports the enrichment of visitor experience through a range of educational programs and opportunities that will span cultural, historical, geological, and biological topics and values. The park's facilities will be designed to be accessible to the greatest extent possible and the continued recreational activities that will be permitted (Table 9) will support the community's continued mental and physical health.				
<b>EMPLOYMENT FUNCTIONAL PLAN</b>				
<b>Objective A:</b> <i>Improve the qualifications of entry-level workers and their transition to employment.</i>				<b>X</b>
<b>Objective B:</b> <i>Develop and deliver education, training and related services to ensure and maintain a quality and competitive workforce.</i>				<b>X</b>
<b>Objective C:</b> <i>Improve labor exchange.</i>				<b>X</b>
<b>Objective D:</b> <i>Improve the quality of life for workers and families.</i>				<b>X</b>
<b>Objective E:</b> <i>Improve planning of economic development, employment and training activities</i>				<b>X</b>
<b>Discussion:</b> The proposed Master Plan does not involve labor training or job placement activities. Therefore the Employment Functional Plan is not relevant to the proposed project.				
<b>ENERGY FUNCTIONAL PLAN</b>				
<b>Objective A:</b> <i>Moderate the growth in energy demand through conservation and energy efficiency.</i>		<b>X</b>		
<b>Objective B:</b> <i>Displace oil and fossil fuels through alternate and renewable energy resources.</i>		<b>X</b>		
<b>Objective C:</b> <i>Promote energy education and legislation.</i>		<b>X</b>		
<b>Objective D:</b> <i>Support and develop an integrated approach to energy development and management.</i>		<b>X</b>		
<b>Objective E:</b> <i>Ensure State's abilities to implement energy emergency actions immediately in event of fuel supply disruptions. Ensure essential public services are maintained and provisions are made to alleviate economic and personal hardships which may arise.</i>		<b>X</b>		
<b>Discussion:</b> Due to the park's limited access to infrastructure and the dispersed locations of some of the proposed facilities, all facilities requiring power are recommended to be designed to be as energy efficient as possible and to use renewable energy resources to fill the remaining demand wherever feasible. The shuttle system is encouraged to use low or no				

<b>HAWAII STATE FUNCTIONAL PLANS</b>		<b>S</b>	<b>N/S</b>	<b>N/A</b>
(Key: S = Supportive, N/S = Not Supportive, N/A = Not Applicable)				
emission vehicles and to use green vehicles such as electric vehicles that can be charged with renewable energy sources such as solar PV or vehicles that use alternative fuels. By designing energy independent facilities, the park will be less impacted by disruptions to electricity service or fuel supply or sudden increases in either of their costs.				
<b>HEALTH FUNCTIONAL PLAN</b>				
<b>Objective 1:</b>	<i>Health promotion and disease prevention. Reduction in the incidence, morbidity and mortality associated with preventable and controllable conditions.</i>			<b>X</b>
<b>Objective 2:</b>	<i>Prevention and control of communicable diseases. Reduction in the incidence, morbidity, and mortality associated with infectious and communicable diseases.</i>			<b>X</b>
<b>Objective 3:</b>	<i>Health needs of special populations with impaired access to health care. Increased availability and accessibility of health services for groups with impaired access to health care programs.</i>			<b>X</b>
<b>Objective 4:</b>	<i>Community hospitals system. Development of a community hospital system which is innovative, responsive and supplies high quality care to the constituencies it serves.</i>			<b>X</b>
<b>Objective 5:</b>	<i>Environmental programs to protect and enhance the environment. Continued development of new environmental protection and health services programs to protect, monitor, and enhance the quality of life in Hawai'i.</i>	<b>X</b>		
<b>Objective 6:</b>	<i>DOH leadership. To improve the Department of Health's ability to meet the public health need of the State of Hawai'i in the most appropriate, beneficial and economical way possible.</i>			<b>X</b>
<b>Discussion:</b> The proposed Master Plan does not include the creation of medical or health programs; therefore, the majority of the Health Functional Plan is not applicable. However, the Master Plan does seek to protect, enhance, and improve the environmental aspects of the park including the restoration of the dunes, wetlands, loko, native forests, and riparian ecosystems. The recommended educational and interpretive programs and <del>required</del> visitor <del>orientation</del> information provided prior to park entry supports the objective of enhancing the quality of life by enriching the visitor experience at the park.				
<b>HIGHER EDUCATION FUNCTIONAL PLAN</b>				
<b>Objective A:</b>	<i>A number and variety of postsecondary education institutions sufficient to provide the diverse range of programs required to satisfy individual and societal needs and interests.</i>			<b>X</b>
<b>Objective B:</b>	<i>The highest level of quality, commensurate with its mission and objectives, of each educational, research, and public service program offered in Hawai'i by an institution of higher education.</i>			<b>X</b>
<b>Objective C:</b>	<i>Provide appropriate educational opportunities for all who are willing and able to benefit from postsecondary education.</i>			<b>X</b>
<b>Objective D:</b>	<i>Provide financing for postsecondary education programs sufficient to ensure adequate diversity, high quality, and wide accessibility.</i>			<b>X</b>
<b>Objective E:</b>	<i>Increase program effectiveness and efficiency through better coordination of educational resources.</i>	<b>X</b>		

HAWAII STATE FUNCTIONAL PLANS (Key: S = Supportive, N/S = Not Supportive, N/A = Not Applicable)		S	N/S	N/A
<p><b>Discussion:</b> The proposed Master Plan supports a variety of educational programs at all levels of education, including higher education. It is anticipated that the park and all its varied environments could become places of active research and should be envisioned as outdoor classrooms, providing learning opportunities for all visitors, including out-of-state and international visitors, Kaua‘i and Hawai‘i residents, school groups, field schools, and research groups, families and interest groups/organizations, cultural practitioners and scientific researchers. The proposed <del>ECC</del> and Cultural Gathering Area <u>and restoration of cultural and natural resource sites</u> also provide formal learning spaces that support the hands-on educational programs that occur in the field.</p>				
HISTORIC PRESERVATION FUNCTIONAL PLAN				
<b>Objective A:</b>	<i>Identification of historic properties.</i>	X		
<b>Objective B:</b>	<i>Protection of historic properties.</i>	X		
<b>Objective C:</b>	<i>Management and treatment of historic properties.</i>	X		
<b>Objective D:</b>	<i>Provision of adequate facilities to preserve historic resources.</i>	X		
<b>Objective E:</b>	<i>The establishment of programs to collect and conserve historic records, artifacts, and oral histories and to document and perpetuate traditional arts, skills, and culture.</i>	X		
<b>Objective F:</b>	<i>Provision of better access to historic information.</i>	X		
<b>Objective G:</b>	<i>Enhancement of skills and knowledge needed to preserve historical resources.</i>	X		
<p><b>Discussion:</b> The proposed Master Plan supports all objectives of the Historic Preservation Functional Plan through programmatic as well as physical measures to improve the protection and management of the park’s archaeological and historic resources and prioritize the cultural heritage of the park. The primary programmatic action to mitigate impacts to archaeological resources will be to establish a Cultural Advisory Group, whose input will improve interpretation of the park’s cultural, archaeological, and historic resources and to help guide all aspects of park management, educational and interpretive programs, and Master Plan implementation. The <del>required</del> <u>information provided prior to park entry</u> will increase visitor knowledge of the park’s extensive and sensitive archaeological and cultural resources and instruct visitors of the appropriate activities and behaviors allowed at the park so that long-term maintenance of the resources can be supported. The Master Plan also recommends the restoration of the park’s archaeological and historic resources, specifically, the dune system, Hula Complex, and Agricultural Complex (including the ‘auwai if feasible). New park facilities will be limited to areas of previous disturbance so that its potential impact to archaeological resources is minimized and additional surveys and monitoring will occur during the detailed design and construction phases of implementation to avoid and minimize impacts to historic resources. The restoration of the Hula and Agricultural Complexes and other archaeological and cultural sites and the development of the Cultural Gathering Area and Hālau Wa‘a and the active cultural use and education that will occur in these spaces will enhance the skills and knowledge needed to support preservation of similar historic resources.</p>				

<b>HAWAII STATE FUNCTIONAL PLANS</b> (Key: S = Supportive, N/S = Not Supportive, N/A = Not Applicable)		<b>S</b>	<b>N/S</b>	<b>N/A</b>
<b>HOUSING FUNCTIONAL PLAN</b>				
<b>Objective A:</b>	<del>Homeownership for at least sixty percent, or roughly 248,500 households by the year 2000. Increase and sustain the supply of permanent rental housing that is affordable and accessible to Hawaii residents, particularly those with incomes at or below 80% AMI. Attain the legislative goal of 22,500 rental housing units by 2026.</del>			<b>X</b>
<b>Objective B:</b>	<del>Sufficient amount of affordable rental housing units by the year 2000 so as to increase the State's rental vacancy rate to at least 3%, with priority given to increasing the supply of units affordable to very low and lower income households. Increase the homeownership rate.</del>			<b>X</b>
<b>Objective C:</b>	<del>Increased development of rental housing units for the elderly and other special need groups to afford them an equal access to housing. Address barriers to residential development.</del>			<b>X</b>
<b>Objective D:</b>	<del>Preservation of existing public and private housing stock.</del>			<b>X</b>
<b>Objective E:</b>	<del>Acquire and designate land suitable for housing development in sufficient amount to locate the deficit in housing units by the year 2000.</del>			<b>X</b>
<b>Objective F:</b>	Maintain a statewide housing data system for use by public and private agencies engaged in the provision of housing.			<b>X</b>
<b>Discussion:</b> Since it concerns a State park, the proposed Master Plan does not <del>include</del> add any housing <del>except for the park's Caretaker's Cottage</del> ; therefore none of the housing objectives apply to the project.				
<b>HUMAN SERVICES FUNCTIONAL PLAN</b>				
<b>Objective A:</b>	To sustain and improve current elder abuse and neglect services.			<b>X</b>
<b>Objective B:</b>	To increase cost-effective, high quality home and community based services.			<b>X</b>
<b>Objective C:</b>	To increase home-based services to keep children in their homes and to increase placement resources for those children who must be temporarily or permanently removed from their homes, due to abuse or neglect.			<b>X</b>
<b>Objective D:</b>	To address factors that contribute to child abuse and other forms of family violence.			<b>X</b>
<b>Objective E:</b>	To provide affordable, accessible, and quality child care.			<b>X</b>
<b>Objective G:</b>	To provide AFDC recipients with a viable opportunity to become independent of the welfare system.			<b>X</b>
<b>Objective H:</b>	To facilitate client access to human services.			<b>X</b>
<b>Objective I:</b>	To eliminate organizational barriers which limit client access to human services.			<b>X</b>
<b>Discussion:</b> The proposed Master Plan does not include the creation or distribution of human service programs; therefore, the Human Services Functional Plan is not applicable.				
<b>RECREATION FUNCTIONAL PLAN</b>				
<b>Objective I.A:</b>	Address the problem of saturation of the capacity of beach parks and nearshore waters.	<b>X</b>		
<b>Objective I.B:</b>	Reduce the incidence of ocean recreation accidents.	<b>X</b>		
<b>Objective I.C:</b>	Resolve conflicts between different activities at heavily used ocean recreation areas.	<b>X</b>		
<b>Objective I.D:</b>	Provide adequate boating facilities. Balance the demand for boating facilities against the need to protect the marine environment from potential adverse impacts.			<b>X</b>
<b>Objective II.A:</b>	Plan, develop, and promote recreational activities and facilities in mauka and other areas to provide a wide range of alternatives.	<b>X</b>		



<b>HAWAI'I STATE FUNCTIONAL PLANS</b> (Key: S = Supportive, N/S = Not Supportive, N/A = Not Applicable)		<b>S</b>	<b>N/S</b>	<b>N/A</b>
<b>Objective II.B:</b>	<i>Meet special recreation needs of the elderly, the disabled, woman, single-parent families, immigrants, and other groups.</i>	<b>X</b>		
<b>Objective II.C:</b>	<i>Improve and expand the provision of recreation facilities in urban areas and local communities.</i>			<b>X</b>
<b>Objective III.A:</b>	<i>Prevent the loss of access to shoreline and upland recreation areas due to new developments.</i>			<b>X</b>
<b>Objective III.B:</b>	<i>Resolve the problem of landowner liability that seriously hampers public access over private lands.</i>			<b>X</b>
<b>Objective III.C:</b>	<i>Increase access to State Forest Reserve lands over federal property, leased State lands, and other government lands.</i>			<b>X</b>
<b>Objective III.D:</b>	<i>Acquire, develop, and manage additional public accessways.</i>			<b>X</b>
<b>Objective IV.A:</b>	<i>Promote a conservation ethic in the use of Hawai'i's recreational resources.</i>	<b>X</b>		
<b>Objective IV.B:</b>	<i>Prevent degradation of the marine environment.</i>	<b>X</b>		
<b>Objective IV.C:</b>	<i>Improve the State's enforcement capabilities.</i>	<b>X</b>		
<b>Objective IV.D:</b>	<i>Mitigate adverse impacts of tour helicopters on the quality of recreational experiences in wilderness areas.</i>			<b>X</b>
<b>Objective V.A:</b>	<i>Properly maintain existing parks and recreation areas.</i>	<b>X</b>		
<b>Objective V.B:</b>	<i>Promote interagency coordination and cooperation to facilitate sharing of resources, joint development efforts, clarification of responsibilities and jurisdictions, and improvements in enforcement capabilities.</i>	<b>X</b>		
<b>Objective V.C:</b>	<i>Assure adequate support for priority outdoor recreation programs and facilities.</i>	<b>X</b>		
<b>Objective VI.A:</b>	<i>Increase recreational access and opportunities in Hawai'i's wetlands.</i>	<b>X</b>		
<b>Objective VI.B:</b>	<i>Develop an adequate information base to assist the County planning departments and other regulatory agencies in make decisions regarding wetlands.</i>	<b>X</b>		
<b>Objective VI.C:</b>	<i>Assure the protection of the most valuable wetlands in the state.</i>	<b>X</b>		
<p><b>Discussion:</b> The proposed Master Plan takes a conservation ethic in its approach while attempting to balance recreational uses as mandated in the LWCF requirements. The proposed visitor limit of 900 people per day <u>on average during peak hours</u> directly supports the objective to address the problem of saturation of beach parks and nearshore waters. It is an initial daily visitor limit that will be reassessed to see if the conditions at the park improve. The reduction in daily visitors as well as the <del>required</del> <u>required</u> visitor <del>education</del> <u>education information provided</u> prior to park entry may help reduce the number of accidents and conflicts in ocean recreational areas of the park as there will be fewer people in these areas and they will be better educated about the sensitive resources, mix of activities, and potential hazards. The mix of recreational activities proposed to continue at the park as shown in Table 9 will provide a variety of recreational opportunities for people of all ages and abilities and includes the preservation of access to upland areas via the Kalalau Trail and the Nāpali Coast State Wilderness Park.</p> <p>Many of the recommendations for managing water/wastewater/drainage impacts and improved visitor education will help mitigate degradation to the marine environment (Sections 2.5.3.1, 4.7, 3.6, and 0). Increased staffing, visitor education, and instituting entry control points will improve the State's enforcement capabilities at the park. A major</p>				

HAWAI'I STATE FUNCTIONAL PLANS		S	N/S	N/A
(Key: S = Supportive, N/S = Not Supportive, N/A = Not Applicable)				
<p>component of the Master Plan is improved maintenance and management strategies of the park and its varied natural, cultural, scenic, and historic resources. The plan recommends ongoing coordination with the County and other State agencies on various aspects of the plan such as transfer of the highway (DOT), management of the heiau (various County agencies), wetlands (US Army Corps of Engineers), wildlife (US Fish and Wildlife Service, State Division of Forestry and Wildlife), visitor information (Hawai'i Tourism Authority), and public safety and enforcement (DOCARE, DAR, Civil Defense, County Fire and Police Departments), among others Chapter 7 of the Master Plan report provides more detail on coordination with other agencies.</p> <p>The Master Plan also recommends delineation and restoration of the park's wetlands and loko to ensure the proposed improvements do not impact them negatively and either improve them as potential wildlife habitat or take action to return them to agricultural use (Section 3.5). The proposed <del>Interpretive</del> <u>Pedestrian</u> Path will provide an opportunity for visitors to traverse the area and learn about the wetlands and loko via interpretive materials. Educational programs and special studies could also be performed to increase general knowledge about wetlands restoration and protection.</p>				
TOURISM FUNCTIONAL PLAN				
<b>Objective I.A:</b>	<i>Development, implementation and maintenance of policies and actions which support the steady and balanced growth of the visitor industry.</i>			X
<b>Objective II.A:</b>	<i>Development and maintenance of well-designed visitor facilities and related developments which are sensitive to the environment, sensitive to neighboring communities and activities, and adequately serviced by infrastructure and support services.</i>	X		
<b>Objective III.A:</b>	<i>Enhancement of respect and regard for the fragile resources which comprise Hawai'i's natural and cultural environment. Increased preservation and maintenance efforts.</i>	X		
<b>Objective IV.A:</b>	<i>Support of Hawai'i's diverse range of lifestyles and natural environment.</i>	X		
<b>Objective IV.B:</b>	<i>Achievement of mutual appreciation among residents, visitors, and the visitor industry.</i>	X		
<b>Objective V.A:</b>	<i>Development of a productive workforce to maintain a high quality visitor industry.</i>			X
<b>Objective V.B:</b>	<i>Enhancement of career and employment opportunities in the visitor industry.</i>			X
<b>Objective VI.A:</b>	<i>Maintenance of a high customer awareness of Hawai'i as a visitor destination in specific desired market segments.</i>			X
<p><b>Discussion:</b> As one of the most popular visitor destinations on the island, Hā'ena State Park had become a victim of its success, becoming overcrowded and impacting the varied resources at the park. The <del>new facilities</del>, educational and interpretive materials and programs, and changes in management and maintenance will improve the conditions at the park, while protecting and caring for the natural, cultural, historic, and scenic resources that are its most valued features. All visitors <del>attending the</del> <u>will receive orientation session information prior to entering the park and</u> will learn about the park's unique and sensitive resources, appropriate behavior, and protocols that will result in an increased understanding</p>				

<b>HAWAII STATE FUNCTIONAL PLANS</b>		<b>S</b>	<b>N/S</b>	<b>N/A</b>
(Key: S = Supportive, N/S = Not Supportive, N/A = Not Applicable)				
and greater respect and aloha for the area. The proposed educational programs and interpretive materials will also enrich the visitor experience as they learn about the varied and multilayered resources of this storied place. The range of recreational activities will also support the diverse range of lifestyles and enjoyment of varied natural environments of the park.				
<b>TRANSPORTATION FUNCTIONAL PLAN</b>				
<b>Objective I.A:</b>	<i>Expansion of the transportation system.</i>			<b>X</b>
<b>Objective I.B:</b>	<i>Reduction of travel demand through zoning and decentralization initiatives.</i>			<b>X</b>
<b>Objective I.C:</b>	<i>Management of existing transportation systems through a program of transportation systems management (TSM).</i>	<b>X</b>		
<b>Objective I.D:</b>	<i>Identification and reservation of lands and rights-of-way required for future transportation improvements.</i>			<b>X</b>
<b>Objective I.E:</b>	<i>Planning and designing State highways to enhance inter-regional mobility.</i>			<b>X</b>
<b>Objective I.F:</b>	<i>Improving and enhancing transportation safety.</i>	<b>X</b>		
<b>Objective I.G:</b>	<i>Improved transportation maintenance programs.</i>	<b>X</b>		
<b>Objective I.H:</b>	<i>Ensure that transportation facilities are accessible to people with disabilities.</i>	<b>X</b>		
<b>Objective II.A:</b>	<i>Development of a transportation infrastructure that supports economic development initiatives.</i>	<b>X</b>		
<b>Objective III.B:</b>	<i>Expansion of revenue bases for transportation improvements.</i>	<b>X</b>		
<b>Objective IV.A:</b>	<i>Providing educational programs.</i>	<b>X</b>		
<p><b>Discussion:</b> Hā'ena State Park is located at the end of Kūhiō Highway, creating a unique condition for the State highway. Currently, pedestrians, bicyclists, and vehicles travel on the narrow highway all the way to Kē'ē with both legal and illegal parking occurring on both sides further exacerbating congestion and potential conflicts. The proposed Master Plan encourages the development of a shuttle system to serve visitor access to the park and reduce congestion and traffic on the existing highway. Due to the potential for rockfalls and to increase safety, general through traffic will be terminated at entry turnaround and a separate pedestrian and bicycle path has been designated makai of the highway via the <u>Interpretive Pedestrian Path</u>.</p> <p>The proposed shuttle system will also increase accessibility to the park since those who are not able to drive will be able to take the shuttle to and from the park. Educational programs can be offered during the shuttle ride to the park and the need for the shuttle could open up economic opportunities for shuttle providers.</p>				
<b>WATER RESOURCES DEVELOPMENT FUNCTIONAL PLAN</b>				
<b>Objective A:</b>	<i>Enunciate State water policy and improve management framework.</i>			<b>X</b>
<b>Objective B:</b>	<i>Maintain the long-term availability of freshwater supplies, giving consideration to the accommodation of important environmental values.</i>	<b>X</b>		
<b>Objective C:</b>	<i>Improve management of floodplains.</i>	<b>X</b>		
<b>Objective D:</b>	<i>Assure adequate municipal water supplies for planned urban growth.</i>			<b>X</b>
<b>Objective E:</b>	<i>Assure the availability of adequate water for agriculture.</i>	<b>X</b>		

<b>HAWAI'I STATE FUNCTIONAL PLANS</b> (Key: S = Supportive, N/S = Not Supportive, N/A = Not Applicable)		<b>S</b>	<b>N/S</b>	<b>N/A</b>
<b>Objective F:</b>	<i>Encourage and coordinate with other water programs the development of self-supplied industrial water and the production of water-based energy.</i>	<b>X</b>		
<b>Objective G:</b>	<i>Provide for the protection and enhancement of Hawai'i's freshwater and estuarine environment.</i>	<b>X</b>		
<b>Objective H:</b>	<i>Improve State grant and loan procedures for water program and projects.</i>			<b>X</b>
<b>Objective I:</b>	<i>Pursue water resources data collection and research to meet changing needs.</i>			<b>X</b>
<p><b>Discussion:</b> The proposed Master Plan supports many of the objectives of the Water Resources Functional Plan. The integrated water/wastewater/drainage system will ensure that on-site water resources will be utilized as efficiently as possible and the proposed facilities will be designed to be as water efficient as possible. <u>All discharges related to the construction and operation of the proposed project will comply with the State's Water Quality requirements contained in Chapters 11-54 and 11-55, HAR. None of the proposed new facilities are located in the known AE or VE floodplains as designated by FEMA. Restoration of the 'auwai and utilization of nonpotable water for irrigation is also recommended to ensure sufficient water supply is available for the restored Agricultural Complex and landscaped areas. Microhydropower is recommended for consideration to help power the proposed facilities. <u>To minimize the impacts of microhydropower systems on native Hawai'i amphidromous biota, the diversion intakes must be designed to have low-velocity intakes placed subsurface in relatively deep pool in the center of the stream in order to minimize entrainment of larval or post-larval stream animals. Also, as a potential in-stream use, any microhydropower system should be integrated with a public trust use such as the taro lo'i production should it be pursued.</u> Restoration of the park's riparian and marine environments and improved maintenance of these areas are also major recommendations of the proposed plan.</u></p>				

## 5.4 COUNTY OF KAUA'I

### 5.4.1 KAUA'I GENERAL PLAN

The General Plan (GP) of the County of Kaua'i is a policy document that fulfills legal mandates of State law and the Charter of the County of Kaua'i. It is intended to help guide long-range development for the enhancement and improvement of life on Kaua'i, advancement of the County's vision for Kaua'i, and the establishment of strategies to help achieve that vision including recommended land uses. The most recent GP is currently undergoing another update was adopted in March 2018. However, it was last adopted in 2000 and It designates the park as "Parks and Recreation" on the North Shore Land Use Map (Figure 32). The GP North Shore Planning District Heritage Resources Map identifies the park as a conservation area - "State & County Park" and notes that heiau cultural sites and traditional cultivation areas are located within the park and a regulated fishing area and coral reefs are located offshore fronting the park (Figure 33).

~~Various policies in the GP cover parks, some with specific reference to Hā'ena State Park.~~

The GP identifies “sharing of recreation resources with visitors” as an issue and opportunity:  
~~Many visitors travel to the North Shore to enjoy its beaches and unique natural areas. The impact is especially great in the Hanalei-Hā‘ena region which has a large share of visitor attractions. Heavy visitor use can displace residents or significantly change the quality of the experience, especially at beaches and parks. Residents need to work with business people and parks agencies to identify: (1) parks and natural areas where visitors will be welcomed and accommodated, with levels of use based on parking or other easily managed limits; and (2) parks and natural areas where it is important to more strictly limit access in order to preserve the resources and/or the quality of the recreation experience (Sec. 6.1.3).~~

GP policies related to Kaua‘i’s parks and natural areas (both County and State) include:  
~~Encourage the development of public-private partnerships involving the County and the Department of Land and Natural Resources in order to manage and improve Kaua‘i’s valuable parks and open spaces (4.2.8.3(a)).~~

~~Manage beach parks, resource parks, rivers, beaches and other natural areas according to the following policies in order of priority: (1) Conserve resources. (2) Provide for use by the general public—i.e., individuals, families, ohana. (3) Allow for group use (including commercial tours and equipment rentals) within conservation limits (4.2.8.3(e)).~~

~~To enhance the visitor’s experience of Kaua‘i and to provide meaningful jobs and income to Kaua‘i residents, the County shall develop or support development of the following programs by Federal, State or private agencies: (1) Regional visitor centers. (2) First person interpretation of natural areas, historic and archaeological sites, traditional agricultural and cultural practices, towns and communities. (3) Study and practice of Native Hawaiian and other ethnic cultural traditions and languages, including the development of cultural learning centers (4.2.8.3(d)).~~

~~Improve facilities, maintenance, and management of activities at State and County parks. Specific actions include: (1) Commit the necessary resources to ensure adequate levels of park maintenance, repair and hygiene and to improve signage and interpretation of natural and cultural features. (2) In resource parks that receive heavy visitation, such as... Hā‘ena, ... plan and improve specific areas to support larger numbers of visitors; manage other areas for moderate or low use, based on conservation objectives. Prepare and update Master Plans for major parks. ... (4.2.8.3(e)).~~

Relevant sections of the GP involve discussions related to improving transportation to the park and support of the State's effort to implement the master plan for the park and provide adequate funding for maintenance and staffing.

Section 2.4.6 of the GP notes the following policy opportunity for the North Shore:



*Integrating Transit: The integration of consolidated parking and transit facilities was a common discussion thread throughout the North Shore communities. Participants considered ways that pools of public parking and transit stops could be integrated into town centers, establishing “park-once” facilities and providing convenient transfer points for tourists accessing Kīlauea Lighthouse and Hā‘ena State Park, with the goal of mitigating the impact of tourist traffic on the Kūhiō Highway and parking facilities at existing visitor destinations. (SSFM 2018)*

Section 3.IV focuses on the economy and actions to support key industries. Under the "Tourism" Subsection, "1.3 Improving the Visitor Experience and Impacts on Communities," the GP states, "Managing visitor impacts also includes improving visitor facilities and parking at both County and State parks, and ocean safety at beaches. Given that impacts disproportionately affect certain areas of the island, particularly the North Shore and South Kāua‘i districts, shuttle efforts, parking improvements, and other solutions should be focused there." (SSFM 2018)

Section 3.V.4 summarizes the actions for Kauai's State Parks and recognizes this master plan effort for Hā‘ena State Park. It also notes:

*In addition to traffic and parking issues, Hā‘ena State Park, Kōke‘e State Park, and Waimea Canyon State Park are underfunded relative to the demands placed on them. For example, limited parking at Hā‘ena State Park has led to illegal parking and frustration for visitors and residents seeking to visit the many attractions nearby. An unmanaged parking situation has contributed to high rates of theft and vandalism at the parking lot. (SSFM 2018)*

It also identifies the following relevant "Partnership Needs:"

1. Implement the Waimea Canyon, Kōke‘e, and Hā‘ena State Park Master Plans.
3. Support adequate funding and staffing for capital improvements, including maintenance and enforcement for public parks, trails, and recreation areas.
4. Improve and coordinate infrastructure and transportation to reduce visitor impacts.

The GP also identifies the North Shore Shuttle running from Kīlauea Lighthouse to Kē‘ē Beach as a "Priority Transit Capacity Project" in its Table 5-2 and Figure 5.37.

**Discussion:** The master planning of parks, such as Hā‘ena State Park, and the appropriate management, maintenance, staffing, funding, and enforcement of the parks including "limit[ing] access in order to preserve the resources and/or the quality of the recreation experience" (Sec. 6.1.3) is prioritizing parking and transportation improvements for the North Shore are clearly supported by the County's GP. The GP recognizes the need for management measures to balance visitor demand and conservation needs. ~~It identifies the conservation of resources as the first priority in the management of beach parks (Sec. 4.2.8.3(e)).~~ Further, the Plan identifies the need for adequate funding to implement management, interpretation, and maintenance of park facilities.

The proposed Master Plan seeks to address the issues and opportunities relating to the visitor experience on Kaua‘i’s North Shore. Community sentiment throughout the Master Planning process has been that the park’s cultural and ecological resources are overwhelmed by visitor volume and use. The purpose of the Master Plan is to help temper the volume of visitors and encourage interaction with the resources without being a detriment to them. As such, the proposed Master Plan is consistent with the GP policies to improve park facilities, conserve natural and cultural resources, protect public safety and improve hygiene to find a balance with public use. It also supports the development of the North Shore Shuttle to help mitigate traffic to the park.

### 5.4.2 NORTH SHORE DEVELOPMENT PLAN

The North Shore Development Plan (DP) designates Hā‘ena State Park and surrounding lands as “Open” (Figure 34). The DP provides a framework for guidelines to direct the physical locations and relationships of major improvements, buildings and landscape within the North Shore Special Planning Area. Relevant North Shore Planning Area goals include:

- *Goal A: To preserve the unique natural beauty of the North Shore Planning Area.*
- *Goal E: To preserve the wildlife and flora of the North Shore, recognizing man’s dependence upon this preservation for his own health and welfare.*
- *Goal F: To insure the preservation of the historic-archaeological sites in the North Shore Planning Area.*
- *Goal H: To provide for recreational opportunities that are compatible with the unique qualities and natural features of the North Shore.*

More specific DP recommendations that relate to natural resources and outdoor recreation and are applicable to the Master Plan are as follows:

*Only basic supportive facilities should be provided at outdoor recreation areas selected for widespread public use in order to enhance the experience.*

*Multiple activity recreation areas must be managed to avoid hazardous conflicts between recreators and allow maximum use of resources.*

*Although public access is obtained to recreational resource areas, publicity should be minimized unless the appropriate agency can assure adequate management and security measures. In this manner, local residents would be allowed to continue traditional patterns of resource use.*

**Discussion:** The Master Plan and supporting management actions address the recommendations of this County planning document. As one of the most popular visitor destinations on the island, Hā‘ena State Park had become a victim of its success, becoming overcrowded and experiencing conflicts between the varied recreational and cultural uses of the park. The new facilities, educational and interpretive materials and programs, and changes in management and maintenance will improve the conditions at the park, better

protecting and caring for the natural, cultural, historic, and scenic resources. The orientation session all visitors must attend will help educate visitors on the unique and sensitive resources at the park and appropriate behavior, protocols, and activities which will in turn engender a greater sense of respect and aloha visitors have while at the park. The proposed educational programs and interpretive materials will also enrich the visitor experience as they learn about the varied and multilayered resources of this storied place.

The proposed Master Plan also encourages the development of a shuttle system to serve visitor access to the park and reduce congestion and traffic on the existing highway. Due to the potential for rockfalls and to increase safety, general through traffic will be terminated at entry turnaround and a separate pedestrian and bicycle path has been designated makai of the highway ~~via the Interpretive Path~~.

### 5.4.3 COUNTY ZONING

The park is not zoned by the County of Kauaʻi. Applicable land use regulations are those associated with the State Conservation District, as previously discussed in Section 5.3.2.

### 5.4.4 SPECIAL MANAGEMENT AREA

The SMA was established to protect coastal resources in areas extending inland of the shoreline. The park is within the SMA (see Figure 35).

**Discussion:** Upon acceptance of a Final EIS, Special Management Area Permits will be required for specific park improvements from the County of Kauaʻi. An SMA permit was obtained for the constructed wetlands that were recently completed for the renovated comfort station at Kēʻē.

### 5.4.5 COUNTY SHORELINE SETBACK

Ordinance 979, adopted December 5, 2014, sets forth a procedure for establishing building shoreline setbacks for the County of Kauaʻi (Section 8-27.3, KCC). The shoreline setback requirements are applicable to the park since it abuts the shoreline (Section 8-27.1, KCC). The determination of the shoreline setback is based on a lot's average depth and historic rates of shoreline change as shown in SOEST's Kauaʻi Coastal Erosion Study as shown in Figure 17 for the park. For lots with an average depth that is greater than 220 feet, the greater setback of the following shall apply:

- (A) Forty feet plus seventy times the annual coastal erosion rate as measured from the certified shoreline. In addition, ...for all applicable lots subject to the Kauaʻi Coastal Erosion Study a mandatory twenty foot additional safety buffer shall be added to the setback area for episodic coastal events, sea level rise and other hazards; or
- (B) A shoreline setback line of one hundred feet from the certified shoreline.

**Discussion:** The average depth of the park's shoreline parcel TMK: 5-9-08: 001 is approximately 1,000 feet. Even at its narrowest point, it is roughly 750 feet deep. The erosion rate ranges from zero to one foot per year along the park's shoreline. Therefore, at most the shoreline setback would be 130 feet from the certified shoreline where the erosion

rate is one foot per year. At minimum it would be 100 feet from the certified shoreline where the erosion rate is zero. A Shoreline Setback Determination will be required by the County of Kauaʻi for implementation of physical building aspects of the plan. However, with exception of the relocated lifeguard tower and dune restoration activities, State Parks will locate any proposed permanent structures described in the Master Plan outside of the shoreline setback area wherever practical.

#### 5.4.6 COUNTY FLOOD PLAIN MANAGEMENT ORDINANCE

County of Kauaʻi Ordinance 831 pertains to development in the floodplain and coastal high hazard areas (tsunami zone). The majority of the park elements are proposed to be outside mapped flood and tsunami hazard areas. The lifeguard stand is proposed to be moved to within the coastal high hazard area. Thus, this action should be coordinated with the County's Flood Plain Coordinator to ensure that it is done in compliance with all County requirements. The Master Plan suggests that the lifeguard stand be built upon the dune rather than excavated into the sand to avoid negative effects to the ecosystem and to minimize disturbance to subsurface resources should they exist.

### 5.5 REQUIRED APPROVALS AND PERMITS

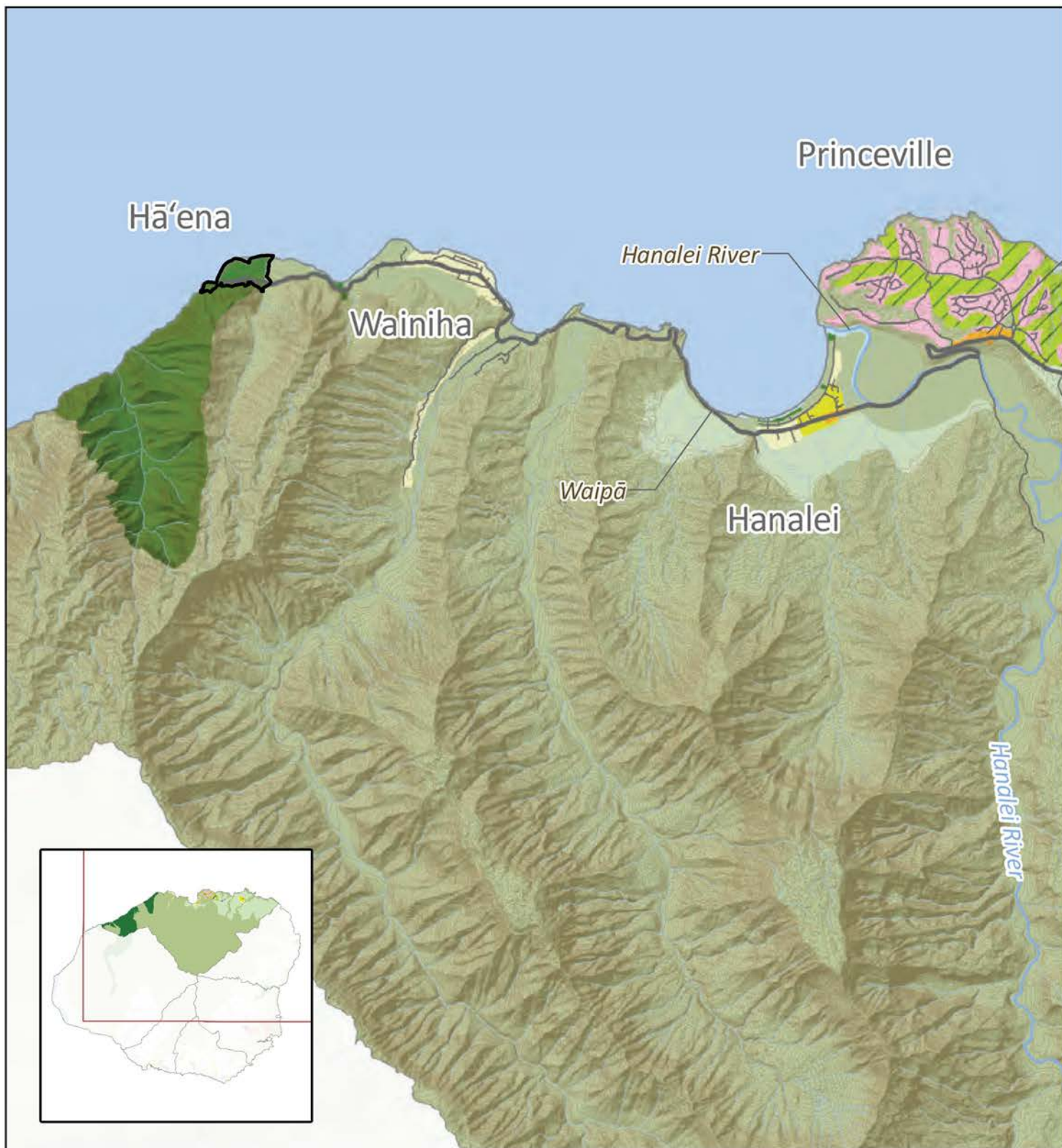
The permits and/or approvals anticipated to be required for implementation of the proposed site improvements are listed in Table 10.

**TABLE 10: REQUIRED APPROVALS AND PERMITS**

PERMIT/APPROVAL	AUTHORITY	STATUS
Compliance with Chapter 343 HRS	Office of Environmental Quality Control	In process
Compliance with Chapter 6E, HRS (Historic Preservation)	State Historic Preservation Division	Required for construction
<u>Site Plan Approval, Conservation District Use Application</u>	State DLNR, Office of Conservation and Coastal Lands	Required for implementation
Special Management Area Permit	County of Kauaʻi Planning Commission	Required for implementation
Shoreline Setback Determination	County of Kauaʻi Planning Department/State of Hawaiʻi Department of Accounting and General Services, State Survey Office	Required for construction
Wetland Delineation Study and Determination	US Army Corps of Engineers	May be required if wetland areas are near proposed improvements. <u>Other Department of the Army permits may be required based on determination.</u>
<u>Form 7480-1 Notice of Landing Area Proposal</u>	<u>Federal Aviation Administration</u>	<u>Required for the helipad</u>

PERMIT/APPROVAL	AUTHORITY	STATUS
National Pollution Discharge Elimination System (NPDES) Permit	State Department of Health, Clean Water Branch	Required for construction
Noise Permit	State Department of Health, Indoor and Radiological Health Branch	May be required for construction
Stream Channel Alteration Permit; Stream Diversion Works Permit; and/or Petition to Amend Interim Instream Flow Standards	DLNR, Commission on Water Resource Management	May be required for micro-hydropower system; riparian restoration (depending on extent of instream activities)
Permit to Perform Work within a State Right-of-Way	State of Hawai'i Department of Transportation (DOT)	Required for work with the State Highway
Land Transfer of State Highway from DOT to State Parks	State of Hawai'i Department of Transportation	Required for road closure from park entry to Kē'ē Beach
Grading and Grubbing Permits	County of Kaua'i Department of Public Works	Required for construction
Building Permits	County of Kaua'i Department of Public Works	Required for construction





## LEGEND

	Hā'ena State Park Project Boundary
	Planning District Boundary
	Major Roads
	Roads
	Streams
	Reservoirs
	Natural
	Agriculture
	Agriculture (IAL)
	Parks and Recreation
	Golf Course
	Homestead
	Residential Community
	Neighborhood Center
	Neighborhood General
	Resort
	Transportation

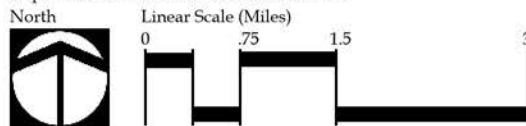
FIGURE 32

General Plan Land Use Map

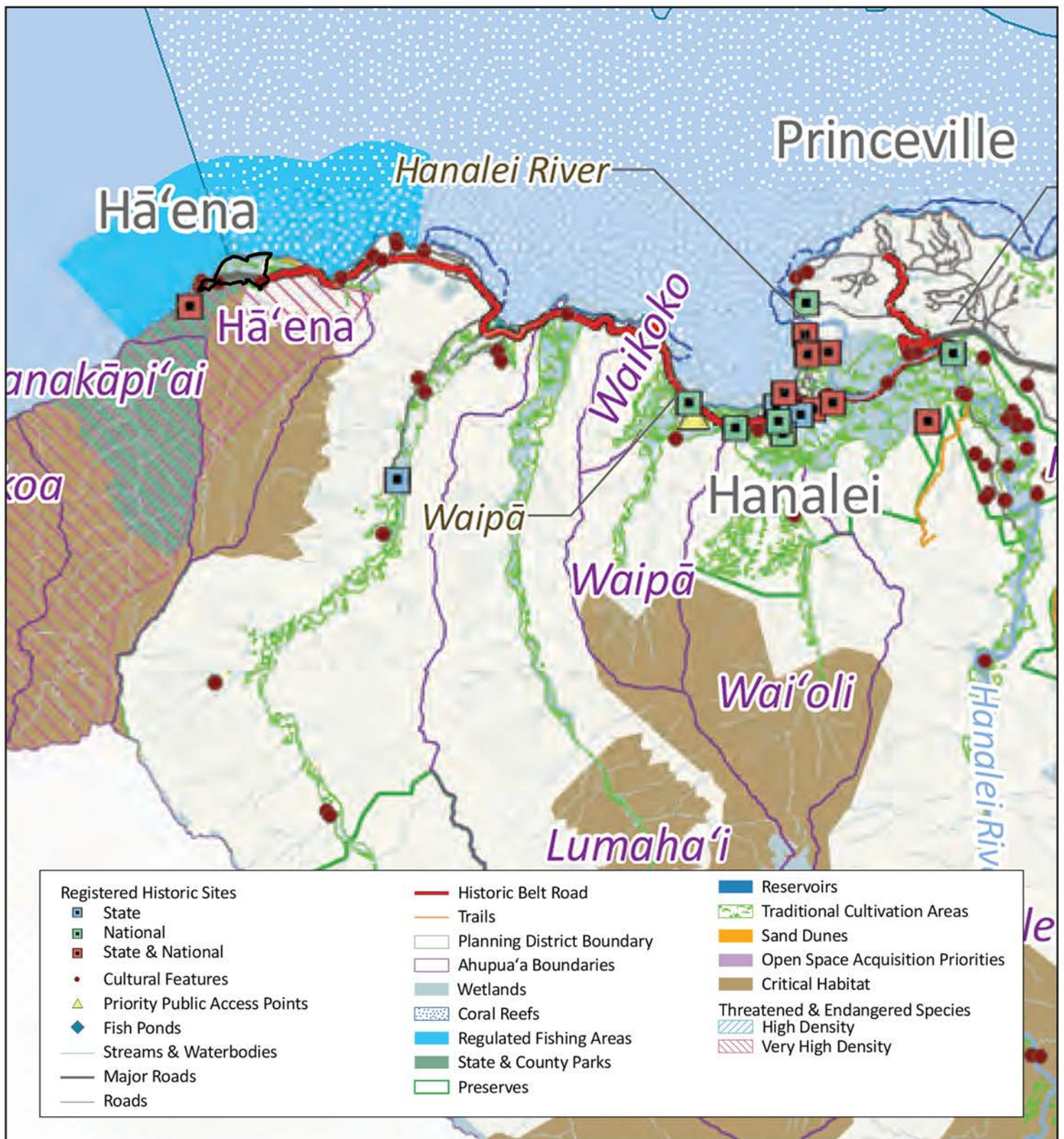
## HĀ'ENA STATE PARK

Department of Land and Natural Resources


Island of Kauai







## LEGEND

 Hā'ena State Park Project Boundary

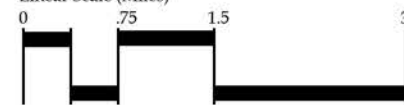
**FIGURE 33**  
General Plan Heritage Resources Map  
**HĀ'ENA STATE PARK**

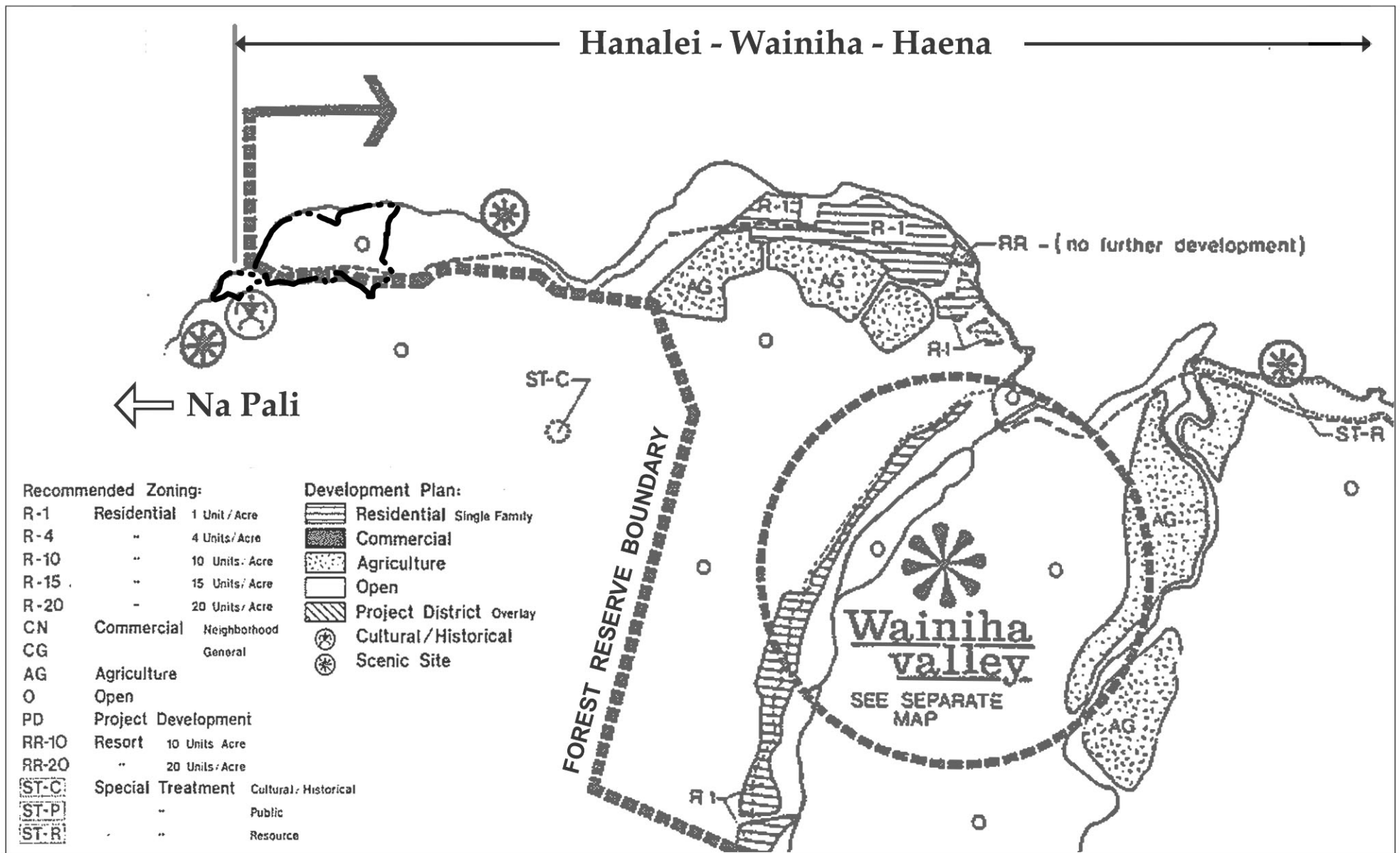
Department of Land and Natural Resources

Island of Kaua'i

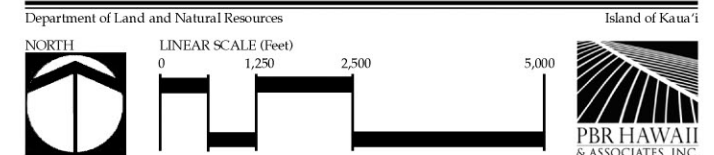
North

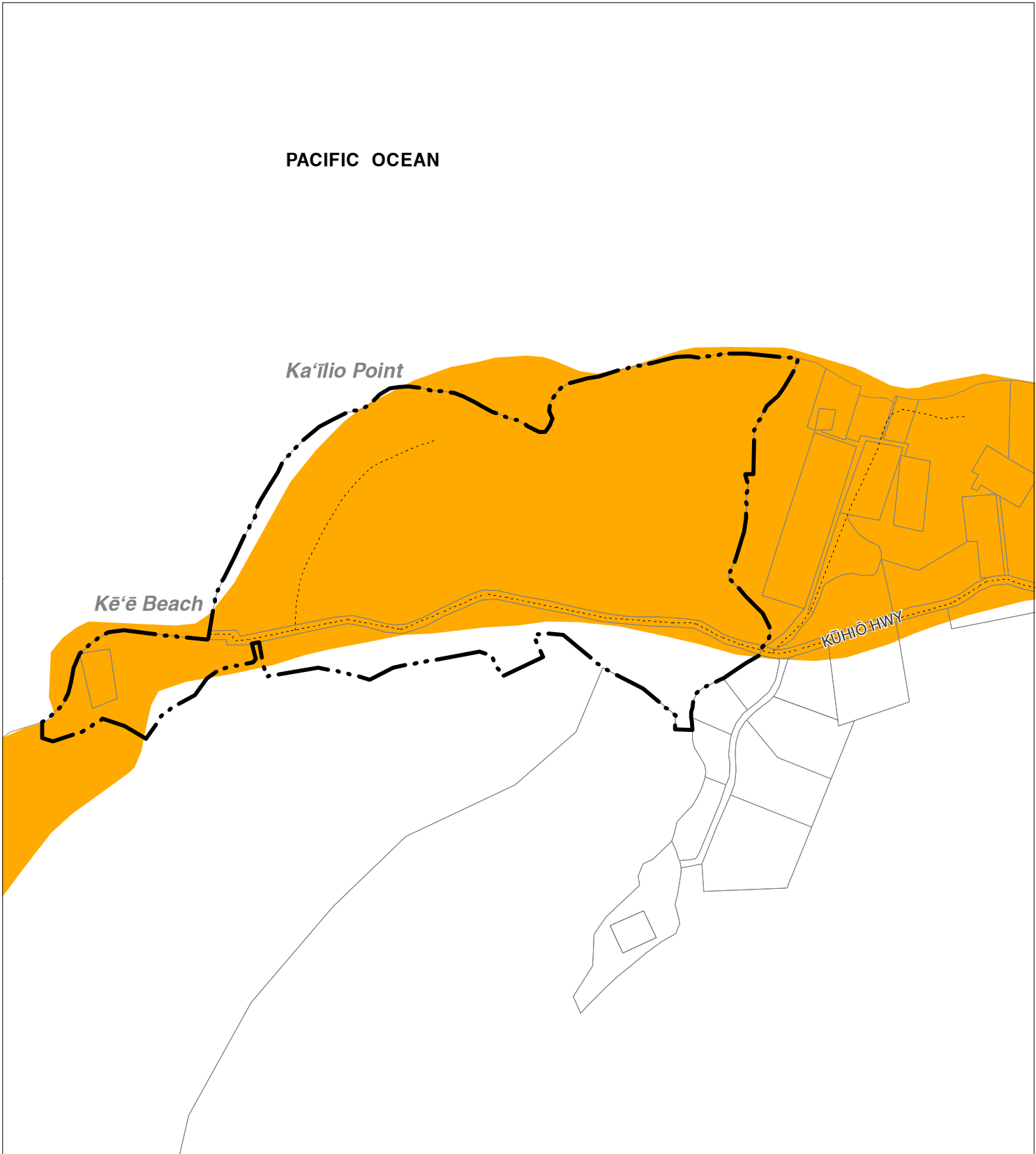
Linear Scale (Miles)





**FIGURE 34**  
North Shore Development Plan Update  
**HĀ'ENA STATE PARK**





## LEGEND




-  Hā'ena State Park Project Boundary
-  Road
-  Within the Special Management Area

FIGURE 35

Special Management Area

# HĀ'ENA STATE PARK

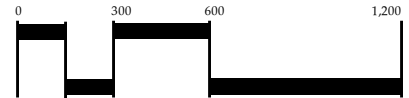
Department of Land and Natural Resources

Island of Kaua'i

NORTH



LINEAR SCALE (Feet)



## 6.0 ALTERNATIVES TO THE PROPOSED MASTER PLAN

Under HAR Title 11, DOH, Chapter 200, Environmental Impact Statement Rules, Section 11-200-17(F), a Draft EIS must contain a section discussing alternatives that could attain the project objectives regardless of cost, and in sufficient detail to explain why the specific alternative was rejected. This chapter describes alternatives to the Hā‘ena State Park Master Plan, along with reasons why each alternative was rejected. As stated in Section 2.1.3 of this EIS:

*“The goals and vision for the Hā‘ena State Park Master Plan were developed with State Parks staff and the MPAC during the initial meetings held in April and May 2010. There are five main goals that have guided the development of the Master Plan and the proposed management strategies. They are:*

- Recognize that the entire park is culturally significant.*
- Restore Hā‘ena State Park as a living place... cleanse, restore and revive cultural practices again.*
- Involve the original families and reconnect the local community to the place.*
- Uphold State Parks’ responsibility for the public’s safety, access, and welfare.*
- Balance the provision of recreational opportunities with the preservation of the significant natural and cultural resources.”*

### 6.1 BACKGROUND

In 1994, The Keith Companies (TKC) was awarded the contract to develop the Hā‘ena State Park Master Plan. After several years of research, community meetings and interviews, The Keith Companies-Hawai‘i, Inc. and Earthplan Planning and Design prepared a draft report entitled, *Hā‘ena State Park Master Plan and Draft Environmental Impact Statement* for State Parks. The last known revision was a hand-edited copy completed in 2001. It included extensive background information as well as the development and evaluation of four master plan alternatives. The effort culminated in a “community preferred master plan” that is referred to throughout this report as the 2001 draft plan. While the plan was never completed or adopted nor was the Draft EIS filed with OEQC, they contain valuable information and are the starting point for this effort.

In 2008, State Parks contracted with PBR HAWAII to complete the master plan and environmental impact statement (EIS) for Hā‘ena State Park. PBR HAWAII was tasked to work with the community through an advisory committee to refine the 2001 draft plan with an emphasis on the cultural and historic significance of Hā‘ena and to develop alternatives for transportation and parking.

The following discussion of alternatives includes the no action alternative, a summary of the 2001 draft plan alternatives, and the alternatives developed for the current effort.



## 6.2 NO ACTION ALTERNATIVE

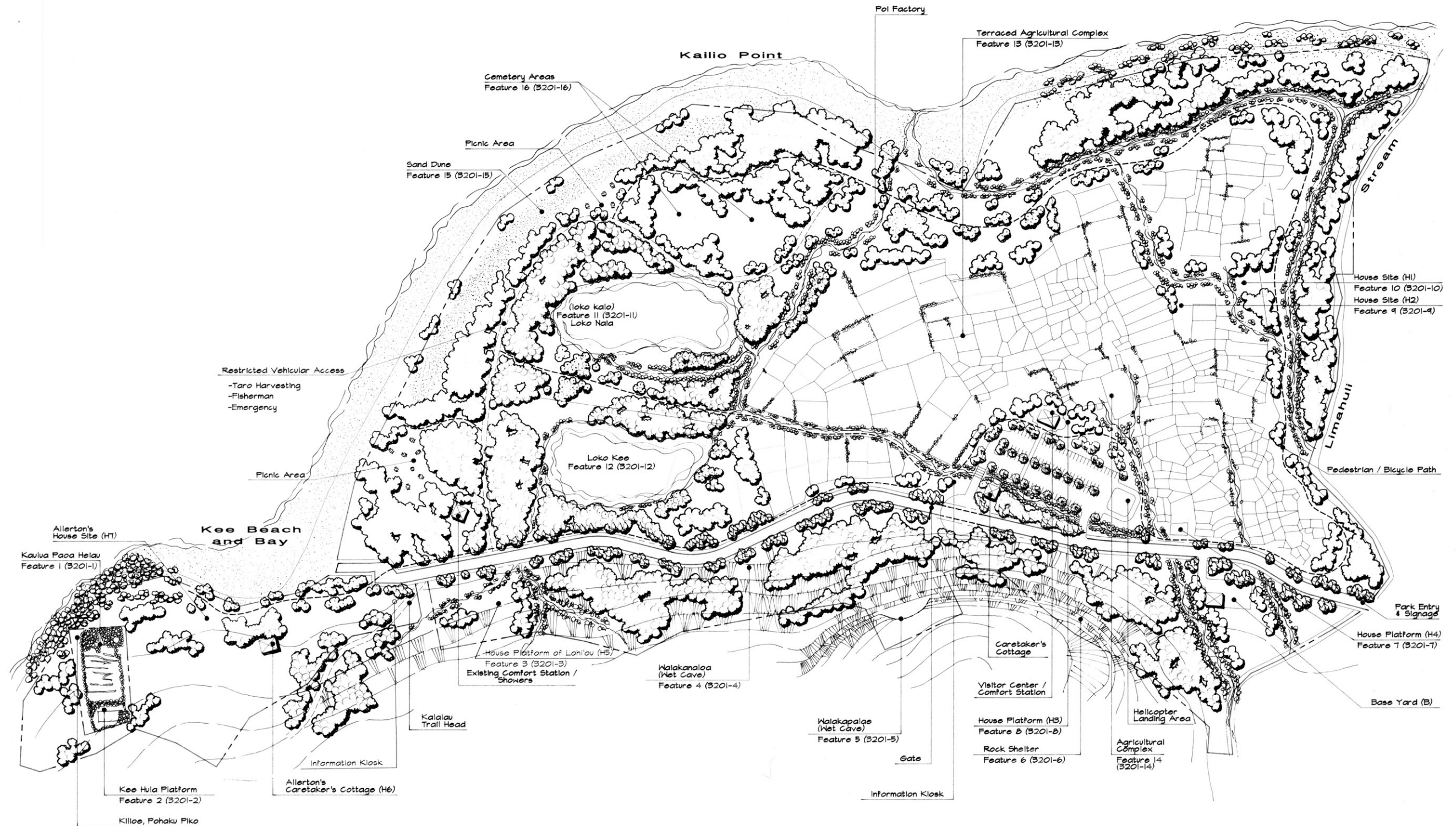
The “No Action Alternative” would involve the status quo, that is the physical and management improvements proposed as part of the Master Plan would not be implemented. If the proposed Master Plan improvements are not implemented, long-term impacts from continuing current use and management practices include:

- Unlimited numbers of visitors have the potential to damage natural, archaeological, and cultural resources, to expose themselves to hazardous conditions, or to offend or come into conflict with other park users because of the lack of oversight and education on the appropriate activities and behaviors at the park.
- Motorized vehicles continue to clog Kūhiō Highway and back up along the highway outside of the park due to the unlimited visitors that are allowed in the park. The parking, both legal and illegal, along Kūhiō Highway will continue to occur causing traffic congestion, which in turn creates increased air pollution and hazardous conditions for pedestrians walking along the highway. Vehicle congestion could also hamper evacuation of the park if there is an emergency or need to evacuate the area;
- The countless number of hikers who are not tracked and are using Kalalau Trail are of concern when hikers are hurt and require assistance or are stranded at Hanakāpīʻai Stream during flood conditions;
- There will be continued visitor exposure to potential rockfall hazards as the main visitor path to Kēʻē is maintained along the highway where there are Class A rockfall hazards, or areas with a high risk estimated for potential rockfalls.
- The continued degradation to natural, cultural, archaeological, and scenic resources due to invasive species overgrowth, overcrowded conditions, and inadequate infrastructure improvements and facilities to support unlimited visitor use.

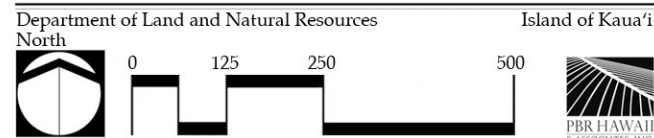
The “no change” (or No Action) alternative was rejected outright due to: 1) the potential for continued degradation of cultural and natural resources and the worsening traffic and parking congestion that would occur if nothing were done; 2) potential risk of rockfalls and threats to public safety; and 3) the five main goals or objectives that have guided the development of the Hāʻena State Park Master Plan and the proposed management strategies would not be met.

## 6.3 THE 2001 DRAFT PLAN ALTERNATIVES

As noted earlier, The Keith Companies (TKC) prepared a draft report entitled, *Hāʻena State Park Master Plan and Draft Environmental Impact Statement* for State Parks. TKC worked with local community groups and other relevant stakeholders to develop four alternative master plans. Community members preferred the first alternative that proposed to have the least amount of exposure to the park’s natural, cultural, and historic features. The plan included constructing a visitor center, caretaker’s cottage, pedestrian and bicycle pathways, and interpretive signage and is shown in Figure 36.



**FIGURE 36**  
2001 Draft Plan Alternative  
**HA'ENA STATE PARK**



## COMMUNITY PREFERRED MASTER PLAN HAENA STATE PARK HAENA, KAUAI, HAWAII

**THE KEITH COMPANIES**  
Hawaii Division  
4479 Rice Street, #202, Lihue, Kauai, HI 96766









Source: Keith Companies.  
Disclaimer: This graphic has been prepared for general planning purpose only.







- A** Ka Ulu a Paoa Heiau
- B** Kē'ē Hula Platform - Ke Ahu a Laka
- C** Kilioe, Pōhaku Piko
- D** Caretaker's Cottage & Baseyard
- E** Kalalau Trail Head
- F** Existing Comfort Station / Showers
- G** Proposed / Existing Gates
- H** Restored Hula Complex
- I** Interpretive Corridor  
(Pedestrians/Bicycles/Special Access Only)
- J** Proposed Helicopter Landing Area
- K** Restore Allerton's Cottage for Hula Use
- L** Park Entry w/ Turnaround
- M** Restore Existing House for Lo'i / Park Use (TBD)
- N** Poi Factory
- O** Proposed Cultural Gathering Area
- P** Parking Lot
- Q** Proposed Lifeguard Tower
- R** Restore Agricultural Complex (Phases)
- S** Orientation and Cultural Center
- T** Drop-off and Shuttle Parking
- U** Hale Wa'a



 Property Boundary
  Existing 'Auwai
  Certified Shoreline
  Signage/Interpretive Displays

 Flood Boundary
  Proposed 'Auwai
  Wetlands - (M2USN, M2USP)
  Rockfall Hazard (Class A & B)

 SMA Boundary
  Streams
  Wetlands - PEMC
  No Commercial Activity (per 1967 Partition Agreement)

 Tsunami Evacuation Zone
  Existing Waterline
  Wetlands - PFOC

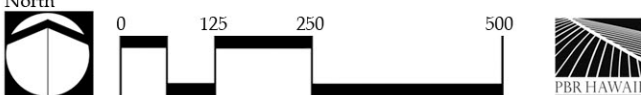
Note: Based on 1999 Community Preferred Master Plan prepared by the Keith Companies. Red text shows updates and revisions gathered from community input and the Hāena State Park Master Plan Advisory Committee.



**FIGURE 37**  
2010 July Alternative  
**HA'ENA STATE PARK**

Department of Land and Natural Resources  
North

Island of Kaua'i



PBR HAWAII



The second and third alternatives focused on increasing the amount of infrastructure improvements to the park. However, residents voiced concern over the improvements potential negative impact on existing natural and cultural aspects of the park. The last alternative was a ‘no action,’ alternative which focused on a hands-off approach to allow the existing conditions of the park to continue.

The 2001 draft plan alternative, however, needed refinement and was therefore rejected. The plan recommended distributing recreational uses throughout the park which could potentially impact cultural resources along the shoreline. It also located picnic facilities along the dunes, active beach recreation at Ka‘ilio Point, and bicycle trails along the ‘auwai and Limahuli Stream. Such uses have been deemed by many members of the MPAC, as undesirable because of the impacts to the cultural, archaeological, and natural resources and the dispersal of those impacts. It also increases the need for water safety personnel beyond Kē‘ē Beach and the potential for visitors to impact the surrounding environment due to the lack of comfort stations in the area. The 2001 draft plan, however, did include physical improvements that would help in managing human use of the park, such as a Visitor Center, Caretaker’s Cottage, and baseyard at the main entry, a gate near the main parking area, and another gate restricting vehicular access from the dunes at Kē‘ē. Many of these concepts were used to inform the development of the preferred alternative.

## **6.4 THE 2015 MASTER PLAN ALTERNATIVES**

### **6.4.1 JULY 2010 ALTERNATIVE**

In the current master planning effort, various alternatives were developed in the attempt to manage multiple issues both physical and operational in nature. Initial versions explored the use of the highway for an Interpretive Corridor, creating a turnaround and shuttle stop in the same area as the 2001 draft plan and closing off the highway to through traffic beyond this point so only pedestrians and bicyclists would be permitted with the exception of special access and ADA vehicles. The first public review draft from July 2010 is shown in Figure 37. The Visitor Center and Caretaker’s Cottage were shifted to provide better oversight at the new entry point and gates would be installed to control traffic along the highway. It also identified the area around the heiau as the Hula Complex and created the Cultural Gathering Area with a Hale Wa‘a in the area between the lo‘i and the Loko Naia. The lifeguard stand is relocated from the end of the highway to a cleared area fifty feet north of the pavement. It also employed green design concepts such as bioswales around the parking areas and rainwater catchment for the new facilities and the picnic areas were removed from the dunes.

Subsequently, State Parks commissioned AECOM under a separate contract to perform additional detailed analysis of the potential rockfall hazards at the park in 2012. Their findings required a rethinking of the master plan since the proposed Interpretive Corridor and Visitor Center were located in areas of potential rockfall hazards. The MPAC reconvened to discuss various rockfall mitigation alternatives proposed by the engineer. The MPAC voiced strong opposition to any alternative that required affixing containment structures, fencing, or rock scaling along Nā Pali o Makana, the cliffs that run along the highway at the base of Makana, due to the cultural and aesthetic impacts, the costs, and the temporary nature of the

solutions. In addition, the public would still be traversing through a potential rockfall zone at a much slower rate since only pedestrians and bicycles would be permitted on the highway. Therefore, the proposal to shift the major flow of visitors and vehicles outside of the modeled rockfall hazard zone became the basis of the preferred Master Plan. Although this would require that the main flow of visitors would now be cutting through the area of the existing restored lo‘i, members of the MPAC noted that this portion of the lo‘i is actually less productive than the lo‘i further makai due to the limited sunlight that reaches the area at the base of Makana. The idea to make this area a hands-on visitor learning opportunity while the Hui continued restoration efforts further makai arose and was also incorporated into the preferred Master Plan.

The July 2010 alternative was therefore rejected due to the potential public safety hazards of locating the major flow of visitor traffic in a potential rockfall hazard area in favor of the preferred Master Plan.

#### **6.4.2 TRANSPORTATION AND PARKING ALTERNATIVES**

During the meetings with the project team, MPAC and community members, a wide variety of management concepts were discussed regarding park access and transportation modes to the park, parking management, and fee options. Because they all relate to some of the biggest problems at the park, including the sense of overcrowding, traffic congestion and parking problems both within the park and on the highway, various suggestions were made including encouraging and even requiring that visitors arrive at the park by different modes of transportation to help reduce traffic. The primary modes discussed included shuttles, bicycles and pedestrian as well as different ideas on how to manage personal vehicle access. A preliminary shuttle study was completed as part of the draft Master Plan. Other modes of transportation by air or water were eliminated from the discussion as most felt they were inappropriate for the park and that it would be difficult to manage multiple entry points particularly for ocean-based access. The following sections describe the three main scenarios explored with the MPAC.

##### ***6.4.2.1 Scenario 1: Princeville-based Park Entry***

One of the concepts introduced by members of the MPAC involved having all visitors except those with special access passes or lifetime passes to access the park via a Princeville-based entry facility and parking lot with shuttle service to the park. The site for this facility is described as the “Alternative Princeville Site” in the preliminary shuttle study (Appendix C of the Master Plan report). The shuttle bus would travel from the Princeville entry facility to Hā‘ena State Park, making several stops along the way. Park visitors with entry wristbands could exit and re-board the shuttle along the way; and other people (both residents and tourists) could board and exit the bus along the way, using the shuttle as a local bus service. The bus service could either be operated by, or in formal coordination with, the County’s Kaua‘i Bus, thereby allowing it to be subsidized to the same extent that the remainder of the Kaua‘i Bus system is subsidized. The shuttle should be implemented in Phase I so a smaller parking lot or no parking lot would be needed. No walk-in or bike-in access would be allowed as people may be encouraged to park in nearby neighborhoods and walk or bike to the park. This would also mean that no one could access the park unless they arrive on the



shuttle, including those who live between Princeville and Hā'ena. If they wanted to enter the park, they would either have to jump on the shuttle at one of the interim stops, or drive back to the Princeville-based entry point, park, and then take the shuttle in to Hā'ena. This would greatly reduce traffic to the park except for those wishing to drive till the end of the highway and turn around. However, it would also cause some inconvenience to those wishing to go to the park who live the closest to the park.

#### ***6.4.2.2 Scenario 2: Combination On-site Parking and Princeville Entry Facility***

The potential Princeville site described above currently has widespread support. With an estimated potential of 200+ stalls, it would be large enough to serve the park with a 900 daily visitor limit at the current ratio of 2.5 riders per vehicle if the stalls turn over at least once per day. However, the site may also be used to serve the parking needs for other nearby uses, especially if it is acquired by another entity, in which case the Princeville-based parking lot may not be sufficient for the park. The proposed Master Plan (Figure 1) shows a smaller parking lot labeled as Phase I to supplement the parking in Princeville as needed and the size of the parking lot should be adjusted appropriately so as not to discourage use of the shuttle. The stalls at the park should be made available via a reservation system similar to what will be required for park entry tickets. This will encourage visitors to plan ahead and the parking stalls could be offered at premium prices to encourage use of the shuttle and carpooling. Controls should also be instituted to limit the number of parking reservations individuals are able to make and different options for half-day or full-day parking passes could be considered to encourage turnover of the stalls.

#### ***6.4.2.3 Scenario 3: On-site Parking Only***

If no shuttle or transit service is available to the park, the full 100-stall parking lot will need to be built in order to minimize impacts to surrounding neighborhoods. Visitors will need to carpool more than they currently do, which is roughly 2.5 riders per vehicle, or find other means to the park, such as taxis or bicycling and walking. A daily visitor limit set at 900, and a 100-stall parking lot that is estimated to turn over at least once a day would require the average vehicle to carry 4.5 people to the park. Or, if the stalls turn over two times a day, that would require roughly 3 people to ride per vehicle.

#### ***6.4.2.4 Preferred Vehicular Access Scenario***

The preferred scenario is to implement the shuttle from the Princeville facility at the start of Phase I, minimizing the need for visitor parking in the parking lot in the park. However, the Master Plan includes space to accommodate a parking lot for up to 100 vehicles. The design and materials of the parking lot would allow its size to be adjusted as the master plan is implemented. It could be reduced to accommodate as few as zero vehicles if the shuttle bus service is fully implemented and meets all needs, or expanded to accommodate up to 100 vehicles to address the possibility that the shuttle service might not be implemented on schedule or to accommodate special needs that could only be met by additional on-site parking (for example, the need for after-hours on-site parking, or additional parking for special events, cultural practitioners, kūpuna, subsistence fishermen or ~~handicapped~~ visitors requiring ADA accessibility). In addition, the parking stalls would be separated into a fee-

paying and non-fee paying sections, which can be adaptively managed daily or even hourly depending on visitor arrivals.

Regardless of which scenario is implemented, strict parking enforcement along the highway will be required to discourage illegal parking, traffic hazards, and safety issues. Also, a widespread public information campaign should be held months in advance to inform the public and the visitor industry of any changes to park access and State Parks expects that adjustments will be necessary in order to best accommodate visitor access to the park over time.

### **6.4.3 JULY 2015 MASTER PLAN PRESENTED IN THE DRAFT EIS**

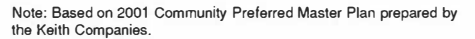
The July 2015 version of the master plan that was presented in the Draft EIS has been greatly simplified based on the input received during the public comment and review process. Many in the community felt that the plan included too many facilities that were not needed and distracted from the natural beauty of the park. They also noted that they seemed to cater to tourists rather than residents. These facilities were the Education and Cultural Center (ECC) and the Caretaker's Cottage located near the main parking lot. Both of these facilities have been removed from the current version of the master plan. There was also a loop trail that connected Kē'e Beach with the Cultural Gathering Area and the ECC to allow for guided educational tours and additional evacuation routes. However, many in the community felt they were too intrusive. Therefore, they have also been removed. The picnic area near the ECC has also been removed as well as the interpretive displays along the coastal trail. The near-term plan has also been eliminated since the overall master plan has been simplified. The July 2015 version of the master plan is provided in Figure 38.

Some of the key management concepts have also been revised since the Draft EIS. The proposed 900-person daily visitor limit has also been adjusted to apply only during peak visitor hours and will be based on an average over the course of a month rather than a strict daily limit. The limit is also set as an initial number that will be adaptively managed and adjusted over time based on visitor satisfaction and observed impacts to the park's varied natural, cultural, and historic resources. The full discussion is included in Section 2.5.4.3.

The required visitor orientation session has also been eliminated and replaced with providing visitor information prior to park entry and made available on State Park's website. The full description is provided in Section 2.5.4.5.



- A** Ka Ulu a Paoa Heiau
- B** Bicycle Racks
- C** Kē'ē Hula Platform - Ke Ahu a Laka
- D** Rehabilitate Allerton's Cottage for Hula Use
- E** Kalalau Trail Head
- F** Existing Comfort Station / Showers
- G** Proposed / Existing Gates
- H** Restored Hula Complex
- I** Interpretive Path to Kē'ē
- J** Lifeguard Tower
- K** Caretaker's Cottage & Baseyard
- L** Landscaped Natural Drainage System / Bioswale
- M** Rehabilitate Montgomery House for Lo'i / Park Use (TBD)
- N** Picnic Areas w/ Tables
- O** Education and Cultural Center
- P** Parking Lot
- Q** DLNR Baseyard/Helicopter Landing Area
- R** Restore Agricultural Complex (Phases)
- S** Historic Poi Mill
- T** Turnaround
- U** Hālau Wa'a
- V** Proposed Cultural Gathering Area
- W** Rainwater Catchment Cisterns
- X** Rockfall Mitigation Measures
- Y** Rotating Display/Demonstration Gardens
- Z** Reconstructed Hale and Lo'i Interpretive Site
- ▲** Rockfall Hazard Warning Signs
- \*** Interpretive Displays
- Ocean Safety Signage



Department of Land and Natural Resources

Island of Kaua'i





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## 7.0 CONTEXTUAL ISSUES

This chapter presents key issues within the context of Hā'ena State Park.

### 7.1 RELATIONSHIP BETWEEN THE SHORT-TERM USES OF THE ENVIRONMENT AND MAINTENANCE AND ENHANCEMENT OF LONG-TERM PRODUCTIVITY

Short-term uses and long-term productivity of the proposed Master Plan involve short-term impacts during construction and the adjustment period once access to the park is limited to 900 people per day on average during peak hours and the long-term benefits after the Master Plan is completed and visitors adjust to the new protocols required to visit the park.

Short-term impacts during construction may include temporary noise and air impacts due to the construction equipment that may be used. Contractors are required to adhere to DOH regulations and to ensure the use of proper equipment and regular vehicle maintenance. Equipment mufflers or other noise attenuating equipment may also be employed as additional mitigation. Traffic may also be impacted when materials and equipment are transported to the site. Groundwork will disturb soils. However, the proposed facilities are located in previously disturbed areas to minimize the potential of impacting subsurface archaeology and cultural artifacts. Best practices to minimize soil erosion, sediment runoff, and dust such as installation of dust screens and silt fences/bales and careful dewatering practices will be implemented. Construction will be limited to daylight hours to minimize impacts to wildlife. Archaeological surveying prior to construction and archaeological monitoring during construction are recommended. To further help mitigate the impacts during construction, the Cultural Advisory Group and Community Advisory Group should be established before any design and construction contracts are awarded so they can advise State Parks during those phases and help avoid potential issues that may arise. Construction activities will also generate employment opportunities and excise tax revenues from purchasing and design activities.

Visitors to the park may also be impacted initially by the change in access policies and the daily visitor limit of 900 people per day on average during peak visitor hours, including day hikers on the Kalalau Trail. The daily visitor limit does not include cultural practitioners, special user groups such as hālau, lo'i workgroups, cemetery caretakers, or school groups. It also does not include the 60 hikers who obtain valid camping permits for the Kalalau Trail or the 30 hunters who obtain valid hunting permits for the Nāpali Coast State Wilderness Park Hunting Unit G. Prior to instituting the proposed visitor limits, a public information campaign must be made far in advance for both residents and the visitor industry so people are able to plan their visit to the park. The entry and parking policies as well as any fees should be included as part of the campaign. While this may cause a temporary inconvenience for visitors and may cause temporary impacts such as congestion and secondary impacts to surrounding recreational uses and communities due to the displacement of those who would otherwise visit the park, it will allow State Parks to better manage the park's varied natural,



cultural, historic, and scenic resources in the long-term. Visitors will be forced to plan their trips to the park in advance and park staff will be able to better anticipate the needs for park operations and maintenance.

Over the long-term, implementation of the proposed Master Plan improvements and management strategies are expected to outweigh the short-term uses of the environment and impacts. As discussed in Chapters 3.0 and 4.0, the long-term benefits include the restoration of the natural, cultural, historic, and scenic resources; removal of visitor traffic from a potential rockfall hazard area; improved facilities using renewable energy resources and an integrated water/wastewater/drainage system; reduced traffic and congestion; improved circulation and shuttle service; increased public education and awareness of the park's sensitive resources and cultural values; reduced user conflicts and criminal activity; increased public awareness of ocean safety and natural hazards and better preparation and coordination between public agencies during emergencies; and improved management and oversight of the park. Negative long-term impacts are anticipated to be minimal and would be mitigated as discussed. For example, the new facilities would increase the amount of impervious surfaces at the park. However this impact would be mitigated by the installation of rainwater catchment cisterns that would help capture rooftop runoff so it could be used for irrigation or toilet flushing. Bioswales and rain gardens landscaped with native plants would also be installed around the facilities and parking lots to detain and filter runoff before percolating into the ground. There would also be potentially fewer visitors to the park due to the ~~daily-proposed~~ visitor limits during peak hours, which could be considered a negative impact. However, the improved condition of the natural, cultural, and scenic environment of the park itself and the ability of visitors to plan their trips to the park in advance would also ensure that the experience visitors have at the park are enriched and enjoyable rather than wasted looking for parking and encountering potentially hazardous conditions along the highway.

## 7.2 CUMULATIVE IMPACTS

Cumulative impacts are those that result from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions. Because the proposed Master Plan is for an existing state park and does not recommend a change in its use, the plan does not compound or change the mix of uses in this rural and remote corner of Kaua'i. The proposed reduction in the number of visitors, visitor orientation sessions, and restoration of the park's natural, cultural, historic, and scenic resources are anticipated to reduce traffic, to improve public sensitivity and awareness, and to build upon similar restoration efforts initiated at nearby Limahuli Gardens by NTBG, further supporting the health and condition of those resources and expanding the areas along the North Shore where native ecological and Native Hawaiian cultural environments are reestablished and activated again.

## 7.3 SECONDARY IMPACTS

Secondary impacts, or indirect impacts, include those that are caused by the action and are later in time or are farther removed in distance, but are still reasonably foreseeable. They

could include increased pressure at and use of surrounding recreational and shoreline areas, especially Hā'ena Beach Park and Makua, due to the proposed visitor limits and reduced parking at the park. State Parks will encourage all visitors to plan their trips to the park in advance and a significant public information campaign will be required well in advance of instituting the visitor limits. Every effort will be made to use a variety of social media, the Internet, and media and visitor information outlets to inform the public about any changes to park access protocols. The HSPCAC is also working with State Parks and other public agencies such as the County and USFWS ~~will also coordinate on~~-transportation, parking, and area circulation improvements ~~with other public agencies such as the County and USFWS~~ to come up with solutions that benefit the North Shore communities. In addition, if the North Shore shuttle is established, a mitigation measure may be to include a stop at Hā'ena Beach Park and other points of interest along the North Shore to help alleviate regional traffic and parking congestion.

Water quality of ocean and surface waters are anticipated to improve with implementation of the integrated water/wastewater/drainage system, secondary wastewater treatment (at a minimum), installation of rainwater catchment cisterns, rain gardens, and bioswales, and the use of non-chemical disinfectants and cleaning products and environmentally-safe soaps that contain plant nutrients and biocompatible cleaners as well as the avoidance of pesticide or herbicide use as discussed in Sections 3.4, 3.5, 3.6, and 0 as these will mitigate any runoff that runs to these waters. This in turn will have the beneficial secondary impact of improving the health of the marine and riparian ecosystems and the species that inhabit these waters.

Similarly, the clearing of invasive species and the restoration of the native forests, wetlands, loko, and dune system and the elimination of nighttime light pollution at park facilities may support and encourage the use of the park by native wildlife as discussed in Sections 0, 3.8, and 3.9.

The ~~mandatory~~ visitor ~~educational sessions~~ orientation information will also help to minimize impacts to the park's varied natural, cultural, historic, and scenic resources as visitors will learn about appropriate behavior, protocol, and activities permitted in the park, having the beneficial secondary effect of better protection of those resources and reduced user conflicts which will in turn improve mutual understanding, respect, and the feeling of aloha shared by all who visit the park.

The proposed facilities, restored natural, cultural, and historic resources, better overall maintenance of the park, and expanded educational programs will also have the beneficial secondary impact of enriching all levels of educational research and activities that could develop. It is anticipated that the park and all its varied environments could become places of active research and should be envisioned as outdoor classrooms, providing learning opportunities for all visitors, including out-of-state and international visitors, Kaua'i and Hawai'i residents, school groups from preschool to college, field schools, families and interest groups/organizations, cultural practitioners and scientific researchers. Restoration of the Hula and Agricultural Complexes and the development of the Cultural Gathering Area

also create places where culturally-based training can occur and the park provides the opportunity to share this knowledge among a wide audience.

#### **7.4 IRREVERSIBLE AND IRRETRIEVABLE COMMITMENTS OF RESOURCES**

The construction of the proposed facilities will require the irreversible and irretrievable commitments of resources. Because the construction of the new proposed facilities will require the irreversible and irretrievable commitment of natural resources, efforts will be made to minimize all large-scale grading, grubbing, and stockpiling of soil and limited to the dry season whenever possible. These impacts will be temporary and will serve the greater cause of creating a better park with improved facilities to serve the public and help State Parks better care for the varied natural, cultural, and historic resources. There will also be an increased demand for electricity for the new facilities and potentially water to irrigate the restored Agricultural Complex. However, green design will be implemented in the design of the proposed park facilities to help mitigate those impacts. The facilities will be designed to maximize water and energy efficiency and the use of renewable energy resources such as solar, microwind, and microhydropower are recommended to fill the remaining energy needs. However, if pursued hydropower may also have negative effects on fauna depending upon the design and placement of the intake structure. These potential impacts include decreased water quality, loss of habitat, and entrainment and impingement and associated mortality of migratory fishes, such as native Hawaiian amphidromous stream fauna made up of goby fishes (‘o‘opu), prawns or shrimp (‘ōpae) and snails (hīhīwai and hapawai). As a potential in-stream use, any microhydropower system should also be integrated with a public trust use such as the taro lo‘i production if pursued. The integrated water/wastewater/drainage system and the restoration of the ‘auwai will also help mitigate any increased water demand by reusing on-site water resources to the maximum extent possible before additional municipal water resources are required. The reduction in the number of visitors to less than half of the current summertime levels during peak visitor hours will also help reduce overall demand for potable water. Therefore, no upsizing of the park’s municipal water connection is required.

The impacts represented by the commitment of resources should be weighed against the significant positive and recurring benefits that will derive from the implementation of the proposed Master Plan, versus the consequences of taking no action or the implementation of a less beneficial plan for the park.

#### **7.5 PROBABLE ADVERSE ENVIRONMENTAL EFFECTS THAT CANNOT BE AVOIDED**

There will continue to be some human impact on the environment at the park. However, as discussed in Chapters 3.0 and 4.0, the proposed Master Plan seeks to minimize the adverse impacts of that use by reducing the number of people who visit the park during peak visitor hours, reducing traffic and congestion along the highway, improving wastewater treatment and reducing potable water use, reducing solid waste and preventing pollution, reducing the quantity and improving the quality of surface runoff, and improving visitor education. Two

of the potential sources of renewable energy could also have adverse impacts to biota depending on the technology selected. Therefore, less harmful technologies such as microwind or windbelts and microhydropower are discussed in Section 2.5.3.2. The Master Plan also seeks to reverse other adverse impacts via restoration of the park's varied natural, cultural, and historic resources including the dunes, stream, loko, wetlands, and forest areas as well as the Hula and Agricultural Complexes and other cultural and archaeological sites scattered throughout the park.

### **7.5.1 RATIONALE FOR PROCEEDING WITH THE MASTER PLAN NOTWITHSTANDING UNAVOIDABLE EFFECTS**

The main reasons for proceeding with the proposed Master Plan include protection and restoration of the park's sensitive and unique natural, cultural, historic, and scenic resources; improvement of the environmental conditions such as surface and marine water quality; removal of alien species and restoration of native ecosystems; improving public safety; increasing knowledge and sensitivity of the cultural values and activities that occur within the park; providing outdoor and indoor educational opportunities as well as recreational opportunities for residents and visitors alike; reducing negative impacts to native flora and fauna; and reducing illegal parking and traffic congestion above current conditions.

## **7.6 UNRESOLVED ISSUES**

The main unresolved issues involve the shuttle service and the timing of implementation. For the preferred shuttle service described in Section 6.4.2.4, it is not clear ~~whether the third-party operator currently who would be providing the shuttle service to the park will continue or if State Parks or some other government agency such as the County or USFWS either puts out a concession agreement or runs a similar service that can serve the park from the remote Princeville parking area.~~ There may also be multiple shuttle providers if it proves to be successful. There is currently some momentum from the County's efforts and there may be a way for multiple agencies to cooperate on a transit system to serve the North Shore. Because of the uncertainty of the shuttle service, the ultimate parking requirements and shuttle stop design for the park are not known at this time. However, this can be mitigated through implementation of various operational strategies and adjusting those operations over time if they fail as discussed in more detail in Sections ~~2.5.1.3~~ 2.5.1.2 and 6.4.2.

The timing of implementation of the proposed Master Plan is subject to CIP budget requests submitted by State Parks and approvals granted by the State Legislature. Therefore, it is not clear exactly when the proposed improvements will be made. ~~Therefore, the Near Term Plan described in Section 2.5.1 will help State Parks implement some of the key management strategies with less funding, while funding is sought for the more extensive long-term improvements.~~

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## 8.0 CONSULTATION

### 8.1 PRE-CONSULTATION

At the outset of the project, State Parks initiated public and agency outreach for the development of the Hā‘ena State Park Master Plan through letters and meetings requesting input prior to and during the development of the plan. Pre-consultation contacts are listed below and copies of the comments and responses are provided in Section 11.0. A list of all community and stakeholder meetings is included in Table 2 and meeting notes from the public meetings are attached in Appendix A.

#### ***FEDERAL AGENCIES***

- U.S. Fish and Wildlife Service
- U.S. National Marine Fisheries Service
- U.S. Army Corps of Engineers
- U.S. Department of the Interior, National Park Service

#### ***STATE OF HAWAII***

- Office of Environmental Quality Control
- Department of Land and Natural Resources (DLNR) Division of State Parks, Administrator
- DLNR State Parks, Planner
- DLNR State Parks, Kaua‘i Parks Superintendent
- DLNR State Parks, Park Ranger
- Department of Agriculture
- Department of Accounting and General Services (DAGS)
- DAGS, Kaua‘i Branch
- Department of Business Economic Development & Tourism (DBEDT)
- DBEDT, Strategic Industries Division (formerly Energy Resources and Technology Division)
- DBEDT, Office of Planning
- Department of Defense
- Department of Education
- Department of Hawaiian Homelands
- Department of Health Environmental Planning Office
- Department of Land and Natural Resources (DLNR)
- DLNR, Commission on Water Resource Management
- DLNR, Division of Aquatic Resources (DAR)
- DLNR, DAR, NOAA CORAL Fellow
- DLNR, Division of Boating and Ocean Recreation (DOBOR)
- DLNR, DOBOR, Kaua‘i District
- DLNR, Division of Conservation and Resources Enforcement
- DLNR, Division of Forestry and Wildlife (DOFAW)

- DLNR, DOFAW, Nā Ala Hele
- DLNR, DOFAW, Kaua‘i District
- DLNR, DOFAW, Kaua‘i District Wildlife Program Manager
- DLNR, DOFAW, Kaua‘i District Seabird Habitat Conservation Plan
- DLNR, Historic Preservation Division (SHPD)
- DLNR, SHPD, Kaua‘i
- DLNR, Land Division
- DLNR, Office of Conservation and Coastal Lands
- Department of Transportation
- Department of Transportation, Highways Division, Kaua‘i District
- Hawai‘i Tourism Authority
- Office of Hawaiian Affairs

***UNIVERSITY OF HAWAII (UH)***

- UH School of Ocean and Earth Science and Technology
- UH Environmental Center
- UH Water Resources Research Center

***COUNTY OF KAUAI***

- Fire Department
- Department of Parks and Recreation
- Planning Department
- Police Department
- Department of Public Works
- Department of Public Works, Engineering Division
- Transportation Agency
- Department of Water
- Office of Economic Development
- Office of Economic Development, Tourism Specialist
- Kaua‘i Historic Preservation Review Commission

***ELECTED OFFICIALS***

- Interim Mayor Kaipo Asing
- Councilmember Jay Furfaro
- Councilmember Mel Rapozo
- Councilmember Tim Bynum
- Councilmember Daryl Kaneshiro
- Councilmember Shaylene Iseri-Carvalho
- Councilmember Ronald D. Kouchi
- Councilmember JoAnn A. Yukimura

**UTILITIES**

- Hawaiian Telcom
- Kaua‘i Island Utility Cooperative

**OTHER ORGANIZATIONS AND INDIVIDUALS**

- Hui Maka‘āinana o Makana
- National Tropical Botanical Garden, Limahuli Garden
- Hālau Palaihiwa o Kaipuwai
- Hawai‘i Ecotourism Association
- Kaua‘i Planning and Action Alliance
- Community Conservation Network (now Hawai‘i Conservation Stewardship Network)
- Makai Watch
- Carlos Andrade
- F. Bruce Wichman

**8.2 PUBLIC ENGAGEMENT THROUGH THE MASTER PLAN PROCESS**

In addition to pre-consultation requests, the Hā‘ena State Park master planning process involved public open house events and public meetings; several meetings of the MPAC, its transportation sub-committee; and a pre-consultation meeting with the Kaua‘i Historic Preservation Review Commission. A list of these meetings is included in Table 2 and meeting notes from the public meetings are attached as Appendix A. Pre-consultation correspondence is included in Section 11.0.

**8.3 EIS PUBLIC ENGAGEMENT****8.3.1 ACT 172-12 EISPN CONSULTATION**

The EISPN was distributed to the following agencies, individuals, and organizations. Comments received in response to the EISPN and the response letters submitted are included in Section 12.0 of this Draft EIS. The EISPN was also sent to various libraries and media outlets to provide availability to the public.

**FEDERAL AGENCIES**

- U.S. Army Corps of Engineers, Honolulu District
- U.S. Department of Agriculture Natural Resource Conservation Service
- U.S. Department of Commerce National Marine Fisheries Service
- U.S. Department of the Interior USGS Pacific Islands Water Science Center
- U.S. Department of the Interior National Park Service
- U.S. Fish and Wildlife Service
- U.S. Department of the Navy
- Federal Aviation Administration

- Federal Highways Administration
- Federal Transit Administration
- U.S. Coast Guard
- Environmental Protection Agency-Pacific Islands Contact Office

***STATE OF HAWAII***

- Department of Agriculture
- Department of Accounting and General Services
- Department of Accounting and General Services, Kauaʻi
- Department of Business, Economic Development & Tourism (DBEDT)
- DBEDT, Research Division Library
- DBEDT, Office of Planning
- DBEDT, Energy Division
- Department of Defense
- Department of Education
- Department of Hawaiian Home Lands
- Department of Health (DOH)
- DOH, Environmental Planning
- DOH, Environmental Management Clean Water Branch
- Department of Land and Natural Resources (DLNR)
- DLNR, Land Division
- DLNR, Land Division, Kauaʻi District
- DLNR, State Historic Preservation Division (SHPD)
- DLNR, SHPD, Kauaʻi
- DLNR, Division of Forestry and Wildlife (DOFAW)
- DLNR, DOFAW, Kauaʻi
- DLNR, DOFAW, Nā Ala Hele
- DLNR, Division of Aquatic Resources
- DLNR, Division of Boating and Ocean Recreation
- DLNR, Engineering Division
- DLNR, Commission on Water Resource Management
- DLNR, Office of Conservation and Coastal Lands
- Department of Transportation
- Department of Transportation, Highways Division, Kauaʻi District
- Office of Hawaiian Affairs
- Legislative Reference Bureau Library
- Hawaiʻi Tourism Authority

***UNIVERSITY OF HAWAII (UH)***

- UH Water Resources Research Center
- UH Environmental Center
- UH Marine Option Program
- UH Thomas H. Hamilton Library

- UH Edwin H. Mo‘okini Library
- UH Maui College Library
- UH Kaua‘i Community College Library

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- Department of Water
- Office of Economic Development
- Department of Parks and Recreation
- Kaua‘i Historic Preservation Review Commission

### ***ELECTED OFFICIALS***

- U.S. Senator Brian Schatz
- U.S. Senator Mazie Hirono
- U.S. Representative Tulsi Gabbard
- State Senator Ronald Kouchi
- State Representative Derek Kawakami
- Kaua‘i County Mayor Bernard Carvalho
- Kaua‘i County Council Chair Mel Rapozo
- Kaua‘i County Council Vice Chair Ross Kagawa
- Kaua‘i County Councilmember Mason Chock
- Kaua‘i County Councilmember Gary Hooser
- Kaua‘i County Councilmember Arryl Kaneshiro
- Kaua‘i County Councilmember KipuKai Kuali‘i
- Kaua‘i County Councilmember JoAnn Yukimura

### ***UTILITIES***

- Hawaiian Telcom
- Kaua‘i Island Utility Cooperative

### ***OTHER ORGANIZATIONS AND INDIVIDUALS***

- Kua‘aina Ulu ‘Auamo (formerly Hawai‘i Community Stewardship Network)
- Kaua‘i Planning and Action Alliance
- B. Frederick Wichman
- Hawai‘i Ecotourism Association
- Thomas and Annie Hashimoto, MPAC
- Henrietta Phillips, MPAC
- Lono Brede, MPAC



- Presley Wann, MPAC
- Kehaulani Kekua, MPAC
- ‘Aikane Alapa‘i, MPAC
- Sabra Kauka, MPAC
- Victoria Wichman, MPAC
- Chipper Wichman, MPAC
- Hau‘oli Wichman, MPAC
- Jeff Chandler, MPAC
- Ka‘imi Hermosura, MPAC
- Keli‘i Alapa‘i, MPAC
- Naomi Yokotake, MPAC
- Carlos Andrade, MPAC
- Maka‘ala Ka‘aumoana, MPAC
- Kawika Winter, MPAC
- Barbara Robeson, MPAC
- Caren Diamond, MPAC
- Carl Berg, MPAC
- Carl Imparato, MPAC
- Sue Kanoho, MPAC
- Julie Schuller, MPAC
- Joel Guy, MPAC
- Mehana Vaughn, MPAC
- Micco Godinez, MPAC
- Chino Godinez, MPAC
- Kathryn Keala, MPAC
- D. Kaliko Santos, MPAC
- Atta Forrest, MPAC
- Michael Dahilig/County of Kaua‘i, Planning Department, MPAC
- Nani Sadora/County of Kaua‘i, Planning Department, Open Space Commission, MPAC

***PUBLIC LIBRARIES AND NEWS MEDIA***

- Hawai‘i State Library - Hawai‘i Documents Center
- Kaimukī Regional Library
- Kāne‘ohe Regional Library
- Pearl City Regional Library
- Hawai‘i Kai Regional Library
- Hilo Regional Library
- Kahului Regional Library
- Līhu‘e Regional Library
- Princeville Library
- Honolulu Star Advertiser
- Hawai‘i Tribune Herald
- West Hawai‘i Today

- The Garden Island
- Maui News
- Moloka‘i Dispatch
- Honolulu Civil Beat

### **8.3.2! DRAFT EIS CONSULTATION**

The Draft EIS has been distributed to the following agencies, individuals, and organizations. This distribution list was approved by OEQC on May 5, 2015 (OEQC File No. 15-052 Hā‘ena State Park I-0128). Additional DLNR divisions and DOH branches were added to the list following OEQC’s distribution list approval as they were forwarded the Draft EIS by DLNR Land Division and DOH EDO, respectively, as noted. The Draft EIS was also sent to various libraries and media outlets to provide availability to the public. Comment letters received for the Draft EIS ~~will be~~ have been incorporated ~~and included~~ in the Final EIS and are attached with their corresponding response letters in Section 13.0 as required by Section 343-5, HRS.

#### ***FEDERAL AGENCIES***

- U.S. Army Corps of Engineers, Honolulu District
- U.S. Department of Agriculture, Natural Resource Conservation Service
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- U.S. Department of the Interior, USGS Pacific Islands Water Science Center
- U.S. Department of the Interior, National Park Service
- U.S. Fish and Wildlife Service
- U.S. Department of the Navy
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- DBEDT, Energy Division
- Department of Defense
- Department of Education
- Department of Hawaiian Home Lands
- Department of Health (DOH)
- DOH, Environmental Planning Office (EPO)
- DOH, Kaua‘i District Health Office (via DOH EPO)

- DOH, Environmental Management Clean Water Branch (via DOH EPO)
- DOH, Wastewater Branch (via DOH EPO)
- DOH, Safe Drinking Water Branch (via DOH EPO)
- Department of Land and Natural Resources (DLNR)
- DLNR, Land Division
- DLNR, Land Division, Kauaʻi District (via DLNR Land)
- DLNR, State Historic Preservation Division (SHPD)
- DLNR, SHPD, Kauaʻi
- DLNR, Division of Forestry and Wildlife (DOFAW) (via DLNR Land)
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- DLNR, DOFAW, Nā Ala Hele
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- DLNR, Division of Boating and Ocean Recreation
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- DLNR, Commission on Water Resource Management
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- State Representative Derek Kawakami
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- Ka‘imi Hermosura, MPAC
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- Caren Diamond, MPAC

- Carl Berg, MPAC
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- Sue Kanoho, MPAC
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- Mehana Vaughn, MPAC
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- Kathryn Keala, MPAC
- D. Kaliko Santos, MPAC
- Atta Forrest, MPAC
- Michael Dahilig/County of Kaua‘i, Planning Department, MPAC
- Nani Sadora/County of Kaua‘i, Planning Department, Open Space Commission, MPAC

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- Pearl City Regional Library
- Hawai‘i Kai Regional Library
- Hilo Regional Library
- Kahului Regional Library
- Līhu‘e Regional Library
- Princeville Library
- Honolulu Star Advertiser
- Hawai‘i Tribune Herald
- West Hawai‘i Today
- The Garden Island
- Maui News
- Moloka‘i Dispatch
- Honolulu Civil Beat

#### **8.3.3! DRAFT EIS PUBLIC MEETING**

A public meeting to incorporate community concerns in the EIS ~~will be~~ was held on August 19, 2015 during the Draft EIS public comment period. Oral comments and questions were fielded during the meeting. Comment cards were distributed to the attendees who were given the option to fill them out and turn them in that evening or mail them to PBR Hawaii. Attendees were also encouraged to distribute the comment cards to those who were not able to attend the meeting and submit them to PBR Hawaii. Email addresses where attendees could submit comments were also shared at the end of the PowerPoint presentation. Substantive written and oral comments received during the meeting will be incorporated into the EIS are summarized below. Written comments that included a mailing address were sent written responses and both



are included in Section 13.0 of the EIS. Written comments that did not include a mailing address were also responded to but not mailed and are included in Section 13.0.

The following summarizes the oral and written comments received and collected during the August 19, 2015 public meeting. They are organized by topic and are individually responded to in Section 13.0.

### **Facilities:**

- The large visitor center is not desired. Seems to cater to tourists and not for locals.
- Like the education center/build a community education "building" to inform people about the land
- No gates blocking the view down the highway.
- No commercial vendors or gift shops.
- No caretaker's cottage. No types of building at Kē'ē (no permanent structures, no pavement at all, no new bathrooms). No fences. No boardwalk. No gates. No bridges.
- Like the integration of natural hazard avoidance, reduced threats by locating boardwalk outside of rockfall area; cultural practices; preservation of important historic and cultural sites; encouraging revitalization of sites; outdoor recreation; education; local advisory committee; scaled-down outdoor recreation impacts and footprint
- Supports the cultural and rehabilitation/restoration of lo'i aspects
- Move the entrance further down the road, do not make the stream the entrance so that locals can still use Cold Pond and stream
- Hope it doesn't desecrate loved one's grave sites
- Limahuli Gardens has a visitor center that explains local history/culture

### **Park Access and Proposed Visitor Limits:**

- Concern regarding limiting access to only 900 people per day. What happens if the 900<sup>th</sup> guest is reached but splits a family or group of friends? Can the limit apply to tourists and not locals?/limit should be set at 500 tourists per day/no limit for locals
- Concern over the limited parking at the park and having the traffic and cars spill over into the County park, along the highway, and down to Makua
- Perhaps one day a week can be closed to non-residences, or provide privileges for Hawaiian organizations
- Concern over limited access during early morning or late afternoons
- Would like to see online ticketing, permit, entry access with set number for visitors and set number for residents
- Require limited permits for tourists/unlimited access for locals and guests
- Do not count walkers and bikers in the daily count (should be free)
- There is fishing at night/allow beach access to walk on at all hours of day for all the people
- Limiting local access is not helping the problem is the number of people visiting Kaua'i
- Keep the white people out
- Applaud the proposed exemption of fishermen and hunters from the visitor limit
- No priority to hunters and fisherman

- No access fees for locals/residents
- No gate guard
- State parks are to be enjoyed by the people, especially residents. Do not discriminate against taxpaying residents to the benefit of cultural practitioners, hunters, and fisherman
- Visitors should have to apply for a day pass to visit the park, but residents should be able to obtain passes valid for one year or longer
- Allow foot and bike access
- Put gates at the start of the actual park to regulate the 500 limit; but allow volunteers/locals with permits (sticker) to enter; second gate at Kumu road, limiting the traffic to all of the land past Hanalei to 1,500 per day, plus local residents
- Threatens access rights by closing areas
- The plan smacks of localism/ detests the twisting of the definition of volunteer to accommodate Hā'ena locals; park belongs to ALL, not just North Shore residents/shame on you for blaming tourists

### **Parking and Shuttle:**

- Is there way to discriminate against rental cars?
- Limit parking and force paid shuttle rides/parking by permit only (with a fee)/50 parking stalls with permits, 50 without
- Force tourists to use the shuttle and get permits, not kama'aina
- Much planning should go into the shuttle aspect of the plan- communication and networking with resorts is critical
- Provide pamphlets for those riding the shuttle explaining cultural significance and environmental sensitivities
- Subsidize shuttle
- Require hotels and time share hotels to provide shuttle service; shuttles paid for by businesses/tourists; require Hawai'i Visitors Bureau to contribute funds to finance shuttle and shuttle infrastructure
- Concerns about parking and whether people, and/or cars will be limited
- All permanent residents get a resident car sticker for access
- Bring back the shuttle
- All North Shore beaches roadside parking need to be policed and ticketed accordingly.
- Stop all traffic in Princeville and supply regular shuttles from before sunrise until after sunset is a better plan and only allow Hawaii residents to drive over Hanalei River Bridge
- Shuttles are a good idea but should incorporate Hanalei into the scheduled service so tourists can stop for food and shopping/shuttles should start at Princeville
- Limit truck/car traffic to 500 per day
- Have shuttles run every 15 minutes, from 8 am- 5 pm; charge parking fees of \$20-30 to park (Hawai'i residents exempt); would result in 90% of current traffic to opt to take shuttle, even residents would
- State or federal money should fund the shuttle system to get people past Hanalei. Tourists staying in Princeville should be shuttled to Kē'ē, Tunnels, Lumahai, and

Hanalei; North Shore hotels and condos should provide transportation from airport to North Shore, then shuttles should move tourists around North Shore

### **Park Management and Visitor Education:**

- Explore specifics of organizations to manage plan.
- Address how monies should be used.
- Information about issues of Kē'ē should be given to visitors in a non-aggressive way before they arrive/educate tourists before they reach Lumahai
- Proposes a day or half day of rest for the park
- Note: you have defined the limits of acceptable change (do not use the term carrying capacity)
- No halau own Kē'ē, all kumu must respect Hā'ena tradition
- Do not allow any plants to be touched
- Waiakapala'e is for women
- No new age practitioners should be considered as cultural religious practitioners
- Overly controlled by the State, removes the natural joy of the area
- Community should be informed before plan is implemented
- Continue community advisory committee permanently

### **Natural Resources:**

- Above and beyond parking concerns are the conservation considerations (i.e. a struggling, environmentally compromised coral reef area)
- Threatens wildlife, burial sites, and deface mountain/goes against all conservation purposes
- Bad area for tsunami zone

### **General Comments:**

- Do not support/approve the plan.
- In support of the plan/For the most part like the plan/in total support of the plan.
- Master plan for the whole region is needed/EIS needed for whole region
- Anti-government sentiment/consult lawful Hawaiian government/no federal government involvement
- Interested in volunteering/think volunteer provision is really important
- Restore the damage that has already occurred
- Unsure if the plan will work
- Proposes more police activity/patrolling
- Get with all Hā'ena families and get responses and ideas in the plan
- There were both positives and negatives with this plan
- Maintain an area that is truly allowed to run wild (Aldo Leopold-style)
- Request more time to respond
- Stop rampant promoting and advertising of the area/capping the visitor count through HTA and Kaua'i Visitor Bureau should be considered, even at the risk of diminished tourism revenue

- Something has to be done-see the extreme number of cars and people and damage to the trail and ocean; plan can be fine-tuned later
- Likes that there are options and that the plan is adaptive
- Mahalo for helping protect this beautiful island/ appreciate the hard work that has gone into planning

## **9.0 LIST OF PREPARERS AND CONSULTANT REPORTS**

The Draft EIS was prepared by PBR HAWAII and Associates, Inc. with offices located at 1001 Bishop Street, Suite 650, Honolulu, HI 96813.

Several key technical consultants were contracted to provide specific assessments and recommendations related to the proposed Master Plan. These consultants and their specialties are listed below:

- AECOM/Special Civil Engineering Services – Rockfall Hazards
- Austin Tsutsumi and Associates, Inc. – Traffic Engineering
- Geometrician Associates, LLC – Biological Survey
- SWCA Environmental Consultants – Marine Resources
- Maria Kaimi Orr/Kaimipono Consulting Services, LLC – Cultural Impact
- Kennedy/Jenks Consultants – Civil Engineering

State Park’s archaeologists and staff assisted in the preparation of the archaeological sections of the EIS and Master Plan report as well as the interpretive and educational opportunities section of the Master Plan report.



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## 11.0 PRE-CONSULTATION COMMENTS AND RESPONSES

The request for input at the beginning of the project was sent to the following agencies, organizations, and individuals indicated in the table below with a check mark (√). Comments and input were collected from August 11, 2008 to October 22, 2008 with one follow up letter dated November 10, 2011. If comments were received, the date of the comment is indicated in the table next to the respective agency, organization, or individual's name. Copies of the comment letters and the respective responses are attached. The letter from the NPS was sent in response to State Park's request for review of an earlier draft of the Master Plan (August 2013) for consistency with LWCF requirements and not part of the EIS pre-consultation request. It is included at the end of the pre-consultation letters for reference.

AGENCY/INDIVIDUAL	PRE-CONSULT REQUEST SENT	COMMENT DATED
<b>STATE</b>		
Office of Environmental Quality Control	√	
Department of Land and Natural Resources (DLNR), Division of State Parks, Administrator	√	
DLNR, State Parks, Planner	√	
DLNR, State Parks, Kaua'i Parks Superintendent	√	
DLNR, State Parks, Park Ranger	√	
Department of Agriculture	√	
Department of Accounting and General Services (DAGS)	√	8/25/2008
DAGS, Kaua'i Branch	√	8/14/2008
Department of Business Economic Development & Tourism (DBEDT)	√	
DBEDT, Strategic Industries Division (formerly Energy Resources and Technology Division)	√	8/27/2008
DBEDT, Office of Planning	√	
Department of Defense	√	8/26/2008
Department of Education	√	8/26/2008
Department of Hawaiian Homelands	√	
Department of Health Environmental Planning Office	√	
Department of Land and Natural Resources (DLNR)	√	
DLNR, Commission on Water Resource Management	√	8/25/2008
DLNR, Division of Aquatic Resources (DAR)	√	
DLNR, DAR, NOAA CORAL Fellow	√	
DLNR, Division of Boating and Ocean Recreation (DOBOR)	√	
DLNR, DOBOR, Kaua'i District	√	
DLNR, Division of Conservation and Resources	√	

AGENCY/INDIVIDUAL	PRE-CONSULT REQUEST SENT	COMMENT DATED
Enforcement		
DLNR, Division of Forestry and Wildlife (DOFAW)	√	
DLNR, DOFAW, Nā Ala Hele	√	
DLNR, DOFAW, Kauaʻi District	√	
DLNR, DOFAW, Kauaʻi District, Wildlife Program Manager	√	8/28/2008
DLNR, DOFAW, Kauaʻi District, Seabird Habitat Conservation Plan	√	
DLNR, Historic Preservation Division (SHPD)	√	8/31/2008
DLNR, SHPD, Kauaʻi	√	
DLNR, Land Division	√	
DLNR, Office of Conservation and Coastal Lands	√	9/15/2008
Department of Transportation	√	9/4/2008
Department of Transportation, Highways Division, Kauaʻi District	√	
Hawaiʻi Tourism Authority	√	9/2/2008
Office of Hawaiian Affairs	√	8/28/2008
<b>UNIVERSITY OF HAWAII (UH)</b>		
UH School of Ocean And Earth Science and Technology	√	
UH Environmental Center	√	
UH Water Resources Research Center	√	
<b>FEDERAL</b>		
U.S. Fish and Wildlife Service	√	8/29/2008
U.S. National Marine Fisheries Service	√	
U.S. Army Corps of Engineers	√	
U.S. Department of the Interior, National Park Service	For Master Plan review, 8/2013	6/6/2014
<b>COUNTY OF KAUAI</b>		
Fire Department	√	8/25/2008
Department of Parks and Recreation	√	
Planning Department	√	
Police Department	√	
Department of Public Works	√	8/27/2008*
Department of Public Works, Engineering Division	√	8/27/2008*
Transportation Agency	√	
Department of Water	√	8/22/2008, 11/10/2011
Office of Economic Development	√	
Office of Economic Development, Tourism Specialist	√	
Kauaʻi Historic Preservation Review Commission	√	9/9/2008, 10/22/2008

AGENCY/INDIVIDUAL	PRE-CONSULT REQUEST SENT	COMMENT DATED
<b><i>ELECTED OFFICIALS</i></b>		
Interim Mayor Kaipo Asing	√	
Councilmember Jay Furfaro	√	
Councilmember Mel Rapozo	√	
Councilmember Tim Bynum	√	
Councilmember Daryl Kaneshiro	√	
Councilmember Shaylene Iseri-Carvalho	√	
Councilmember Ronald D. Kouchi	√	
Councilmember JoAnn A. Yukimura	√	
<b><i>UTILITIES</i></b>		
Hawaiian Telcom	√	9/2/2008
Kaua'i Island Utility Cooperative	√	
<b><i>OTHER ORGANIZATIONS AND INDIVIDUALS</i></b>		
Hui Maka'āinana o Makana	√	
National Tropical Botanical Garden Limahuli Garden	√	
Hālau Palaihiwa o Kaipuwai	√	
Hawai'i Ecotourism Association	√	
Kaua'i Planning and Action Alliance	√	8/29/2008
Community Conservation Network (now Hawai'i Conservation Stewardship Network)	√	
Makai Watch	√	
Carlos Andrade	√	
F. Bruce Wichman	√	8/25/2008
Notes: *Joint Letter		

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LINDA LINGLE  
GOVERNOR



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

AUG 25 2008

RUSS K. SAITO  
COMPTROLLER  
BARBARA A. ANNIS  
DEPUTY COMPTROLLER  
(P)1286.8

RECEIVED  
AUG 26 2008  
PBR HAWAII

Ms. Kimi Mikami Yuen, Associate  
PBR Hawaii & Associates, Inc.  
1001 Bishop Street, ASB Tower, Suite 650  
Honolulu, Hawaii 96813-3484

Dear Ms. Yuen:

Subject: Pre-Consultation for the Proposed Haena State Park Master Plan and  
Environment Impact Statement  
Haena, Kauai, Hawaii

Thank you for the opportunity to comment on your letter dated August 11, 2008. This proposed project does not directly impact any of the Department of Accounting and General Services' facilities or projects, and we have no comments to offer at this time

If you have any questions, please call me at 586-0400 or have your staff call Mr. Bruce Bennett of the Public Works Division at 586-0491.

Sincerely,

RUSS K. SAITO  
State Comptroller

c: Ms. Katherine Kealoha, DOH-OEQC  
Ms. Lauren Tanaka, DLNR Parks Division



PBR HAWAII  
& ASSOCIATES, INC.

PRINCIPALS

THOMAS S. WITTEN, ASLA  
Chairman

R. STAN DUNCAN, ASLA  
President

RUSSELL Y. I. CHUNG, FASLA, LEED AP BD+C  
Executive Vice-President

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Vice-President

GRANT T. MURAKAMI, AICP, LEED AP BD+C  
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TOM SCHINELL, AICP  
Principal

W. FRANK BRANDT, FASLA  
Chairman Emeritus

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Managing Director - Hilo

SCOTT MURAKAMI, ASLA, LEED AP  
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DACHENG DONG, LEED AP  
Associate

MARC SHIMATSU, ASLA  
Associate

CATIE CULLISON, AICP  
Associate

February 22, 2015

Douglas Murdock  
State of Hawaii Comptroller  
Department of Accounting and General Services  
PO Box 119  
Honolulu, HI 96810

SUBJECT: PRE-CONSULTATION FOR THE PROPOSED HÅ'ENA STATE  
PARK MASTER PLAN AND ENVIRONMENTAL IMPACT  
STATEMENT, HÅ'ENA, KAUA'I, HAWAII

Dear Mr. Murdock,

Thank you for your department's letter dated August 25, 2008 regarding the above referenced pre-consultation request. As the planning consultant for the applicant, State of Hawai'i, Department of Land and Natural Resources, Division of State Parks, we acknowledge the comments from the Department of Accounting and General Services, indicating that the proposed master plan does not directly impact any of the Department's facilities or projects.

Thank you for contributing to the development of this document. Your comments will be included in the Environmental Impact Statement documents.

Sincerely,

PBR HAWAII

Catie Cullison, AICP  
Associate

cc: Lauren Tanaka, State Parks

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LINDA LINGLE  
GOVERNOR



STATE OF HAWAII  
DEPARTMENT OF ACCOUNTING  
AND GENERAL SERVICES  
Kauai District Office  
1680 Haleukana Street  
Lihue, Hawaii 96766-9063

RUSS K. SAITO  
Comptroller  
BARBARA A. ANNIS  
Deputy Comptroller

KDO 09.0026

RECEIVED  
AUG 15 2008  
PBR HAWAII

August 14, 2008

Ms. Kimi Mikami Yuen, LEED AP®  
PBR Hawaii & Associates, Inc.  
1001 Bishop Street  
ASB Tower, Suite 650  
Honolulu, HI 96813-3484

Dear Ms. Yuen:

Subject: Pre-Consultation for the Proposed Ha'ena State Park Master Plan and  
Environmental Impact Statement Ha'ena, Kauai, Hawaii

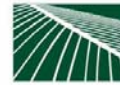
In regards to your letter dated August 11, 2008, on the subject project, the proposed project has  
no impact on any of our existing or proposed projects, plans, policies, or programs.

Thank you.

Sincerely,

Stanley S. Doi

kk



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& ASSOCIATES, INC.

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MARC SHIMATSU, ASLA  
Associate

CATIE CULLISON, AICP  
Associate

February 22, 2015

Eric Agena, District Engineer  
State of Hawai'i  
Dept. of Accounting and General Services  
1680 Haleukana St.  
Lihue, HI 96766

SUBJECT: PRE-CONSULTATION FOR THE PROPOSED HĀ'ENA STATE  
PARK MASTER PLAN AND ENVIRONMENTAL IMPACT  
STATEMENT, HĀ'ENA, KAUAI, HAWAII

Dear Mr. Agena,

Thank you for your agency's letter dated August 14, 2008 regarding the above referenced  
pre-consultation request. As the planning consultant for the applicant, State of Hawai'i,  
Department of Transportation, Highways Division, we acknowledge the comments from  
DAGS-Kaua'i indicating that the Master Plan has no impact on any of your existing or  
proposed projects, plans, policies or programs.

Thank you for contributing to the development of this document. Your comments will be  
included in the Environmental Impact Statement documents.

Sincerely,

PBR HAWAII

Catie Cullison, AICP  
Associate

cc: Lauren Tanaka, State Parks

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Mailing Address: P.O. Box 2359, Honolulu, Hawaii 96804

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GOVERNOR  
THEODORE E. LIU  
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SEP 02 2008  
PBR HAWAII

August 27, 2008

Kimi Mikami Yuen  
PBR Hawaii & Associates  
1001 Bishop Street  
ASB Tower, Suite 650  
Honolulu, Hawaii 96813-3484

Re: Pre-consultation for the Department of Land and Natural Resources  
(DLNR) proposed Ha'ena State Park Master Plan and Environmental  
Impact Statement, Ha'ena, Kauai, Hawaii

In response to your pre-consultation notice dated August 11, 2008, thank you for the early opportunity to provide comments on the proposed master plan and environmental impact statement for the Ha'ena State Park, Kauai. The project is comprised of 64 acres within the park and adjacent near shore water and Ke'e Beach.

We would like to call your attention to: (1) State energy conservation goals; and, (2) energy and resource efficiency and renewable energy and resource development.

- 1. State energy conservation goals.** Project buildings, activities, and site grounds should be designed and/or retrofitted with energy saving considerations. The mandate for such consideration is found in Chapter 344, HRS ("State Environmental Policy") and Chapter 226 ("Hawaii State Planning Act"). In particular, we would like to call to your attention HRS 226 18(c) (4) which includes a State objective of promoting all cost-effective energy conservation through adoption of energy-efficient practices and technologies.
- 2. Energy and resource efficiency and renewable energy and resource development.** We recommend that the planning and preliminary design for the project be conducted following sustainable development principles and guidelines and OEQC 1999 Planner's Checklist. We suggest that the plan look for opportunities for off-grid energy such as photovoltaic systems for lighting.

PBR Hawaii & Associates, Inc.  
August 25, 2008  
Page 2

Our website (<http://www.hawaii.gov/dbedt/info/>) provides detailed information on guidelines, directives and statutes, as well as studies and reports on aspects of energy efficiency and renewable energy. Please also do not hesitate to contact Carilyn Shon, Energy Efficiency Branch Manager, at telephone number (808) 587-3810, for additional information on LEED, energy efficiency, and renewable energy resources.

Sincerely,

  
Elizabeth Corbin  
Acting Administrator

Cc: OEQC  
Ms. Lauren Tanaka, DLNR Division of State Parks



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MARC SHIMATSU, ASLA  
Associate

CATIE CULLISON, AICP  
Associate

February 22, 2015

Mark Glick  
State DBEDT, Energy Division  
PO Box 2359  
Honolulu, HI 96804

**SUBJECT: PRE-CONSULTATION FOR THE PROPOSED HĀ'ENA STATE  
PARK MASTER PLAN AND ENVIRONMENTAL IMPACT  
STATEMENT, HĀ'ENA, KAUA'I, HAWAII**

Dear Mr. Glick,

Thank you for your agency's letter dated August 27, 2008 regarding the above referenced pre-consultation request. As the planning consultant for the applicant, State of Hawai'i, Department of Land and Natural Resources, Division of State Parks, we acknowledge the comments from the Energy Division, providing information regarding State energy conservation goals and resource efficiency. The proposed master plan includes several recommendations for resource conservation and explores opportunities for use of solar and micro-hydro to help power proposed facilities.

Thank you for contributing to the development of this document. Your comments will be included in the Environmental Impact Statement documents.

Sincerely,

PBR HAWAII

Catie Cullison, AICP  
Associate

cc: Lauren Tanaka, State Parks

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MAJOR GENERAL ROBERT G. F. LEE  
DIRECTOR OF CIVIL DEFENSE

EDWARD T. TEIXEIRA  
VICE DIRECTOR OF CIVIL DEFENSE



**STATE OF HAWAII**  
DEPARTMENT OF DEFENSE  
OFFICE OF THE DIRECTOR OF CIVIL DEFENSE  
3949 DIAMOND HEAD ROAD  
HONOLULU, HAWAII 96816-4495

August 26, 2008



PHONE (808) 733-4300  
FAX (808) 733-4287

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AUG 28 2008  
PBR HAWAII

Ms. Kimi Mikami Yuen, LEED AP  
Associate  
PBR Hawaii & Associates, Inc.  
1001 Bishop Street  
ASB Tower, Suite 650  
Honolulu, Hawaii 96813-3484

Dear Ms. Yuen:

Pre-Consultation for Proposed Ha'ena State Park Master Plan,  
Environmental Impact Statement, Ha'ena, Kaua'i, Hawai'i

Thank you for the opportunity to comment on this project. After review of your letter and the accompanying map of this project, we recommend that a 25 sq. ft. area be set aside for possible future siren installation. Beyond that, we have no further comments to make at this time.

We anticipate reviewing the draft Environmental Impact Statement when it is completed, and will make any other appropriate recommendations at that time. If you have any questions, please call Mr. Richard Stercho, Hazard Mitigation Planner, at (808) 733-4300, ext. 583.

Sincerely,

  
EDWARD T. TEIXEIRA  
Vice Director of Civil Defense

c: Ms. Lauren Tanaka, DLNR Division of State Parks





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February 22, 2015

Doug Mayne, Vice Director  
State Civil Defense  
3949 Diamond Head Road  
Honolulu, HI 96813-3484

**SUBJECT: PRE-CONSULTATION FOR THE PROPOSED HĀ'ENA STATE PARK MASTER PLAN AND ENVIRONMENTAL IMPACT STATEMENT, HĀ'ENA, KAUA'I, HAWAII**

Dear Mr. Mayne,

Thank you for your agency's letter dated August 26, 2008 regarding the above referenced pre-consultation request. As the planning consultant for the applicant, State of Hawai'i, Department of Land and Natural Resources, Division of State Parks, we acknowledge the comments from State Civil Defense (SCD), requesting that a 25-foot square area be set aside for possible future siren installation. We have accommodated this request in the master plan, noting that the area near the main parking area can accommodate a 25-foot area for possible pole installation should it be deemed necessary by SCD.

Thank you for contributing to the development of this document. Your comments will be included in the Environmental Assessment and subsequent Environmental Impact Statement documents.

Sincerely,

PBR HAWAII

Catie Cullison, AICP  
Associate

cc: Lauren Tanaka, State Parks

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LINDA LINGLE  
GOVERNOR



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

OFFICE OF THE SUPERINTENDENT

August 26, 2008

Ms. Kimi Mikami Yuen, Associate  
PBR Hawaii & Associates, Inc.  
1001 Bishop Street  
ASB Tower, Suite 650  
Honolulu, Hawaii 96813-3484

Dear Ms. Yuen:

**SUBJECT: Pre-Consultation for the Proposed Ha'ena State Park Master Plan and Environmental Impact Statement, Kauai, Hawaii**

The Department of Education has no comment at this time on the master plan and environmental impact statement for the Ha'ena State Park. Should you have any questions, please call Heidi Meeker of the Facilities Development Branch at 377-8301.

Very truly yours,

Patricia Hamamoto  
Superintendent

PH:jmb

c: Randolph Moore, Assistant Superintendent, OSFSS  
Duane Kashiwai, Public Works Administrator, FDB  
Lauren Tanaka, Division of State Parks, DLNR

PATRICIA HAMAMOTO  
SUPERINTENDENT

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DA CHENG DONG, LEED AP  
Associate

MARC SHIMATSU, ASLA  
Associate

CATIE CULLISON, AICP  
Associate

February 22, 2015

Kathryn Matayoshi, Superintendent  
State of Hawai'i, Department of Education  
PO Box 2360  
Honolulu, HI 96804

**SUBJECT: PRE-CONSULTATION FOR THE PROPOSED HÄ'ENA STATE  
PARK MASTER PLAN AND ENVIRONMENTAL IMPACT  
STATEMENT, HÄ'ENA, KAUA'I, HAWAII**

Dear Ms. Matayoshi,

Thank you for your agency's letter dated August 26, 2008 regarding the above referenced pre-consultation request. As the planning consultant for the applicant, State of Hawai'i, Department of Land and Natural Resources, Division of State Parks, we acknowledge that the Department of Education had no comment at the time.

Thank you for contributing to the development of this document. Your comments will be included in the Environmental Impact Statement documents.

Sincerely,

PBR HAWAII

Catie Cullison, AICP  
Associate

cc: Lauren Tanaka, State Parks

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GOVERNOR OF HAWAII



STATE OF HAWAII  
DEPARTMENT OF LAND AND NATURAL RESOURCES  
**COMMISSION ON WATER RESOURCE MANAGEMENT**

P.O. BOX 621  
HONOLULU, HAWAII 96809

August 25, 2008

LAURA H. THIELEN  
CHIEF OF BUREAU  
MEREDITH J. CHING  
JAMES A. FRAZIER  
NEAL S. FUJIMURA  
CHRYOM L. FUKINO, M.D.  
DONNA FAY K. KIYOSAKI, P.E.  
LAWRENCE H. MIKE, M.D., J.D.  
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DEPUTY DIRECTOR

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PBR HAWAII

Ms. Kimi Mikami Yuen  
PBR Hawaii & Associates, Inc.  
ASB Tower, Suite 650  
1001 Bishop Street  
Honolulu, HI 96813

Dear Ms. Yuen:

Proposed Haena State Park Master Plan and  
Environmental Impact Statement, Haena, Kauai  
TMKs: (4) 5-9-001:022 (por.) and 025 and (4) 5-9-8:001

Reference is made to your August 11, 2008, letter requesting comments as to whether the proposed project will have any impacts on the Commission on Water Resource Management's (Commission) existing or proposed projects, plans, policies and programs.

The Commission on Water Resource Management (Commission), Stream Protection and Management Branch, has the responsibility to protect stream channels from alteration whenever practicable to provide for fishery, wildlife, recreational, aesthetic, scenic, and other beneficial instream uses in the State of Hawaii under the authorization of the State Water Code (Code), Chapter 174C, Hawaii Revised Statutes, and Chapter 13-169, Hawaii Administrative Rules (Protection of Instream Uses of Water).

Limahuli Stream flows through the National Tropical Botanical Garden (NTBG) and Haena State Park. In 1977, the Commission approved NTBG's application to construct a new stream diversion and petition to amend the interim instream flow standard (PAIIFS) to divert approximately 150 gallons per minute (GPM) at the 320-foot elevation and to restore approximately 200 GPM at the 180-foot elevation of Limahuli Stream. The approved diversion is used to irrigate the upper grounds of Limahuli Garden and an existing kalo loi.

Any new or increased diversion of water from Limahuli Stream will require one or more of the following permits from the Commission:

- Stream Channel Alteration Permit (SCAP)
- Stream Diversions Works Permit (SDWP)
- Petition to Amend Interim Instream Flow Standard (PAIIFS)

Should you have any questions, please contact Robert Chong of the Stream Protection and Management Branch at 587-0266, or by email at: robert.k.chong@hawaii.gov.

Sincerely,

KEN C. KAWAHARA, P.E.  
Deputy Director



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Managing Director - Hilo

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MARC SHIMATSU, ASLA  
Associate

CATIE CULLISON, AICP  
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February 22, 2015

William M. Tam, Deputy Director  
Commission on Water Resource Management  
1151 Punchbowl St. Rm. 227  
Honolulu, HI 96813

**SUBJECT: PRE-CONSULTATION FOR THE PROPOSED HĀ ENA STATE PARK  
MASTER PLAN AND ENVIRONMENTAL IMPACT STATEMENT,  
HĀ ENA, KAUA I, HAWAII I**

Dear Mr. Tam,

Thank you for your agency's letter dated August 25, 2008 regarding the above referenced pre-consultation request. As the planning consultant for the applicant, State of Hawai'i, Department of Land and Natural Resources, Division of State Parks, we acknowledge the comments from the Commission's Stream Protection and Management Branch indicating that any new or increased diversion of water from Limahuli Stream will require one or more of the following permits: Stream Channel Alteration Permit; Stream Diversion Works Permit; and/or Petition to Amend Interim Instream Flow Standards.

While the master plan does not propose any specific stream alterations, two suggested elements may involve Limahuli's stream waters or its riparian area. First, riparian restoration work is identified as potentially beneficial to the stream and its aquatic life. Specific restoration plans have not been prepared at this time. However, it is anticipated that this work will not involve instream activities and would more likely involve activities such as removal of alien trees and replanting appropriate natives for the location.

The master plan also suggests that alternative sources of energy be considered to supply power to the site facilities. One potential alternative energy source may be micro-hydro power. We acknowledge that water use for this purpose may require a permit(s) from the Commission.

Thank you for contributing to the development of this document. Your comments will be included in the Environmental Impact Statement documents.

Sincerely,

PBR HAWAII

Catie Cullison, AICP  
Associate

cc: Lauren Tanaka, State Parks

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LINDA LINGLE  
GOVERNOR OF HAWAII



#### STATE OF HAWAII DEPARTMENT OF LAND AND NATURAL RESOURCES

DIVISION OF FORESTRY AND WILDLIFE  
KAUAI DISTRICT  
3060 EIWA STREET, ROOM 306  
LIHUE, KAUAI, HAWAII 96766

August 28, 2008

Ms. Kimi Mikami  
PBR Hawaii & Associates, Inc.  
1001 Bishop Street  
ASB Tower, Suite 650  
Honolulu, HI. 96813-3484

Re: Pre-Consultation for the proposed Ha'ena State Park Master Plan and Environmental Impact Statement, Ha'ena, Kauai, Hawai'i.

We received a copy of the pre-consultation letter dated August 11, 2008 from Ms. Andrea Erichsen, DLNR-DOFAW Kauai Seabird Habitat Conservation Plan Coordinator on August 27, 2008.

We provide the following comments on the proposed project:

1. Federal and State listed threatened and endangered waterfowl species such as Hawaiian coot (*Fulica alai*), Hawaiian gallinule (*Gallinula chloropus*), Hawaiian stilt (*Himantopus mexicanus*) and Hawaiian duck (*Anas wyvilliana*) are known to use the wetland areas for feeding and possibly nesting. The Hawaiian goose (*Nesochen sandvicensis*), although not documented in the park proper, may occasionally visit the area for feeding. Care must be taken not to disturb nesting sites during planned development projects near the wetlands.
2. Federal and State listed T-E seabirds species are not known to exist in the proposed project area, however, the threatened Newell's shearwater (*Puffinus newelli*), the endangered Hawaiian dark-rumped petrel (*Pterodroma phaeopygia*), and candidate species, Band-rumped storm petrel (*Oceanodroma castro*) are known to transit these areas at night to and from their mountain nesting areas and the sea. Because of their nocturnal habit, and their known attraction to man-made lights, it is recommended that seabird safe lights be installed where lighting may be needed. As much as possible, artificial lights including parking lights and facility lights should be minimized or reduced during the fledging season of September to December. Please consult with Ms. Andrea Erichsen for seabird friendly lighting information at [Andrea.L.Erichsen@hawaii.gov](mailto:Andrea.L.Erichsen@hawaii.gov) or call her at 808-245-9160.

3. The federally endangered Hawaiian hoary bat (*Lasiurus cinereus*) may transit the area at night, but are not likely to be impacted by the proposed project.
4. We recommend to strategically placing educational signage to inform the general public of native wildlife in the area.
5. We recommend that night time construction activities using overhead construction lights be avoided as much as possible during the period of September to December due to the Kauai seabird light attraction problem.
6. The Na Pali Coast trail at the end of the road near Ke'e beach is an important public hunter access route to the Na Pali Coast State Park. The Na Pali Coast State Park-Unit G is open to year-round, daily archery hunting for feral pig and feral goat. Because of the year-round hunting, the trail should be kept open so that hunters may enter and exit the park. It is not uncommon for hunters to start their trek at 4:00 a.m. and return after dark. Because vehicle parking has been an issue in the park, it is important that the proposed plan designate at least 2 parking stalls for public hunters near the Na Pali Coast trailhead. The reason for this is because hunters returning for the NPC are packing out harvested game and having their vehicles near the trailhead will allow them to quickly store the game in their vehicle out of view from the non-hunting public.

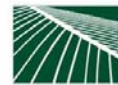
If you have any questions, please feel free to contact me at 274-3433. Please place my email address on your list. Mahalo. [thomas.j.kaiakapu@hawaii.gov](mailto:thomas.j.kaiakapu@hawaii.gov).

Sincerely,



Thomas Ka'iakapu  
Kauai Wildlife Manager

Cc: Kauai DOFAW  
Lauren Tanaka, State Parks Administration



**PBR HAWAII**  
& ASSOCIATES, INC.

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February 22, 2015

Thomas Ka'iakapu, Kauai Wildlife Manager  
DOFAW, Kaua'i District  
3060 Eiwa Street, Room 306  
Lihue, HI 96766

**SUBJECT: PRE-CONSULTATION FOR THE PROPOSED HÄ'ENA STATE PARK MASTER PLAN AND ENVIRONMENTAL IMPACT STATEMENT, HÄ'ENA, KAUA'I, HAWAII**

Dear Mr. Ka'iakapu,

Thank you for your letter dated August 28, 2008 regarding the above referenced pre-consultation request. As the planning consultant for the applicant, State of Hawai'i, Department of Land and Natural Resources, Division of State Parks, we acknowledge DOFAW's comments.

We acknowledge that federal and state listed threatened and endangered species may utilize the site. In preparation for the master plan, a flora and fauna survey was conducted by Geometric Associates, LLC in 2009. The survey included a physical survey of flora and fauna; a review of previous surveys of the area; report of the results describing plant communities and habitats; and, discussion of potential effects from increased recreation on wildland resources.

Thirteen species of birds were observed during the 2009 survey including the endangered Hawaiian Duck (Koloa Maoli, *Anas wyvilliana*), two indigenous shorebirds (Kolea, *Pluvialis fulva* and 'Ulili, *Heteroscelus incanus*) and an indigenous seabird (Koa'e Kea, *Phaethon lepturus dorotheae*). All other birds sighted were non-native introductions.

Additional species of seabirds, waterbirds, shorebirds and forest birds that are federally listed as endangered or threatened may use the park. The wetlands may also provide feeding and nesting areas to the indigenous Black-crowned Night-heron ('Auku'u; *Nycticorax nycticorax hoactli*).

We acknowledge that seabirds, including the threatened Newell's shearwater, endangered Hawaiian petrel and species of concern, the band-rumped storm petrel may fly over the site. Further, we acknowledge that seabirds are attracted to artificial lights, flying around the light source until they collide with objects or collapse from exhaustion, making them vulnerable to predators once on the ground. To avoid any impact to seabirds, the master plan does not include any parking lot lighting. Any security lighting that is deemed necessary at the ECC will be shielded downward to avoid any impacts to seabirds.



Thomas Ka'iakapu

**PRE-CONSULTATION FOR THE PROPOSED HĀ'ENA STATE PARK MASTER PLAN AND ENVIRONMENTAL IMPACT STATEMENT, HĀ'ENA, KAUA'I, HAWAII**

Page 2 of 2

Other federally endangered waterbirds that would likely use the wetlands are the Black-necked Stilt (Ae'o; *Himantopus mexicanus knudseni*), Hawaiian Coot ('Alae ke'oke'o; *Fulica alae*), Hawaiian Moorhen ('Alae'ula; *Gallinula chloropus sandvicensis*), and Nēnē (*Branta sandvicensis*). To avoid impacts to waterbirds no physical changes or new activities are proposed for the site's wetlands. However, there has been interest on the part of some community members to restore the wetlands (which are believed to be former Hawaiian fishponds or used for wet cultivation of taro) for ecological or cultural use. The master plan recommends that before any wetland restoration activities occur, that an analysis of the costs, benefits and liabilities associated with intentionally creating habitat for endangered waterbirds be conducted.

The 2009 biological survey also reports that although not sighted during the survey, the endangered Hawaiian hoary bat (*Lasiurus cinereus semotus*), probably utilizes Hā'ena State Park as it has been observed in the Hanalei and Princeville areas. To avoid any impacts to the endangered Hawaiian hoary bat, no large woody shrubs or trees over 15 feet in height will be removed during the bat pupping months.

We also acknowledge your suggestion to strategically place educational signage to inform the general public of the area's wildlife. Master plan recommendations include expanding the interpretive programming in the park, including interpretive signage and a required stop in the proposed Education & Cultural Center to gain a greater understanding of the park's many resources – ecological, cultural and archaeological.

We further acknowledge the information provided in your letter relating to the importance of the Nāpali trailhead as a hunter access for year-round archery hunting of feral pig and goat. Recommendations of the master plan include limiting access to the parking area nearest Kē'ē beach to those requiring special access, including ADA, lifeguards and cultural practitioners (to include fishermen/women and hunters).

Thank you for contributing to the development of this document. Your comments will be included in the Environmental Assessment and subsequent Environmental Impact Statement documents.

Sincerely,

PBR HAWAII

Katie Cullison, AICP  
Associate

cc: Lauren Tanaka, State Parks

O:\Job26\2627.01 DLNR-Haena State Park Master Plan\EIS\Pre-Consultation\Response Letters\2015 Responses\DOFAW\_Kauai2015.doc



**STATE OF HAWAII**  
**DEPARTMENT OF LAND AND NATURAL RESOURCES**  
STATE HISTORIC PRESERVATION DIVISION  
601 KAMOKILA BOULEVARD, ROOM 555  
KAPOLEI, HAWAII 96707

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KARUOLAH ISLAND RESERVE COMMISSION  
LAND  
STATE PARKS

August 31, 2008

Kimi Yuen, LEED, AP, Associate  
PBR Hawaii & Associates  
1001 Bishop St., Suite 650 ASB Tower  
Honolulu, Hawaii 96813

RECEIVED  
SEP 04 2008  
PBR HAWAII

LOG NO: 2008.3780  
DOC NO: 0808NM48  
Archaeology

Dear Ms. Yuen:

**SUBJECT: Chapter 6E-8 - Historic Preservation Review – Preconsultation on Haena State Park Master Plan and EIS**  
**Haena Ahupua'a, Hanalei Districts, Island of Kaua'i**  
**TMK: [4] 5-9-001: 22, 5-9-008: 001**

The aforementioned is regarding the Master Plan and EIS for Haena State Park. There are several significant historic sites in Haena State Park as your letter of August 11, 2008 clearly points out, in addition, there is a lo'i complex with lokos, which still need more archaeological mitigation (i.e., monitoring plan, burial treatment plan, data recovery plan, preservation plan) shall be submitted for review and approval.

We look forward to reviewing a more refined plan than the latest draft, at which point we can then give you some better comments. If you have any questions please call me at 692-8021.

Aloha,

Nancy McMahon, Deputy Administrator  
State Historic Preservation Division

NM:



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PLANNING • LANDSCAPE ARCHITECTURE • ENVIRONMENTAL STUDIES • ENTITLEMENTS / PERMITTING • GRAPHIC DESIGN

February 22, 2012

Alan Downer, Administrator  
State Historic Preservation Office  
Kakuhihewa Building, Room 555  
601 Kamokila Blvd.  
Kapolei, HI 96707

**SUBJECT: SHPD LOG NO: 2008.3780; DOC NO: 0808NM48, PRE-CONSULTATION FOR THE PROPOSED HĀ'ENA STATE PARK MASTER PLAN AND ENVIRONMENTAL IMPACT STATEMENT, HĀ'ENA, KAUA'I, HAWAII**

Dear Mr. Downer,

Thank you for your agency's letter dated August 31, 2008 (LOG No. 2008.3780, DOC No. 0808NM48) regarding the above referenced pre-consultation request. As the planning consultant for the applicant, State of Hawai'i, Department of Land and Natural Resources, Division of State Parks, we acknowledge the comments from SHPD, indicating that additional archaeological mitigation will be required for the park's agricultural complex.

In preparing the Master Plan, State Parks archaeology staff assisted in compiling previous studies and identified gaps in archaeological research. According to State Parks archaeology staff, most of the park has been the subject of systematic archaeological surveys beginning in the early 1970's when the park was first acquired and subsequent surveys have been conducted for various projects or initiatives. Only a few gaps remain. Extensive archaeological excavations were conducted within the coastal sand dunes and inland irrigated lo'i system. One house site was also excavated. More recent archaeological work augmented early efforts to document the area's most noted sites, particularly the heiau, Lohiau's house site, and the caves, and to portray their traditional and cultural significance. Most recently, archaeological testing was conducted in the vicinity of the comfort station prior to recent improvements to the individual waste water system. The traditional significance of the park as a whole, as well as that of individual features within or immediately adjacent to the park, can be drawn from published and unpublished materials and an overview of the park's recorded traditions commissioned by State Parks soon after the park was acquired. State Parks archaeological staff has concluded that when combined, existing information is sufficient to characterize the basic distribution pattern of archaeological sites and other historic property types in the park.

For the preparation of the master plan, State Parks' archaeology staff utilized these previous studies to develop an archaeological sensitivity map and help guide proposed development to areas which have been previously disturbed and away from known areas of sensitivity. Impacts to archaeological resources will further be avoided through archaeological testing and monitoring prior to all earth disturbing activities, regardless of location within the park. The master plan and the accompanying EIS are being prepared primarily as a planning tool and will address development projects only in concept. If any of the projects contemplated are eventually funded and designed, they would be subject to the historic preservation project review process at that time and to other applicable state and county review requirements.

SHPD LOG NO: 2008.3780; DOC NO: 0808NM48, PRE-CONSULTATION FOR THE PROPOSED HĀ'ENA STATE PARK MASTER PLAN AND ENVIRONMENTAL IMPACT STATEMENT, HĀ'ENA, KAUA'I, HAWAII

Page 2 of 2

Thank you for contributing to the development of this document. SHPD's comments will be included in the Environmental Impact Statement documents.

Sincerely,

PBR HAWAII

Catie Cullison, AICP  
Associate

cc: Lauren Tanaka, State Parks

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LINDA LINGLE  
GOVERNOR OF HAWAII



STATE OF HAWAII  
DEPARTMENT OF LAND AND NATURAL RESOURCES  
Office of Conservation and Coastal Lands

POST OFFICE BOX 621  
HONOLULU, HAWAII 96809

RECEIVED

SEP 16 2008

HAWAII

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LAND  
STATE PARKS

Correspondence: KA-09-28

SEP 15 2008

REF:OCCL:DH

Ms. Kimi Yuen  
PBR Hawaii  
ASB Tower 1001 Bishop Street, Suite 650  
Honolulu, Hawaii 96813

Dear Ms. Yuen:

SUBJECT: Request for Comments Regarding Proposed Haena State Park Master Plan and Environmental Impact Statement, Haena District, Island of Kauai, Subject Parcels TMK's: (4) 5-9-001:022, 5-9-008:001, and 5-9-001:025

The Department of Land and Natural Resources (DLNR), Office of Conservation and Coastal Lands (OCCL) is in receipt of your letter dated, August 11, 2008, for a request for comments regarding the proposed Haena State Park Master Plan and Environmental Impact Statement (EIS), Haena District, Island of Kauai, Subject Parcel TMK: (4) 5-9-001:022 and 5-9-008:001.

The OCCL notes subject parcels TMK's (4) 5-9-001:001 and 5-9-001:025 are located in the State Land Use (SLU) Conservation District, Resource subzone; subject parcel TMK: (4) 5-9-001:022 is located in the Conservation District, Resource and Protective subzones.

The OCCL notes Conservation District Use Application (CDUA) KA-1373 was approved by the Board of Land and Natural Resources (BLNR) on March 12, 1982 for the Division of State Parks (DSP). The OCCL is unsure at this time whether further CDUA actions are required until the Master Plan and EIS components are conceptualized. However, the OCCL notes you should contact the following community organizations: Hui Ho'omalu I Ka'aina (Maka'ala Ka'aoomona at [makaala@hawaiian.net](mailto:makaala@hawaiian.net)), Hui Maka'ainana o Makana (Jeff Chandler at [Lohiau2@hotmail.com](mailto:Lohiau2@hotmail.com), National Tropical Botanical Gardens Limahuli Garden and Preserve (Kawika Winter at [kwinter@ntbg.org](mailto:kwinter@ntbg.org)), and Community Conservation Network (Atta Chandler-Forest 808-826-6118), and the DLNR Haena Stewardship Management Group (Megan Juran at 808-635-1633) that may contribute comments to the Master Plan and EIS. Should you have any questions please call Dawn Hegger of the Office of Conservation and Coastal Lands at 808-587-0380.

Sincerely,

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

c: KDLO/County of Kauai Planning Department



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February 22, 2015

Samuel J. Lemmo  
Office of Conservation and Coastal Lands  
PO Box 621  
Honolulu, HI 96809

SUBJECT: PRE-CONSULTATION FOR THE PROPOSED HĀ'ENA STATE PARK MASTER PLAN AND ENVIRONMENTAL IMPACT STATEMENT, HĀ'ENA, KAUAI, HAWAII

Dear Mr. Lemmo,

Thank you for your letter dated September 15, 2008 regarding the above referenced pre-consultation request. As the planning consultant for the applicant, State of Hawai'i, Department of Land and Natural Resources, Division of State Parks, we acknowledge the comments from the Office of Conservation and Coastal Lands, indicating that the subject parcels, TMK (4) 5-9-009:001 & 5-9-001:025 are in the Conservation District, Resource subzone and that TMK (4) 5-9-001:022 is in the Resource and Protective subzones.

We further acknowledge that in 1982, a Conservation District Use Application was approved by the Board of Land and Natural Resources (CDUA KA-1373). We also acknowledge that at the time of pre-consultation for the master plan, the OCCL did not have enough information to determine whether further CDUA actions are required. To that end, your agency will be provided a copy of the Environmental Assessment and any subsequent Environmental Impact Statements for review and comment.

Finally, we acknowledge OCCL's referrals to persons representing local community organizations. The master planning process included sustained public outreach, including formation of a 32-member Master Plan Community Advisory Committee (MPAC). The individuals identified in your letter are either members of the MPAC or otherwise contributed to the development of the plan as State Park staff. Notes from the MPAC meetings as well as general community meetings will be included as an appendix to the environmental documents.

Thank you for contributing to the development of this document. Your comments will be included in the Environmental Impact Statement documents.

Sincerely,

PBR HAWAII

Catie Cullison, AICP  
Associate

cc: Lauren Tanaka, State Parks

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LINDA LINGLE  
GOVERNOR



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

September 4, 2008

BRENNON T. MORIOKA  
DIRECTOR

Deputy Directors  
MICHAEL D. FORMBY  
FRANCIS PAUL KEENO  
BRIAN H. SEKIGUCHI

IN REPLY REFER TO:

STP 8.2979

Ms. Kimi Mikami Yuen  
PBR Hawaii & Associates, Inc.  
1001 Bishop Street  
ASB Tower, Suite 650  
Honolulu, Hawaii 96813-3484

RECEIVED

SEP 12 2008

PBR HAWAII

Dear Ms. Yuen:

Subject: Haena State Park Master Plan  
Environmental Impact Statement – Early Consultation

Thank you for requesting the Department of Transportation's (DOT) review of the subject project.

DOT's initial comments are as follows:

1. The subject project will impact traffic on Kuhio Highway (Route 560) in the vicinity of the state park.
2. The DOT understands that a Master Plan (MP) and a Draft Environmental Impact Statement (DEIS) will be prepared for the subject project. The DEIS should include a traffic assessment or traffic impact analysis report (TIAR), which covers both project impacts and mitigation measures attributable to the project.
3. The DOT Highways Division is particularly concerned with parking within Haena State Park. The MP & DEIS should address this and other concerns including, but not limited to, increase in traffic resulting from bicyclists, hikers & campers, drainage and surface runoff, varying park hours, overnight camping, etc.

Ms. Kimi Mikami Yuen  
Page 2  
September 4, 2008

STP 8.2979

The DOT will provide additional comments upon receipt of the Master Plan and DEIS. DOT requests four (4) copies of these documents.

Very truly yours,

BRENNON T. MORIOKA, PH.D., P.E.  
Director of Transportation



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February 22, 2015

Ford Fuchigami, Director  
State Department of Transportation  
869 Punchbowl Street  
Honolulu, HI 96813-5097

**SUBJECT: PRE-CONSULTATION FOR THE PROPOSED HĀ'ENA STATE PARK MASTER PLAN AND ENVIRONMENTAL IMPACT STATEMENT, HĀ'ENA, KAUA'I, HAWAII**

Dear Director Fuchigami,

Thank you for your agency's letter dated September 4, 2008 regarding the above referenced pre-consultation request. As the planning consultant for the applicant, State of Hawai'i, Department of Land and Natural Resources, Division of State Parks, we acknowledge the comments from the Department of Transportation indicating that the project will impact traffic on Kūhiō Highway (Route 560) in the vicinity of the park. We also acknowledge DOT's concerns about parking inside the park itself. We further acknowledge that the DOT recommends a Traffic Impact Assessment Report (TIAR) addressing project impacts and mitigation measures; and that the master plan should address other impacts such as parking impacts and impacts from increases in bicyclists, hikers and campers as well as drainage and surface runoff, varying park hours, overnight campers, etc.

The master plan recognizes that there are serious traffic and parking issues inside and outside Hā'ena State Park. The park is accessed by Kūhiō Highway, a two lane roadway with gravel and asphalt concrete pavement shoulders. The highway enters into the park over Limahuli stream by a single lane bridge measuring 10-foot wide by 12-foot long. Once in the park, the highway resumes to two lanes, measuring approximately 24 feet in width. The highway within the park has no pedestrian or bicycle amenities and illegal parking on both sides of the highway forces pedestrians to compete with moving vehicles.

Within the park, there are two designated parking areas, one approximately 800 feet from the park entrance and one at the terminus of the highway near Kē'ē beach. The parking lot nearest the park entrance is dirt and gravel and measures approximately 30,000 square feet in area, it is unsigned and unstriped. Parking patterns are inefficient and haphazard. The parking area near Kē'ē beach is hard-packed dirt on each side of the highway. Two paved ADA accessible spaces are paved, striped and signed.

GLENN OKIMOTO

PRE-CONSULTATION FOR THE PROPOSED HĀ'ENA STATE PARK MASTER PLAN AND ENVIRONMENTAL IMPACT STATEMENT, HĀ'ENA, KAUA'I, HAWAII

Page 2 of 2

Because traffic and parking is of such great concern, a sub-committee of the Master Plan Community Advisory Committee was convened to look at various parking and traffic mitigation measures. The sub-committee meetings included attendance by DOT-Kaua'i Staff, County transit agency staff as well as the project's traffic engineer, Austin, Tsutsumi & Associates, Inc. (ATA). The outcome of the discussions with the community is a master plan that includes an alternative to establish a limit on the number of visitors to the park per day and/or institute a shuttle bus system to serve the majority of park visitors.

A Traffic Impact Analysis Report (TIAR) was prepared by ATA to help inform the master plan process and address mitigation measures. The TIAR includes vehicle counts, discussion of existing traffic operating conditions, parking conditions, projected traffic impacts for the proposed master plan and traffic/parking management options, including a shuttle. These issues along with the proposed mitigation measures will be discussed in the Environmental Impact Statement (EIS).

Thank you for contributing to the development of this document. Your comments will be included in the Environmental Impact Statement documents.

Sincerely,

PBR HAWAII

Catie Cullison, AICP  
Associate

cc: Lauren Tanaka, State Parks

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## Hawai'i Tourism Authority

Hawai'i Convention Center, 1801 Kalakaua Avenue, Honolulu, Hawai'i 96815  
Website: [www.hawaiitourismauthority.org](http://www.hawaiitourismauthority.org)

LINDA LINGLE  
Governor  
REX D. JOHNSON  
President and Chief Executive Officer  
Telephone: (808) 973-2255  
Fax: (808) 973-2253

September 2, 2008

RECEIVED

SEP 03 2008

PBR HAWAII

Ms. Kimi Mikami Yuen, LEED AP  
PBR Hawaii & Associates, Inc.  
1001 Bishop Street, ASB Tower, Suite 650  
Honolulu, HI 96813-3484

Dear Ms. Yuen:

Thank you for the opportunity to comment on the proposed Hā'ena State Park Master Plan and Environmental Impact Statement for Hā'ena, Kaua'i, Hawai'i.

As you may know, the "Hawai'i Tourism Strategic Plan: 2005-2015" (TSP) includes nine strategic initiatives identified as critical to working towards the vision for Hawai'i's visitor industry future. One of those initiatives relates to the need to "respect, enhance and perpetuate Hawai'i's natural resources to ensure a high level of satisfaction for residents and visitors."

In our efforts to support work in this area, the Hawai'i Tourism Authority (HTA) has provided funding to both the Hawai'i State Department of Land and Natural Resources, to mitigate immediate needs at Hā'ena State Park, and the County of Kaua'i, to address needs at the County Park at Hā'ena. Both of these parks were identified as priority sites in the Natural Resources Assessment conducted on behalf of the HTA in December 2003.

These resources are invaluable from multiple perspectives. They support Hawai'i's residents' quality of life, provide recreational opportunities for residents and visitors, and add to Hawai'i's allure as a visitor destination. From both a visitor perspective and, more importantly, from a "protect the resource" perspective, careful planning that "balances the needs of public usage of the park's recreation resources with the protection and preservation of the significant cultural, natural and scenic resources" is critical and in line with the TSP and HTA's current efforts.

If you have any questions, please do not hesitate to contact me or Muriel Anderson at 973-2269.

Sincerely,

Rex D. Johnson  
President and Chief Executive Officer



**PBR HAWAII**  
& ASSOCIATES, INC.

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February 22, 2015

Mr. Ronald Williams, CEO  
Hawai'i Tourism Authority  
Hawai'i Convention Center  
1801 Kalakaua Avenue, Floor 1  
Honolulu, HI 96815

**SUBJECT: PRE-CONSULTATION FOR THE PROPOSED HĀ'ENA STATE PARK MASTER PLAN AND ENVIRONMENTAL IMPACT STATEMENT, HĀ'ENA, KAUA'I, HAWAII**

Dear Mr. Williams,

Thank you for your agency's letter dated September 2, 2008 regarding the above referenced pre-consultation request. As the planning consultant for the applicant, State of Hawai'i, Department of Land and Natural Resources, Division of State Parks, we acknowledge the comments from HTA indicating that the Hawai'i Tourism Strategic Plan 2005-2015 includes an initiative to, "respect, enhance and perpetuate Hawai'i's natural resources to ensure a high level of satisfaction for residents and visitors". Additionally, we acknowledge that the HTA Natural Resources Assessment identified Hā'ena State Park as a priority site and that the HTA has provided funding to State Parks to address needs at the park.

Recognizing the importance of Hā'ena to Hawaiian history and culture along with the many known archaeological and ecological resources in the park, the Master Plan endeavors to elevate consideration for these resources in both site design and management actions. A copy of the proposed master plan will be provided to you with the environmental documents.

Thank you for contributing to the development of this document. Your comments will be included in the Environmental Impact Statement documents.

Sincerely,

PBR HAWAII

Catie Cullison, AICP  
Associate

cc: Lauren Tanaka, State Parks

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PHONE (808) 594-1888



FAX (808) 594-1865

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FOR HAWAII

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

HRD08/3774

August 28, 2008

Kimi Mikami Yuen  
PBR Hawaii Associates  
1001 Bishop Street  
ASB Tower, Suite 650  
Honolulu, HI 96813-3484

**RE: Pre-consultation request for the proposed Hā'ena State Park Master Plan and Environmental Assessment, Hā'ena, Kaua'i, TMKS: 5-9-01: por. 22 and 5-9-08:1.**

Aloha e Kimi Mikami Yuen,

The Office of Hawaiian Affairs (OHA) is in receipt of the above-mentioned letter dated August 11, 2008. The state Department of Land and Natural Resources Division of State Parks has commissioned the development of a master plan and environmental impact statement (EIS) for the 64-acre Hā'ena State Park. The new master plan will refine a previous plan for the area, and the EIS will balance public usage of the park with the protection of the area's cultural, natural and scenic resources. OHA has reviewed the project and offers the following comments.

OHA asks that the Ceded Lands status of all parcels affected by the project be clearly indicated in both the master plan and the EIS to assist the public review process of these documents. Ceded Lands hold a considerable amount of sentimental, historical and legal significance for Native Hawaiians and OHA. These lands were illegally taken from the Hawaiian Kingdom after the 1893 overthrow and later transferred ("ceded") by the United States government to the State of Hawai'i upon statehood. Today, the state holds the Ceded Lands corpus in trust for Native Hawaiians and the general public.

In accordance with Chapter 343 of the Hawaii Revised Statutes (HRS), the applicant must complete a Cultural Impact Assessment (CIA) for the project. The CIA shall include information relating to the practices and beliefs of the Native Hawaiians who once inhabited this area, and it is recommended that the community be involved in this assessment, in accordance with Act 50, Session Laws of Hawaii 2000.

Kimi Mikami Yuen  
August 27, 2008  
Page 2

In addition, OHA requests that a comprehensive archaeological inventory survey for the project area be conducted and submitted to the Department of Land and Natural Resources – Historic Preservation Division for review and approval. OHA should be allowed the opportunity to comment on the criteria assigned to any cultural or archaeological sites identified within the archaeological inventory survey. Consideration must also be afforded to any individuals accessing the project area for constitutionally protected traditional and customary purposes, in accordance with the Hawai'i State Constitution, Article XII, section 7.

Thank you for the opportunity to comment. If you have further questions, please contact Sterling Wong by phone at (808) 594-1816 or e-mail him at [sterlingw@oha.org](mailto:sterlingw@oha.org).

'O wau iho nō me ka 'oia 'i'o,

Clyde W. Nāmu'o  
Administrator

C: OHA Kaua'i CRC Office





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February 22, 2015

Dr. Kamana'opono Crabbe, CEO  
Office of Hawaiian Affairs  
560 N. Nimitz Highway, #200  
Honolulu, HI 96817

**SUBJECT: PRE-CONSULTATION FOR THE PROPOSED HĀ'ENA  
STATE PARK MASTER PLAN AND ENVIRONMENTAL  
IMPACT STATEMENT, HĀ'ENA, KAUA'I, HAWAII**

Dear Dr. Crabbe,

Thank you for your agency's letter dated August 28, 2008 regarding the above referenced pre-consultation request. As the planning consultant for the applicant, State of Hawai'i, Department of Land and Natural Resources, Division of State Parks, we acknowledge the comments from OHA, requesting that the Ceded Lands status of all parcels affected by the project be indicated on the plan and in the EIS; that a Cultural Impact Assessment be prepared and that an Archaeological Inventory Survey (AIS) be conducted and submitted to the State Historic Preservation Division (SHPD).

Recognizing the importance of Hā'ena to Hawaiian history and culture along with the many known archaeological and ecological resources in Hā'ena State park, the Master Plan endeavors to elevate consideration for these resources in both site design and management actions. In an effort to listen and expand understanding of Hā'ena's importance to the community, a 32-member Master Plan Community Advisory Committee (MPAC) was formed. This group has convened on several occasions to work together with State Parks in development of a plan that balances outdoor recreation with safety and respect for the park's many layered resources. We acknowledge with appreciation that the MPAC includes OHA representation. MPAC and general community meeting notes are included within the appendices of the Environmental Assessment.

As a result of the MPAC discussions, a key Master Plan recommendation is that a Cultural Advisory Group be formed and consulted on park management actions, construction projects as well as the park's interpretive programs. The enhanced oversight is expected to result in improved interpretation of the park's cultural, ecological and archaeological resources, and as a result, a visiting public that is more aware and sensitive to the importance and fragility of these resources.

With respect to ceded lands, to our knowledge the master plan area does not contain any ceded lands. Title research conducted for the master plan is summarized in the Environmental Assessment and its supporting Cultural Impact Assessment (CIA).

Kamana'opono Crabbe

**PRE-CONSULTATION FOR THE PROPOSED HĀ'ENA STATE PARK MASTER  
PLAN AND ENVIRONMENTAL IMPACT STATEMENT, HĀ'ENA, KAUA'I, HAWAII**  
Page 2 of 2

With regard to archaeological resources, State Parks relied on the many previous studies conducted throughout the park to help inform the master plan. State Parks' archaeology staff assisted in compiling previous studies and identified gaps in archaeological research. Additionally, State Parks' archaeology staff utilized these previous studies to develop an archaeological sensitivity map that helped to guide proposed new development activities to areas which have been previously disturbed and away from known areas of sensitivity. The master plan and its accompanying EIS are being prepared primarily as planning tools and will address development projects only in concept. If any of the projects contemplated are eventually funded and designed, they would be subject to the historic preservation project review process at that time and to other applicable state and county review requirements. Impacts to archaeological resources will further be avoided through archaeological testing and monitoring prior to all earth disturbing activities, regardless of location within the park.

Thank you for OHA's contributions to the Master Plan Community Advisory Committee and to the development of this document. Your comments will be included in the Environmental Impact Statement documents.

Sincerely,

PBR HAWAII

Catie Cullison, AICP  
Associate

cc: Lauren Tanaka, State Parks

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## United States Department of the Interior

FISH AND WILDLIFE SERVICE  
Pacific Islands Fish and Wildlife Office  
300 Ala Moana Boulevard, Room 3-122, Box 50088  
Honolulu, Hawaii 96850



In Reply Refer To:  
2008-TA-0305

AUG 29 2008

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PER HAWAII

Ms. Kimi Mikami Yuen  
PBR Hawaii & Associates, Inc.  
1001 Bishop Street  
ASB Tower, Suite 650  
Honolulu, Hawaii 96813-3484

Subject: Technical Assistance Regarding the Proposed Haena State Park Master Plan and  
Draft Environmental Impact Statement, Kauai, Hawaii

Dear Ms. Yuen:

Thank you for your letter, received August 12, 2008, providing the opportunity for input on the development of a master plan and draft Environmental Impact Statement for Haena State Park. You requested comments as to whether the development of a master plan could have an impact on any existing or proposed U.S. Fish and Wildlife Service (Service) projects, plans, policies or programs.

The Service contributed funding to the development and implementation of a Community Based Marine Management Area (CMMA) for the Haena region, including waters off of Haena State Park. The intent of the CMMA is to engage the local community in Haena in marine conservation practices and to assist them in planning, managing and monitoring a community-based marine managed area. Project goals include establishing the Marine Management Area with effective rules and active management and the establishment of effective monitoring approaches to track the progress of the CMMA. The boundaries of the marine area, which are established in State regulations, include the waters in front of the park. The proposed Master Plan for Haena State Park should be compatible with the goals and community involvement established by the CMMA. We recommend community members involved in the CMMA be involved in the development of the proposed Master Plan.

We searched our databases, including data compiled by the Hawaii Biodiversity and Mapping Program, in order to identify species in the proposed project area that are protected under the Endangered Species Act (ESA) of 1973 [16 U.S.C. 1531-1544], as amended. There is no designated critical habitat in project area. One endangered plant species (*Peucedanum sandwicense*) is reported from the area, and three bird species collectively referred to as seabirds, may fly over the area: the threatened Newell's shearwater (*Puffinus auricularis newelli*); the endangered Hawaiian petrel (*Pterodroma phaeopygia sandwichensis*); and a species of concern,



Ms. Kimi Mikami Yuen

2

the band-rumped storm petrel (*Oceanodroma castro*). Seabirds are attracted to artificial lights and they fly around the light source until they either collide with a tall object such as an adjacent building, light pole, wire, or fall to the ground from exhaustion. Once grounded, they are vulnerable to predators or often struck by vehicles along roadways.

To assist you in developing your project to minimize impacts to species listed under the ESA, we provide the following guidance. We recommend that surveys be conducted by a biologist familiar with Kauai's flora and fauna to document the presence of listed species in the proposed project area. To minimize impacts to listed seabirds, we recommend that all existing and additional lighting be downshielded and that motion detectors and timers be installed on all light fixtures.

The proposed Haena State Park Master Plan and EIS are programmatic in nature and are planning documents. If, as project planning progresses, you determine actions that may adversely impact federally listed species or critical habitats, please contact our office for further assistance. If you have questions regarding these comments, please contact Megan Laut, Fish and Wildlife Biologist, Consultation and Technical Assistance Program (phone: 808-792-9400, fax: 808-792-9581).

Sincerely,

Christa Russell

for

Patrick Leonard  
Field Supervisor



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February 22, 2015

Ms. Robyn Thorson, Regional Director  
USFWS, Pacific Islands Office  
300 Ala Moana Blvd. Room 3-122  
Box 50088  
Honolulu, HI 96850

**SUBJECT: USFWS FILE: 2008-TA-0305  
PRE-CONSULTATION FOR THE PROPOSED HĀ'ENA  
STATE PARK MASTER PLAN AND ENVIRONMENTAL  
IMPACT STATEMENT, HĀ'ENA, KAUA'I, HAWAII**

Dear Ms. Thorson,

Thank you for your agency's letter dated August 29, 2008 (2008-TA-0305) regarding the above referenced pre-consultation request. As the planning consultant for the applicant, State of Hawai'i, Department of Land and Natural Resources, Division of State Parks, we acknowledge the information pertaining to the Service's involvement with the Community-Based Marine Management Area (CMMA) (also referred to as the Hā'ena Community-Based Subsistence Fishery). We further acknowledge the recommendation that the master plan be compatible with the CMMA and that community members involved in the CMMA be involved in the development of the Master Plan.

In an effort to develop a plan that balances outdoor recreation with safety and respect for the park's ecological, cultural and archaeological resources, a 32-member Master Plan Community Advisory Committee (MPAC) was formed. This group includes individuals involved with the CMMA. The MPAC has convened on several occasions to work together with State Parks in development of a plan. MPAC and general community meeting notes will be included in Environmental Impact Statement documents. The MPAC members involved with the CMMA provided insights to the master plan physical layout and management recommendations so that the plan does not interfere with the goals of the CMMA.

We further acknowledge that in your agency's letter, one endangered plant species (*Peucedanum sandwicense*) is reported from the area and your agency recommends that a biological survey be conducted for the site. In preparation for the master plan, a flora and fauna survey was conducted by Geometrician Associates, LLC in 2009.

USFWS FILE: 2008-TA-0305

PRE-CONSULTATION FOR THE PROPOSED HĀ'ENA STATE PARK MASTER PLAN AND ENVIRONMENTAL IMPACT STATEMENT, HĀ'ENA, KAUA'I, HAWAII

Page 2 of 3

The survey included a physical survey of flora and fauna; a review of previous surveys of the area; report of the results describing plant communities and habitats; and, discussion of potential effects from increased recreation on wildland resources. The survey suggests that human disturbance for agriculture and habitation over the last centuries probably changed the vegetation within the park and that the present vegetation is a haphazard collection of natives, cultivated plants and a variety of alien plants. The biological survey report identifies eleven vegetation zones in the park and documents the zones in a map. The survey report also includes a table of plants identified in and near the park. *Peucedanum sandwicense* is not listed among those identified plants.

With regard to faunal resources, we acknowledge that seabirds, including the threatened Newell's shearwater, endangered Hawaiian petrel and a species of concern, the band-rumped storm petrel may fly over the site. Further, we acknowledge that seabirds are attracted to artificial lights, flying around the light source until they collide with objects or collapse from exhaustion, making them vulnerable to predators once on the ground. To avoid any impact to seabirds, the master plan does not include any parking lot lighting. Any security lighting that is deemed necessary at the park will be shielded downward to avoid any impacts to seabirds.

Thirteen species of birds were observed during the 2009 survey including the endangered Hawaiian Duck (Koloa Maoli, *Anas wyvilliana*), two indigenous shorebirds (Kolea, *Pluvialis fulva* and 'Ulili, *Heteroscelus incanous*) and an indigenous seabird (Koa'e Kea, *Phaethon lepturus dorotheae*). All other birds sighted were non-native introductions.

Additional species of seabirds, waterbirds, shorebirds and forest birds that are federally listed as endangered or threatened may use the park. The wetlands may also provide feeding and nesting areas to the indigenous Black-crowned Night-heron ('Auku'u; *Nycticorax nycticorax hoactli*). Other federally endangered waterbirds that would likely use the wetlands are the Black-necked Stilt (Ae'o; *Himantopus mexicanus knudseni*), Hawaiian Coot ('Alae ke'oke'o; *Fulica alae*), Hawaiian Moorhen ('Alae'ula; *Gallinulae chloropus sandwicensis*), and Nēnē (*Branta sandwicensis*). To avoid impacts to waterbirds no physical changes or new activities are proposed for the site's wetlands. However, there has been interest on the part of some community members to restore the wetlands (which are believed to be former Hawaiian fishponds or used for wet cultivation of taro) for ecological or cultural use. The master plan recommends that before any wetland restoration activities occur, that an analysis of the costs, benefits and liabilities associated with intentionally creating habitat for endangered waterbirds be conducted.

The biological survey also reports that although not sighted during the survey, the endangered Hawaiian hoary bat (*Lasiurus cinereus semotus*), probably utilizes Hā'ena State Park as it has been observed in the Hanalei and Princeville areas. To avoid any impacts to the endangered Hawaiian hoary bat, no large woody shrubs or trees over 15 feet in height will be removed during the bat pupping season. Our most recent discussions with Fish and Wildlife biologists have informed us that the breeding season is now considered to be June 1<sup>st</sup> through September 15<sup>th</sup>.

Finally, we acknowledge that when your agency's letter was written in 2008, it stated that there is no designated critical habitat in the area. We further acknowledge that in 2010, new Critical



USFWS FILE: 2008-TA-0305

PRE-CONSULTATION FOR THE PROPOSED HĀ'ENA STATE PARK MASTER PLAN AND ENVIRONMENTAL IMPACT STATEMENT, HĀ'ENA, KAUA'I, HAWAII

Page 3 of 3

Habitat ecosystems were designated for the Island of Kaua'i. A review of Geographic Information Systems (GIS) data found that no new Critical Habitats have been designated for the Master Plan area.

Thank you for contributing to the development of this document. Your comments will be included in the Environmental Impact Statement documents.

Sincerely,

PBR HAWAII



Catie Cullison, AICP  
Associate

cc: Lauren Tanaka, State Parks

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Bill "Kaipo" Asing  
Mayor



COUNTY OF KAUAI  
Fire Department  
Mo'ikeha Building  
4444 Rice Street, Suite 295  
Lihue, Kaua'i, Hawaii 96766

Robert F. Westerman  
Fire Chief

John T. Blalock  
Deputy Fire Chief

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August 25, 2008

Ms. Kimi Mikami Yuen  
LEED AP Associate  
PBR Hawai'i & Associates, INC.  
1001 Bishop St.  
ASB Tower, Suite 650  
Honolulu, HI 96813-3484

SUBJECT: Pre-Consultation for the Proposed Hā'ena State Park Master Plan and Environmental Impact Statement, Hā'ena, Kaua'i, Hawaii

Dear Ms. Yuen:

We received your letter dated August 11, 2008 with a requested response date of August 29, 2008, however due to inadequate information regarding the proposed project, we are unable to respond appropriately.

I have tasked Mr. Kalani Vierra, Water Safety Supervising Officer of the Kaua'i Fire Department's Ocean Safety Bureau to contact you for more detailed information regarding this matter.

The Kaua'i Fire Department has many concerns and interest in the area as we maintain ocean safety at Ke'e Beach and any project would have an impact on the County of Kaua'i.

Please contact Kalani Vierra at (808) 241-4984 should you have any questions or require additional information regarding this matter.

Sincerely,



Robert F. Westerman  
Fire Chief

RFW/eld

cc: Ms. Lauren Tanaka, DLNR Division of State Parks

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February 22, 2015

Chief Robert F. Westerman  
County of Kaua'i Fire Department  
3083 Akahi Street, Suite 101  
Līhu'e, HI 96766

**SUBJECT: PRE-CONSULTATION FOR THE PROPOSED HĀ'ENA STATE PARK MASTER PLAN AND ENVIRONMENTAL IMPACT STATEMENT, HĀ'ENA, KAUA'I, HAWAII**

Dear Chief Westerman,

Thank you for your letter dated August 25, 2008 regarding the above referenced pre-consultation request. As the planning consultant for the applicant, State of Hawai'i, Department of Land and Natural Resources, Division of State Parks, we acknowledge the comments from KFD, indicating that Water Safety Supervisor Kalani Vierra, was tasked with contacting us for more information. Since 2008, a new lifeguard tower was installed at Kē'ē Beach, and based on information received from Water Safety staff and the community, the Master Plan includes a recommendation to move the tower to afford lifeguards greater visibility of Kē'ē Lagoon. Other master plan recommendations that may assist water safety staff may include limiting the total number of visitors accessing the park each day and requiring all visitors to view an educational video discussing Hā'ena's many resources and associated hazards.

Thank you for contributing to the development of this document. Your comments will be included in the Environmental Impact Statement documents.

Sincerely,

PBR HAWAII

Catie Cullison, AICP  
Associate

cc: Lauren Tanaka, State Parks

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BILL "KAIPO" ASING  
MAYOR

GARY K. HEU  
ADMINISTRATIVE ASSISTANT



DONALD M. FUJIMOTO  
COUNTY ENGINEER  
TELEPHONE 241-4992

EDMOND P.K. RENAUD  
DEPUTY COUNTY ENGINEER  
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AN EQUAL OPPORTUNITY EMPLOYER  
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4444 RICE STREET  
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August 27, 2008

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PBR Hawaii & Associates, Inc.  
1001 Bishop Street  
ASB Towers, Suite 650  
Honolulu, HI 96813-3483  
**Attention: Ms. Kimi Yuen**

**SUBJECT: PRE-CONSULTATION FOR THE PROPOSED HA'ENA STATE PARK MASTER PLAN AND ENVIRONMENTAL IMPACT STATEMENT, HA'ENA, KAUA'I, HAWAII TMK: 5-9-001-022 & TMK: 5-8-008-001 PW 8.08.072**

Dear Ms. Kimi Yuen,

This is in response to your letter dated August 11, 2008 requesting our comments for the proposed State Park Master Plan and Environmental Impact Statements for the captioned properties. We wish to inform you that are comments are similar to those previously commented on April 1, 2008 in regards to the pre-consultation request to construct wetlands as an alternative secondary treatment facility for waste associated with the proposed park's comfort station. A copy of our letter is enclosed for your information and use.

We also recommend comments be solicited from our Parks and Recreation Department and from our Flood Plain Coordinator.

Thank you for this opportunity to provide our comments. We wish to remain on your mailing list in receiving a copy of the draft EIS. Should you have questions, please contact me at (808) 241-4981.

Very truly yours,

Wallace Kudo, P.E.  
Chief, Engineering Division

WK

attachment

cc: Parks and Recreation Department w/attachment  
Design and Permitting w/attachment  
Building Division w/attachment

CONCUR:

DONALD M. FUJIMOTO, P.E.  
County Engineer





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ADMINISTRATIVE ASSISTANT



DONALD M. FUJIMOTO  
COUNTY ENGINEER  
TELEPHONE 241-6600

EDMOND P.K. RENAUD  
DEPUTY COUNTY ENGINEER  
TELEPHONE 241-6600

AN EQUAL OPPORTUNITY EMPLOYER  
COUNTY OF KAUAI  
DEPARTMENT OF PUBLIC WORKS  
4444 RICE STREET  
MO'IKEHA BUILDING, SUITE 275  
LIHU'E, KAUAI, HAWAII 96766-1340

April 1, 2008

PBR Hawaii & Associates, Inc.  
1001 Bishop Street  
ASB Towers, Suite 650  
Honolulu, HI 96813-3483  
Attention: Mr. Vincent Shigekuni

RECEIVED  
SEP 05 2008  
Poh HAWAII

SUBJECT: PRECONSULTATION FOR THE DEPARTMENT OF LAND AND NATURAL  
RESOURCES HA'ENA STATE PARK COMFORT STATION  
CONSTRUCTED WETLANDS DRAFT ENVIRONMENTAL ASSESSMENT  
PW3.08.116

Gentlemen,

We reviewed the subject pre-consultation request to construct wetlands as an alternative secondary treatment facility for the waste water associated with the proposed park's comfort station. We offer the following comments:

1. Based on Panel no. 80 E of the FIRM (Federal Insurance Rate Maps) dated September 16, 2005, the subject property along the coastal reaches are susceptible to flooding from the Pacific Ocean. The flood zoning is a Zone VE, or Coastal High Hazard Area, or Tsunami Zone. The Coastal High Hazard Area is subject to high velocity waters, including but not limited to coastal and tidal inundation or tsunami. We recommend comments be solicited from our Flood Plain Coordinator for building within a flood zone.
2. Our Flood Plain Management Ordinance No. 831 prohibits filling for structural support and manmade alteration of sand dunes and mangrove stands are prohibited.
3. A grading permit can be exempted for the wetland constructions since the work will be within a self contained government controlled area. However, we expect the State to be responsible for implementing Best Management Practices (BMP's) at all times to the maximum extent practicable to prevent damage by sedimentation, erosion, or dust to streams, watercourses, and natural areas and the property of others and to monitoring the grading activities. The grading exemption does not exempt the sites receiving the excess wasted excavated material or the borrow site if the site requires embankment. A separate grading permit may be required for the disposal sites and/or borrow sites.

February 22, 2015

Larry Dill  
County of Kaua'i  
Department of Public Works  
4444 Rice Street  
Lihu'e, HI 96766-1340

SUBJECT: PRE-CONSULTATION FOR THE PROPOSED HA'ENA STATE PARK  
MASTER PLAN AND ENVIRONMENTAL IMPACT STATEMENT,  
HA'ENA, KAUAI, HAWAII

Dear Mr. Dill,

Thank you for your agency's letter dated August 27, 2008 regarding the above referenced pre-consultation request. As the planning consultant for the applicant, State of Hawaii'i, Department of Land and Natural Resources, Division of State Parks, we acknowledge the comments from Public Works which reference previous comments made for the Ha'ena State Park Comfort Station Constructed Wetlands Environmental Assessment Process, which relate to the floodplain, the County's Flood Plain Management Ordinance No. 831, grading permit exemptions and referral to the Army Corps.

The Environmental Impact Statement documents will include information relating to the location of flood hazard areas as well as previously documented wetland areas and the relationship between these resources and park elements proposed by the master plan. Further, we acknowledge that the Flood Plain Ordinance No. 831 prohibits filling for structural support and that in the Coastal High Hazard Zone (VE Zone), manmade alterations of sand dunes and mangrove stands are prohibited.

We further acknowledge that while grading permits may be exempted within a self-contained government controlled area, best management practices (bmps) for erosion control and sediment is expected. Additionally, we acknowledge that the grading exemption does not exempt off-site borrow or receiving sites from permits. With regard to Federal Permits, we have also consulted with the Army Corps of Engineers to assess and document their requirements.

Thank you for contributing to the development of this document. Your comments will be included in the Environmental Impact Statement documents.

Sincerely,

PBR HAWAII

C. Cullison

Catie Cullison, AICP  
Associate

cc: Lauren Tanaka, State Parks


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PBR Hawaii & Associates, Inc.  
April 1, 2008  
Page (2)

4. The Army Corp of Engineers should be contacted to identify whether a Federal Permit (including a Department of Army Permit) is required for this project. Pursuant to Section 401(a)(1) of the Federal Water Pollution Act (commonly known as the "Clean Water Act"), a Section 401 Water Quality Certification is required for "any applicant for Federal license or permit to conduct any activity including, but not limited to, the construction or operation of facilities, which may result in any discharge into the navigable waters..."

Thank you for this opportunity to provide our comments. We wish to remain on your mailing list in receiving a copy of the draft Environmental Assessment. Should you have any questions, please contact me at 808-241-6498.

Very truly yours,



Wallace Kudo, P.E.  
Chief, Engineering Division

wk  
cc:

Building Division  
Design and Permitting  
Construction Inspection

CONCUR:



DONALD M. FUJIMOTO, P.E.  
County Engineer



Water has no substitute.....Conserve it

RECEIVED

AUG 27 2008  
PBR HAWAII

August 22, 2008

Ms. Kimi Mikami Yuen  
PBR Hawaii & Associates, Inc.  
1001 Bishop Street  
ASB Tower, Suite 650  
Honolulu, HI 96813-3484

Dear Ms. Yuen:

Subject: Pre-Consultation for the Proposed Haena State Park Master Plan and Environmental Impact Statement TMK: 5-9-01:022 and TMK: 5-9-08:001, Kuhio Highway, Haena, Kaua'i, Hawaii

This is in regard to your letter dated August 11, 2008. The following are the Department of Water (DOW) comments to the proposed Haena State Park Master Plan and Environmental Impact Statement.

The proposed development has not been identified in your letter. The following are general comments of the DOW:

- Any actual subdivision or development of this area will be dependent on the adequacy of the source, storage, and transmission facilities existing at that time.
- The Department's water system ends near the Limahuli Stream along Kuhio Highway.
- Water service to TMK: 5-9-08:001 will be limited to the existing water meter serving the parcel until adequate water system facilities are available.

If you have any questions, please contact Mr. Keith Aoki at (808) 245-5418.

Sincerely,



Gregg Fujikawa  
Chief of Water Resource and Planning Division

KA:ml  
W5-9-08-001 yuen T-10225

APR 15 2008



September 15, 2011

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Keith Aoki  
Department of Water, County of Kaua'i  
PO Box 1706  
Lihue, Hawaii 96766

**SUBJECT: PRE-CONSULTATION FOR THE PROPOSED HĀ'ENA STATE PARK MASTER PLAN AND ENVIRONMENTAL IMPACT STATEMENT (TMK: 5-9-01:022 & 5-9-08:001), KŪHIŌ HIGHWAY, HĀ'ENA, KAUAI**

Dear Mr. Aoki,

This letter is a follow up to our earlier pre-consultation request and your department's response dated August 22, 2008 (enclosed). Over the course of the last three years, we have assisted State Parks and the community in developing a draft master plan for Hā'ena State Park.

At this time, we would like to update our pre-consultation request to the Department of Water, providing you with the enclosed plan for your evaluation and response.

Generally, we seek your updated input on the project and any comments as to whether the project may have an impact on your department's existing or proposed projects, plans, policies or programs and if there are any specific issues that should be addressed in the project's Environmental Impact Statement.

More specifically, it would be helpful for planning purposes to know the expected Department of Water requirements for the following:

- On- and off-site improvements to serve the proposed park facilities with potable water. New proposed facilities include:
  - Caretaker's cottage (Legend Item K)
  - Cultural and Education Center (Legend Item O)
  - Hale Wa'a (Legend Item U)
- Fire suppression requirements, including expected hydrant needs and expected water storage requirements, and whether opportunities for alternative fire water demand may be explored.

Mr. Keith Aoki

PRE-CONSULTATION FOR THE PROPOSED HĀ'ENA STATE PARK MASTER PLAN AND ENVIRONMENTAL IMPACT STATEMENT (TMK: 5-9-01:022 & 5-9-08:001), KŪHIŌ HIGHWAY, HĀ'ENA, KAUAI

9/15/2011

Page 2 of 2

Please send us any comments you may have by **October 16, 2011**. If you have any questions or require additional information, please feel free to contact me.

Sincerely,  
PBR HAWAII

Catie Cullison, AICP  
Project Manager/Planner

Cc: June Nakamura, Kennedy Jenks Engineers  
Lauren Tanaka, DLNR, Division of State Parks

Encl.

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Water has no substitute.....Conserve it

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AUG 27 2008  
PBR HAWAII

August 22, 2008

Ms. Kimi Mikami Yuen  
PBR Hawaii & Associates, Inc.  
1001 Bishop Street  
ASB Tower, Suite 650  
Honolulu, HI 96813-3484

Dear Ms. Yuen:

Subject: Pre-Consultation for the Proposed Haena State Park Master Plan and Environmental Impact Statement TMK: 5-9-01:022 and TMK: 5-9-08:001, Kuhio Highway, Haena, Kaua'i, Hawaii

This is in regard to your letter dated August 11, 2008. The following are the Department of Water (DOW) comments to the proposed Haena State Park Master Plan and Environmental Impact Statement.

The proposed development has not been identified in your letter. The following are general comments of the DOW:

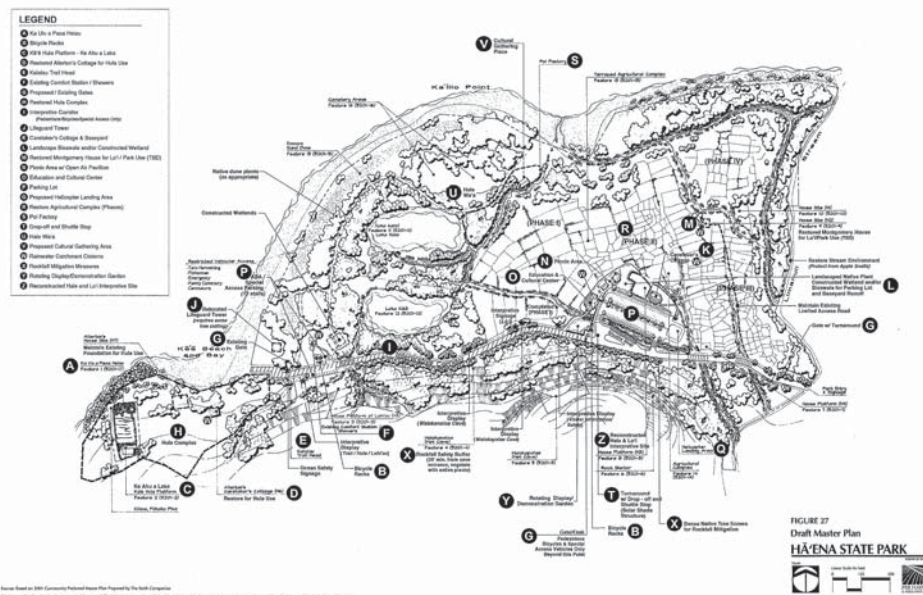
- Any actual subdivision or development of this area will be dependent on the adequacy of the source, storage, and transmission facilities existing at that time.
- The Department's water system ends near the Limahuli Stream along Kuhio Highway.
- Water service to TMK: 5-9-08:001 will be limited to the existing water meter serving the parcel until adequate water system facilities are available.

If you have any questions, please contact Mr. Keith Aoki at (808) 245-5418.

Sincerely,

Gregg Fujikawa  
Chief of Water Resource and Planning Division

KA:ml  
W5-9-08-001 yuen T-10225





Water has no substitute.....Conserve it

November 10, 2011

UID #5629

Ms. Catie Cullison, AICP  
PBR Hawaii & Associates, Inc.  
1001 Bishop Street, Suite 650  
Honolulu, HI 96813-3484

Dear Ms. Cullison:

Subject: Pre-consultation for the proposed Haena State park Master Plan and Environmental Impact Statement, TMK: 5-9-01:022 and TMK: 5-9-08:001, Kuhio Highway, Haena, Kauai

This is in regard to your letter dated September 15, 2011. The following are the Department of Water's (DOW) comments to the proposed Haena State Park Master Plan and Environmental Impact Statement:

- a) Any actual subdivision or development of this area will be dependent on the adequacy of the source, storage, and transmission facilities existing at that time. At the present time, the existing storage facilities are operating at capacity and the DOW is limiting water service to three 5/8-inch water meters or three single family dwellings per existing lot of record. The existing source facilities are nearing capacity. The Department's water system ends near the Limahuli Stream along Kuhio Highway. Adequacy of the existing transmission facilities will be dependent on the required domestic and fireflow demands of the proposed project (i.e. fire flow requirement may depend on the actual land use or zoning designation of the proposed development).
- b) Water service for TMK: 5-9-08:001 will be limited to the existing water meter serving the parcel until adequate water system facilities are available.
- c) Submit a formal request for water service for our review and approval. Include detailed water demand (both domestic and irrigation) calculations along with the proposed water meter size. Water demand calculations submitted by your engineer or architect should also include fixture count and water meter sizing worksheets. The Department's comments will be dependent on the approved water demand calculations.

It is recommended that request for water service, along with pertinent information, should be made to the Department, as soon as possible.

If you have any questions, please contact Mr. Edward Doi at (808) 245-5417.

Sincerely,

Gregg Fujikawa  
Chief of Water Resources and Planning Division

T-13559 Haena, Cullison/ED:100

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



PBR HAWAII  
& ASSOCIATES, INC.

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February 22, 2015

Gregg Fujikawa  
County of Kaua'i  
Department of Water  
PO Box 1706  
Lihue, HI 96766

SUBJECT: PRE-CONSULTATION FOR THE PROPOSED HÄ'ENA STATE PARK MASTER PLAN AND ENVIRONMENTAL IMPACT STATEMENT, HÄ'ENA, KAUA'I, HAWAII

Dear Mr. Fujikawa,

Thank you for your letters dated August 22, 2008 and November 10, 2011 regarding the above referenced pre-consultation request. As the planning consultant for the applicant, State of Hawai'i, Department of Land and Natural Resources, Division of State Parks, we acknowledge the comments from the Department of Water, indicating:

- a) Any actual subdivision or development of the area will be dependent on the adequacy of the source, storage, and transmission facilities existing at that time. At the present time, the existing storage facilities are operating at capacity and the DOW is limiting water service to three 5/8-inch water meters or three single family dwellings per existing lot of record. The existing source facilities are nearing capacity. The Department's water system ends near the Limahuli Stream along Kūhiō Highway. Adequacy of the existing transmission facilities will be dependent on the required domestic and fireflow demands of the proposed project (i.e. fire flow requirement may depend on the actual land use or zoning designation of the proposed development).
- b) Water service for TMK: 5-9-008:001 will be limited to the existing water meter serving the parcel until adequate water system facilities are available.
- c) Submit a formal request for water service for our review and approval. Include detailed water demand (both domestic and irrigation) calculations along with the proposed water meter size. Water demand calculations submitted by your engineer or architect should also include fixture count and water meter sizing worksheets. The Department's comments will be dependent on the approved water demand calculations.

We acknowledge that development will be dependent on the adequacy of water facilities and that until adequate water system facilities are available, development will be limited to the existing water meter.



Gregg Fujikawa  
PRE-CONSULTATION FOR THE PROPOSED HĀ'ENA STATE PARK MASTER PLAN AND  
ENVIRONMENTAL IMPACT STATEMENT, HĀ'ENA, KAUAI, HAWAII  
PAGE 2 OF 2

As detailed design progresses, State Parks will continue to interface with the Department of Water to determine adequacy of water facilities. Prior to construction, a formal request for water service will be submitted for your Department's review and approval.

Thank you for contributing to the development of this document. Your comments will be included in the Environmental Assessment and subsequent Environmental Impact Statement documents.

Sincerely,

PBR HAWAII



Catie Cullison, AICP  
Associate


cc: Lauren Tanaka, State Parks

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COUNTY OF KAUAI  
PLANNING DEPARTMENT  
4444 RICE STREET, SUITE A473  
LIHUE, KAUAI, HAWAII 96766-1326

RECEIVED  
SEP 17 2008  
PBR HAWAII

MEMORANDUM

**DATE:** September 9, 2008  
**TO:** Kimi Yuen, LEED AP  
**FROM:** Kauai Historic Preservation Review Commission   
**SUBJECT:** Pre-Consultation-Haena State Park Master Plan/Draft EIS,  
Department of Land & Natural Resources

---

The Kauai Historic Preservation Review Commission (KHPRC) met on September 4, 2008 to review your letter requesting input to be considered in the preparation of a draft Environmental Impact Statement and master plan for the Haena State Park.

The KHPRC deferred this matter until more information about the project could be made available to the members. Prior to their deferral, there was some general discussion which is reflected in the minutes attached.

We look forward to meeting with you on this important North Shore project in the near future.

Please feel free to call us should you require any further assistance regarding this matter.

Aloha.

Attach.

cc: SHPD- State

KAUAI COUNTY HISTORIC PRESERVATION REVIEW COMMISSION  
Lihue Civic Center, Moikeha Building, Meeting Room 2A/2B

MINUTES

A regular meeting of the Kaua'i County Historic Preservation Commission (KHPRC) was held on September 4, 2008 in the Lihue Civic Center, Moikeha Building, Meeting Room 2A/2B.

The following Commissioners were present: Dennis Alkire, Chairperson, Patsy Sheehan, Vice Chairperson, Alan Faye, Jr., Kehaulani Kekua, and Randy Wichman.

The following Commissioners were absent: Annette Manaday, Molly Summers and Dr. John Lydgate.

CALL TO ORDER

Chairperson Alkire called the meeting to order at 3:03 p.m.

APPROVAL OF THE AGENDA

The agenda was approved as circulated however the Commission began with Unfinished Business Matters first, then discussed Communications and Announcements & General Business Matters.

APPROVAL OF THE MINUTES

The July 3, 2008 and August 7, 2008 minutes were approved as circulated.

ANNOUNCEMENTS AND GENERAL BUSINESS MATTERS

COMMUNICATIONS

**Re: Letter (8/11/08) from Kimi Mikami Yuen, LEED AP, Associate, PBR Hawaii & Associates, Inc. requesting pre-consultation for the State of Hawaii Department of Land and Natural Resources Division of State Parks to prepare a master plan and environmental impact statement for the Haena State Park, Kauai.**

**Chair:** Lets go back Communications, the 3 letters that are attached to our packets. B.I. letter from Kimi Mikami Yuen, LEED, AP, Associate, PBR Hawaii on the master plan and EIS for the Haena State Park. Rick?

**Mr. Wichman:** Ricky the County has no kuleana at the very end of the road or where is the idea that Kaulaulapaoa and the heiau are within in County?

**Staff:** There is a portion that is County property.

**Mr. Wichman:** And those metes and bounds?

**Staff:** There should be. I don't know if it surveyed but I know the County does own a parcel.

**Mr. Wichman:** Within the precinct itself?

**Staff:** I think the project area.

**Mr. Wichman:** Ok so the County is a definite player in this master plan.

**Staff:** And I believe they have identified that in their project. So I don't know what arrangement currently exists between the County and the State or the curators or...

**Mr. Wichman:** And how is this, since we don't have the master plan itself and I don't know how I defer it from the later, the earlier master plans that's been over the 60s, 70s, 80s, 90s there have been master plans coming out left and right out of there right. How is this one different from the rest?

**Staff:** I really don't know so I was wondering whether, since Kimi could not make it today, whether it seems like they identified the main archeological or cultural resources whether you might want to just reserve comments pending the actual draft EA and just see where they are going with that and we can make comments at that time.

**Mr. Wichman:** There would be a couple things for me personally in making sure that the lohiau house site itself is a little bit further away then what its currently cars are coming up to. So those are a little bit of details to. Also should the actual heiau itself fall within County property I think we need to know exactly where in the footprint County falls in.

**Staff:** I believe those items will more clearly addressed in the draft EA.

**Mr. Wichman:** And also the historical preamble also as I am fully aware of many excavations and reports that came out especially through the bathroom building and renovations and moving numerous burials and things have come up as a result of it. So we have a good idea where that is so we need kind of a little bit of an overlay master plan look see before we can actually be helpful in this matter.

**Ms. Sheehan:** Do you read the second paragraph as if the County does in fact own all of it? It says contains the heiau and the... it sounds like its all in there. No?

**Chair:** There is an exhibit 1 that's attached to the letter that shows, indicates the County owning a small on the extreme left hand end.

Ms. Sheehan: It doesn't tell you what that is.

Chair: No it doesn't.

Mr. Wichman: It contains...

Ms. Kekua: It gives you an idea of where it is.

Chair: I think it's the heiau because the road ends and then it shows...

Mr. Faye: It says it includes the platform...

Ms. Sheehan: The verbiage is kind of misleading to me and this picture is even worst.

Staff: It looks like the County owns this piece.

Mr. Wichman: That's the heiau itself right. It's on County property.

Staff: Again there is some kind of informal agreement between the County and SHPD.

Mr. Wichman: I think part of our responsibility is to define the relationship of County within State parks in regards to the heiau. If we want to we can examine the history of it and to see if...

Ms. Sheehan: Why would they have it? Why would the County have it?

Mr. Wichman: Francis Li Brown had it prior to that it could have always been in the County inventory.

Mr. Faye: I thought Allerton had that house?

Mr. Wichman: Later on but it was Francis Li Brown who actually built it.

Mr. Faye: Is that the same property that Allerton, there was 2 houses there.

Mr. Wichman: Later on Allerton.

Mr. Faye: That's what I mean later. That's the one we are talking about the 2 houses right?

Ms. Sheehan: Yes. No, no I can't tell by the map but I guess I was under the impression that when it burned down those houses burned down it was because of the State profile not a County profile.

Mr. Wichman: My understanding County has really had no involvement with the actual decision making in regards to the activities over the last 20 years over there on the heiau grounds itself.

Ms. Sheehan: So this deadline, August 29<sup>th</sup>?

Chair: That's come and gone hasn't it?

Ms. Sheehan: Yes I know. So we are too late for it anyway.

Chair: Well Ricky says we're still waiting for a draft EA although in the letter they are talking about an EIS. So I am confused.

Staff: Well unless they made a decision to skip the EA and go into an EIS, a full EIS, which means they would be a draft EIS and the entire process with the draft EIS. So I am sure, I think this is at this point a preconsultation.

Chair: I agree that we can wait to see the draft document. There is not enough here to really comment on.

Mr. Wichman: Yes especially the locations of the parking lots. The proximity, well anyway we all know what the problems are out there but as soon as we have something concrete.

Staff: I will give Kimi a call and just review the timelines and see where the draft EIS.

Mr. Wichman: How about a motion to defer until next meeting and request that DLNR, well we are looking at these guys right here PBR as we see it as a preconsultation, we would like this preconsultation to occur as it is nonbinding to either party at this point. It's just information seeking. So motion to defer the preconsultation until next meeting.

Ms. Sheehan: Second. I mean I think that's enough to say but if there is any information that's going to be a lot if we could get it sooner. It would be good to get this packet a little earlier so we can read.

Mr. Faye: Mail it when you get it.

Ms. Sheehan: Yes if you get something you can mail it out cause the minutes alone take us a long to read.

Mr. Faye: Yes if you have a package next week.

Ms. Sheehan: If it turns out thick send it to us.

Ms. Kekua: Her letter is only dated on August 11<sup>th</sup> and I don't know the exactly situation her except in a previous conversation that I had with Kimi sometime ago and it was a very brief conversation, they are basically being contracted by the DLNR to complete work that got dropped by the ball, I mean the ball got dropped by a previous consultant. And so I think they are coming in on a clean slate and almost kind of starting over.

Chair: That could be a good thing.

Ms. Sheehan: She still doesn't give us much time.



Ms. Kekua: Right, right so I am not really sure.

Mr. Faye: She doesn't know when we meet either.

Mr. Wichman: I think to better understand the historic ramifications I am taking it that an informal agreement between State and County regards to the heiau means nothing is in writing.

Staff: I would think so.

Mr. Wichman: Ok but just to double check to make sure that that discussion in order to understand the perimeters of the County during that particular time of the agreement. If we can take a look on the inside that would help us, that would help us ensure should the County's historic objective with this particular piece of land are met.

Staff: Just a question if in fact there is a lot of times we deal with this and if we are able to get information by the next meeting is it ok if we, if it's not ready by the next meeting can we bring it back by the first earliest meeting we can get the consultants to come and whatever materials...

Mr. Wichman: Do you want me to amend the motion to reflect that?


Staff: As long as it's ok with you guys.

Mr. Wichman: Ok.

Chair: I believe there is a motion on the floor we have a second, motion to defer. All those in favor? (Unanimous.) Ok motion carries.

COUNTY OF KAUAI  
PLANNING DEPARTMENT  
4444 RICE STREET, SUITE A473  
LIHUE, KAUAI, HAWAII 96766-1326

## MEMORANDUM

**DATE:** October 22, 2008  
**TO:** PBR Hawaii & Associates, Inc.  
Attn. Kimi Yuen, LEED AP, Associate  
**FROM:** Kauai Historic Preservation Review Commission   
**SUBJECT:** Pre-Consultation-Haena State Park Master Plan/Draft EIS,  
Department of Land & Natural Resources

Thank you for attending the Kauai Historic Preservation Review Commission's October 2, 2008 meeting. Your presentation regarding the project background, scope and status was very informative.

It is the KHPRC's understanding that input is being solicited at this time to identify issues and concerns to be considered in the preparation of a draft Environmental Impact Statement and master plan for the Haena State Park. As such, there will be ample future opportunity over the next two years to review and comment on the project as these documents are refined during this informational/developmental stage. The following are some of the areas of interest were raised by the KHPRC: consider nominating the complex to the National/State Register, relationship of trails with respect to cultural resources and practices, fishing zones, interpretive program, maintenance and management/overlapping jurisdictions, mapping and buffers of specific resource preserves within the overall complex preserve. An excerpt of the KHPRC's meeting minutes is attached and provides a more comprehensive and detailed record of the discussions on this matter.

We look forward to meeting with you again as more information and details become available on the master plan for this important North Shore cultural and recreational resource.

Please feel free to call us should you require any further assistance regarding this matter.

Aloha.

Attach.

cc: SHPD- State

DRAFT

KAUAI COUNTY HISTORIC PRESERVATION REVIEW COMMISSION  
Lihue Civic Center, Moikeha Building, Meeting Room 2A/2B

MINUTES

A regular meeting of the Kaua'i County Historic Preservation Commission (KHPRC) was held on October 2, 2008 in the Lihue Civic Center, Moikeha Building, Meeting Room 2A/2B.

The following Commissioners were present: Dennis Alkire, Chairperson, Patsy Sheehan, Vice Chairperson, Alan Faye, Jr., Dr. John Lydgate, Annette Manaday, Molly Summers and Randy Wichman.

The following Commissioner was absent: Kehaulani Kekua.

CALL TO ORDER

Chairperson Alkire called the meeting to order at 3:06 p.m.

APPROVAL OF THE AGENDA

The agenda was approved as circulated.

APPROVAL OF THE MINUTES

The September 4, 2008 minutes were approved as amended as follows:

Page 5, paragraph 3, delete Li and I'i.

ANNOUNCEMENTS AND GENERAL BUSINESS MATTERS

There were no new Announcements and General Business Matters.

COMMUNICATIONS

There were no new Communications.

October 2, 2008 K.H.P.R.C. Meeting Minutes  
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UNFINISHED BUSINESS

**Re: Serikawa Hotel (Hanapepe Hotel, LLC)**

Chair: We have a letter from the architect for Serikawa hotel.

Mr. Faye: That was nice. He wrote a nice letter.

Staff: Mr. Wilson is here today.

Mr. Faye: Are you the architect?

Mr. Juan Wilson: Yes I am.

Chair: Juan Wilson welcome to the Historic Preservation Review Commission.

Mr. Wilson: Well do you want me to speak to it?

Chair: Please.

Mr. Wilson: Ok. I really don't have a contest really with the recommendations that your commission has made. The only issue that seemed concern to me was the pitch of the lanai roof. The original roof was shown as 3 and 2/3 to 12 and reducing it to 3 to 12 which should be recommended for that type of the roof would bring it close to where you are looking down to the hip but it's still on the lower foot of that hip and I have a drawing I could show you what that might look like.

If it gets showers in that I am a little bit worried about 2 things one is recommended pitch with that kind of construction and secondly there are 2 plumbing vents that are right at the break that would occur where these 2 vents would meet it would be a difficult detail to keep waterproof with the flashing. So we stay a little bit above that point and having the plumbing vents clearly one side of the break in the roof would be helpful. Getting below that break would cause problems for that roof. I think the profile continuing in the back of the building is not visible from the street. I think if we have it would be acceptable, I hope, to the commission. I have got some drawings

Chair: Can you remind us again what the material is for the lanai roof?

Mr. Wilson: The original building had an unusual roofing material which was metal shingles and over the years many of them have rusted away on the back side of the building. The front of the building still has metal shingles on it. The back of the building has gone through a couple of repairs over time and now has relatively and well conditioned corrugated roof. We were going



to match that. In other words the new roof that was going to be on the back of the building to the lanai would butt into the existing corrugated roof. It would be in the same material.

Chair: And the roof on the front of the building is still the metal shingles and so is the 2 hips on the sides.

Dr. Lydgate: Was there an issue?

Mr. Wilson: Excuse me let me just add that the owner tried very exhaustibly to find the manufacturer for metal shingles and was not able to find one. It's kind of like tin roofs are not readily available. So anyway I have got a couple of drawings here that show and I think it also addresses the other points French doors, picket fence, all the points that are in your.

Chair: If you would like to pass them around.

Staff: Chair is it alright if we just post it up here?

Chair: That would be good actually. Let's give it an eyeball and see.

Mr. Wilson: This is what was originally shown. This is 3 – 12. We are putting French doors in here instead of sliders. There is a correction up here. There was a stair that came off that shed roof here and this is showing the picket fence (inaudible).

Dr. Lydgate: What is a French door?

Mr. Wichman: Double door.

Mr. Wilson: They are actually sliding French doors they look like French doors but they actually slide. These would be swinging wood doors so all the doors where wood doors.

Ms. Sheehan: (Inaudible) that you can't find that metal shingle.

Mr. Wilson: (Inaudible).

Ms. Sheehan: I was just wondering how old it was.

Mr. Wilson: I think it was probably the 30s.

Ms. Sheehan: I was just curious as to how it got all the way over here. Maybe they should make it again.

Mr. Wilson: It almost looks like its stainless steel, but it almost looks like.

Chair: We have the owner here. Donna would you like to say a few words about your beautiful building?

Ms. Donna Holevoet: Yes it is beautiful and (inaudible) we absolutely love the building and we love Hanapepe. We are trying to be really good citizens of the town and to maybe, fortunately, for the building we don't have a large amount of money so we are not about to come in and change it too dramatically. You know we have had it since about 2001. We just slowly worked on it and do a little modifications to it.

Ms. Sheehan: You have done a great job.

Dr. Lydgate: (Inaudible).

Ms. Holevoet: I really think you could tear that building down and try to rebuild it and it would never look quite the same.

Chair: That is certainly true. You are both to be commended for your efforts toward the preservation of that important building.

Mr. Wichman: Do we need to finish with the motion.

Chair: We should in response to the letter that Juan wrote.

Mr. Faye: Well basically the motion would be that we acknowledge all of your changes we have recommended that you have come back and said to us that these are ok. The only question is that the roof pitch, did we have a motion on that? Did we say something about the roof pitch?

Chair: We did.

Mr. Wilson: You said you wanted to bring as shallow as it was practical to try and meet the hips on the sides. It's about a foot higher and it's around the back of the building.

Mr. Faye: As far as the motion is concerned that we should agree with that.

Chair: I think you just made the motion.

Ms. Manaday: Second.

Chair: We are happy to see the changes. They are consistent with our recommendations. We thank you for listening and for responding in a positive way. It's very gratifying to see that. We understand the technical issues with the shed roof over the new lanai and 3 and 12 is acceptable. We are not going to push that issue of cause additional problems that might occur with going below the minimum recommended pitch for that materials, therefore everything we see looks great.

Mr. Faye: Looks very nice. Thanks for the letter.

Chair: Thank you both for coming. Good job. We should finish the motion though.

Mr. Faye: It was seconded. You just didn't call for the vote.

Chair: All in favor of the motion? (Unanimous voice vote.) Any opposed? (None.) Motion is carried unanimously.

**Re: Letter (8/11/08) from Kimi Mikami Yuen, LEED AP, Associate, PBR Hawaii & Associates, Inc. requesting pre-consultation for the State of Hawaii Department of Land and Natural Resources Division of State Parks to prepare a master plan and environmental impact statement for the Haena State Park, Kauai.**

Chair: Hello Kimi Yuen, AP, Associate, PBR. Tell us all about Haena State Park master plan.

Ms. Kimi: Ok thank you, all of you, for having me here to talk about the project and I apologize I wasn't able to make your earlier meeting last month but Ricky and Shan called and said just come out so I am here basically to give you an overview of where we are at. That letter we sent you was a pre consultation letter and I apologize with the due date because for the most typical agency we want a quick turn around on any concerns they may have with our potential project. But I understand for an organization like you that it will take more time than that and so disregard that due that obviously since its way past anyway.

What we are doing out there is that the State Parks contracted us to finish up the master plan and do an EIS for the state park and it doesn't include the trail. It just goes up to the trail heads and then the State property right by Kee lagoon and then all the way back I think there is, I don't know how familiar some of you are, but there is taro loi and also along the state highway. So what I have with me is back in the mid to late '90s there was an original effort to do a master plan for the state park and I think I was reading in the minutes that, yes she was saying that there was a previous effort and so this, what I have today, is the result of that effort. It was a community preferred master plan that never got formally accepted and approved.

Mr. Wichman: It was 90% done.

Ms. Yuen: 90% done.

Mr. Wichman: And the woman was hapai and then it ended right?

Ms. Yuen: Yes I don't know the whole story but somewhere the ball got dropped and so what we are doing is finishing that up so that the State can actually move ahead with improvements and whatever needs to get done at the park and obviously a lot of people that go there. There is a lot of concerns with traffic you know public safety in terms of rock fall issues because of heavy rains.

There is a lot of different issues that have come up and another big concern that State Park has voiced to us and we fully agree is that this previous effort maybe didn't consider cultural historic issues as much as it should have and so that is going to be a big part of it and I welcome your comments that pre-consult letter is basically something to invite you to the process.

There is a small County parcel where the heiau and the hula mound is and so we realize that I don't and we don't know what the County and SHPD and Start Parks is. So that is 1 element if it is under Ricky's or whatever that...

Mr. Wichman: We can discuss 3 different options or 4 that the County may want to consider with it.

Ms. Yuen: Yes so whatever that is you know you don't have to make any decisions now this is just the initial introduction of the project to you folks to get you involved very early in the process to see where the County may want to stand on that kind of maintenance issues of that site. It is a County parcel and you know what let me, is it ok Ricky if I just kind of talk, basically what we have suggested to the State in terms of a process is that we don't start from scratch because we have been talking with a lot of community folks there is a lot of energy and effort and a lot of actually some agreement that came out and generated this plan. It's just a matter of fine tuning it incorporating the cultural and historic aspects into the plan and from my perspective to me the plan should be driven by those things actually.

To me this park is more than just something at the end of the road. It's not something where tourist just drive just to drive. There is so much more there that really needs to be recognized in the master plan and those things need to drive all the proposed improvements or proposed use of the park. There is a lot of issues and history behind it but at the same time I think if we take that perspective that history and culture should be at the forefront and what drives the master plan I think we will come up with a plan that you know everybody will be happy with. To me it's an opportunity to do something really amazing. If it's a partnership with the County, State, you know the tourist industry because of how popular this site is. People just go to go because it's the end of the road and you know to me it's so much more than that and to make a real statement about the cultural/history of the place would be fantastic and what I think should be driving the master plan.

Like I said we are still very early in this process but we do intend to have public meetings in some form or fashion. We are still talking with the community about what is most effective because we already have this community preferred plan and there is a lot of things that already have been implied to us that maybe not be good things in this plan so don't look at this like this is set in stone in any way but we welcome your thoughts. This is very early like is said there is no necessarily time line for your comments you know how involved you want to be throughout the process. We estimate you know it's going to be 2 years because we are going the full EIS route so the master plan we want to make sure we get enough public input that we get all the background studies done.



We have several consultants on board on this contract including geologist, rock fall specialist, cultural specialist, marine, we have flora fauna wild lands specialist, we have traffic consultant so this is a full blown effort. We want to make sure we do this right. We get everything involved and you know just basically finish up the master plan, the EIS so the State can really take care of this place.

Mr. Faye: Is that helicopter pad for just emergency?

Mr. Wichman: Yes.

Mr. Yuen: Yes.

Mr. Wichman: That's moving out or that's up for negotiation to another place to have an actual heli drop and also with other things having to do with the parking which is not necessarily under our provision to actually tell you about but there are parking issues and the (inaudible).

Mr. Wichman: If you want I will start.

Chair: Please.

Mr. Wichman: We will take the first issue that you brought up which is the fact that the heiau itself is on County property. Our understanding is that no memorandum of agreement has been made between the County and DLNR over it. That's option one, a MOU and then an MOA right with the County that would be option number 1. Number 2 would be the trade. The County can trade that with the State. Say for example something next to Kaneouluma if that is something that's on that could be considered there is a trade. So therefore the lands will come under pure State Parks jurisdiction because it's already State parks around it except of the heiau. C, the County could retain the heiau portion and that should anything be to arise culturally that needs to be settled down would be within the Commission to deal with the other particular issues. So those are 3 ways of looking at it. I know it depends on what the County wants to do and it wants to deal with it. So it would add some sort of idea which way they would want to go.

Dr. Lydgate: Who manages it best? State or County?

Mr. Wichman: Neither.

Dr. Lydgate: Surely it's been a State DLNR thing.

Mr. Wichman: But there are been some exceptions there has been some mismanagement issues in Haena over the last 10 plus years, serious ones. So it all depends on the long term philosophy of the County.

Dr. Lydgate: Do have input?

Ms. Yuen: You mean in terms of the...

Dr. Lydgate: What you would like in this plan have you been talking with the County people?

Ms. Yuen: You know I have spoken actually, I think when I was trying to figure out who was managing or what the agreement was I did end up speaking with Mel Nishihara at Parks and think that is technically where it had fallen once at one time. Even then it was a little loose, you know what I mean nobody really claimed responsibility of it per say and I think it just ended up falling under SHPD as kind of a default and State Parks but there is actually I mean it's a very active site. I mean there are people I mean halau and all that going there very frequently. So it's just been this understanding of a community that's been out there to help make those things happen. So a lot of it like Mr. Wichman has said it is what it is. People realize it, they respect it. They still, it is an important site so they take care of it on their own but there isn't any format.

Mr. Wichman: As far the title to the piece of property now if the State wants to make it into 1 piece then they need to negotiate with the County and they may want to consider a trade cause they own some of the lands boarding the complex on the south side. But then it could be anything or if not you know I am just throwing that out there.

The second one is to preserves within preserves within preserves by isolating the real sensitive areas. The first one a pretty good size circle needs to be drawn around the Lohiau house site. That's right there on the road you have got cars coming down and people are not aware of what is going on with that nor it's significance and then we will deal with interpretive later on cause it's all part of it. So the Lohiau house site because of it's proximity to the parking and the road itself has to have a pretty good sized buffer and special attention to that site, the stabilization and then maybe not very little restoration if any on that.

The second one is the burial grounds which clearly came up when they built the bathrooms. It's sitting right on top of it right? Several so you have this, this is all house site. The hale and burial my guess is it continues further out however we know within this and then here is the other the one right there around Lohiau's house site. There have been issues over and over the years but because of the Haena community they stopped the actual bulldozing of the house sites and stuff like that. The bulldozers were right there but then as we identify those particular areas another one was the development of the particular Taylor camp beach area.

We know that here along Limahuli stream it's also, Bishop Museum has pulled canoes out of there so the Bishop Museum contains quite a bit of artifacts that were actually pulled out of this sector. The locals I think are going to have to worry about it. The taro loi right there is under Hui Makaainanaomakana and over the years they are doing a better and better job and that intends to expand further out. But the idea was the development, the pathways through the parking lots that lead to this beach and around however I think most of the area is to be concentrated but because the parking lot is so far very few people actually make the walk right, or willing to make that walk. So there is still some larger issues about getting the ADA stuff close to the end. There is all kinds of alternatives parking right there by the Makas and Mahuikis but that all becomes you know seriously problematic.

There is also the element of the fishing stones over there it's actually an area that has developed out of the Haena Wainiha fisherman now have. It could be a preserve also within the marine sanctuary within the reefs right? There are 5 different overlaps of government right? Cause isn't it the ocean itself is what department? And then the near shore reefs is another department, the beach itself a department. So there is and County is in the middle of this so the idea was to consolidate that all into one particular so the permitting process in the long run is going to be a lot easier in order to do this historical overlay right. As you incorporate that into one, there is a term for it. Chipper knows what it is cause we talked about it a couple of weeks ago. So I think the idea of facilitating the different branches of government who has all the various jurisdictions here at the end of the road.

Ms. Yuen: Yes I know that DLNR within themselves have been coordinating with all the different branches.

Mr. Wichman: You can bring it all down together into one comprehensive decision maker and I think in the long term of the historic preservation will be a lot better if it was under one. And then the interpretive are coming I know my father is working on giving you a chronology or timeline of all the various interpretive parts of it. So for us that's a no brainer but it's really where all the people are going to be expansion on the parking lots. The trails as they move through certain areas as they get close but not through em. So there is as we get down to the actual foot print we can walk the trails itself right. As long as it doesn't go over a wall we can walk the trail itself right? As long as it doesn't go through a wall we can go around it you know as you actually put the footprint of that and then the additional bathrooms too but you still have quite a bit of a...

Chair: Have you developed other drawings beyond this?

Ms. Yuen: No like I said we are still really early. We are still having our consultants do their baseline study at this point. We are still having our consultants do their base line studies at this point. We are just taking off. So any kind of formulation of what all that means is going to be several months out.

Ms. Sheehan: I have to go back to square one because I don't even know, how big of a piece is this?

Ms. Yuen: It's about 64 acres.

Ms. Sheehan: 64 acres and then when this community was so that those things that is on this map are where it's going or as is?

Ms. Yuen: No, no this is the community preferred master plan. So this isn't an existing site plan.

Ms. Sheehan: The cemeteries are where they are.

Ms. Yuen: Some of the elements are definitely there.

Mr. Wichman: Yes the parking and the element and the helipad is there already. Maybe not as big as this but actually the footprint is still there for this parking lot.

Ms. Yuen: Yes the parking lot is pretty close to what is there now. They had recently expanded it.

Ms. Sheehan: So most of the descriptions or places are actually what exists it may not be developed like the cemetery that's there and identified. So like the poi factory is that an identified something?

Mr. Wichman: The platform the poi factory is still there. We have good 1920 photos of the poi factory.

Ms. Sheehan: So most everything on here is not what you are putting on the land it's what there. I just needed to know the difference between where you are, where the plan is and what exists. So this is pretty much what exists.

Ms. Yuen: It's pretty close to what exists. But things like the picnic area they have out on the coast is you know restricted vehicular access that's been gated off.

Ms. Sheehan: Yes I just couldn't tell the difference between what you have found like it says terraced agricultural complex that's been discovered that is there.

Ms. Yuen: Yes.

Ms. Sheehan: Ok so this is what you have discovered as cultural things on this. Ok so right now the plan is not to disturb. I mean if you take the road and you take where the bathrooms are now and where you take the footpath is I mean it's not disturbing what you have, what exists.

Ms. Yuen: If you look by the larger parking lot there is that caretaker's cottage that is not, visitors center you know those kinds of...

Mr. Faye: You got a whole lot of footpaths and things like that. You have these little rows of trees are those supposed to be footpaths too? That dotted line that says bike lane.

Ms. Yuen: Yes so those if you can see there is this restricted vehicular access that may have been there at one time but that's necessarily something that we may keep you know. Yes this one I was talking about this. So that...

Mr. Faye: So all of this is going to be new right?

Ms. Yuen: That goes proposed in this plan.

Mr. Faye: That's part of the plan and then new vegetation along this.



Ms. Yuen: That was part of this plan.

Mr. Faye: Is that still a part of this plan?

Ms. Yuen: No that is why I am saying this is where they ended in 1999. We are starting from here seeing like maybe that path does not make sense so...

Mr. Faye: This is a draft I take it?

Ms. Yuen: Yes this was the community proposal that came out of that Keith Company's effort in the late 90s right.

Ms. Sheehan: But in this plan you have, I don't know you where satisfied or you know that all the cultural things that you need to know about have been identified.

Mr. Wichman: No.

Ms. Yuen: Not necessarily.

Ms. Sheehan: Ok.

Mr. Wichman: You are which I think part of the recommendations was to continue the mapping. You already have really good mapping of the Huimakaaianana area. I don't think you have a really good map of the Lohiau area or the subsequent post holes that they have found during excavations.

Ms. Yuen: The archeologist within State Parks is supposed to be helping us do that.

Mr. Wichman: Yes so better mapping of the Lohiau complex area especially. You don't have to worry about the heiau because Kekahuna did that in 1953. No need we already have a really good map. The other one too is that it is under an archeological preserve all the complexes. It is my understanding is not on the State or National Registry.

Ms. Yuen: There is and we are trying to track that down, there is some kind of Haena...

Mr. Wichman: It is an archeological preserve but I am not sure whether it's at, cause all the sites have been grouped but whether its actually on the registry which is another one which might be a recommendation coming out of here is that you actually place the entire Haena archeological complex on the State and Federal Registry.

Ms. Yuen: You know there were and I didn't bring my list but there where 3 potential sites or places that were either on the State or historic. One is the highway the belt road and there was a listing for archeological complex and that is what I am trying to figure out exactly. That is we are trying to get the nomination paper to see what that involved. And then there was a third

which escapes me at this point in time. So we are trying to track those down definitely to make sure we take care of that and if it does then expand it or add it. Something we will look at yes.

Chair: What is the schedule for the draft EIS?

Ms. Yuen: The draft EIS is going to come at the tail end. We are hoping the master plan we can get through pretty good version for public comment and we are kind of overlapping so that feedback from the EIS process can get invoked before we finalized the plan. So we are hoping master plan you know mid to late '09 and then the EIS would be in 2010 and then the finalized by the mid.

Mr. Wichman: Yes there are other parts of this plan that will not be handled by us. The concession issue for the end of the road is not us. The toll booth issue is not us right just like Kokee they wanted a toll booth Haena right there as you get across Limahuli Stream right there. That's also right up there on the radar.

Ms. Sheehan: So what is your time table to do all the mapping? Do you even have a timeline that says you are going to go back and take this, what you know now and do more cultural studies for 9 months or do you have a timeline?

Ms. Yuen: It's all kind of rolling in together. We had a preliminary deadline for all the background research to be done by mid next year so hopefully at that point we are generating a cleaned up master plan.

Mr. Wichman: It's a tentative time line. You guys are down the road already. (Inaudible) has actually taken over that particular portion of the plan. Laura Thielen when she was down there a couple of months ago with you right?

Ms. Yuen: I think right around the time that we did a site visit yes.

Mr. Wichman: And so what has happen because Laura Thielen has placed this number 1 on the plan. To get things done so she is pushing it personally and watching it personally. So my guess is Laura is not going to let this thing sit around and percolate like it has before she needs to see it done. And her particular perspective is the way all of the different science and disciplines come together here at the end of the road. Multidisciplinary so you have culture, fishing and many different levels going on here. I know DLNR especially Laura Thielen wants to see this; she has a personal stake in it now.

Ms. Sheehan: I am just asking that you would maybe come back in front of us with a lot of information in the middle of next year.

Ms. Yuen: Sure exactly. We will be happy to see a presentation of the next iteration of the master plan.

Mr. Wichman: We can do a tentative recommendation right now and then that would help you.



Ms. Yuen: Yes anything, either way.

Mr. Wichman: Yes cause we are still here on the pre-consultation right? Nothing is official right now so this is pre-consultation.

Ms. Sheehan: Do you have to make a statement with a pre-consultation?

Staff: I am wondering if a copy of this meeting will be satisfactory for you or if you wanted to make a motion.

Ms. Yuen: Either way. What ever you are comfortable with submitting to us.

Mr. Wichman: There are certain no brainers at this particular point you know but there will be positions taken up and there are still... and it helps to for example if we make the motion the first would be that you would enter in with the County with some sort of discussion in regards to an MOU to and MOA in regards to those lands. So that I give you the marching orders to make the appointment with the County and the State. You will have to find out where the State really wants to go on that. The sooner we end up with a little bit more clear idea of how that piece of property is going to be handled in the State and the County.

So whether you need that or not I doubt it, you know you could probably start that already without motions anyways. The other motions would be that for now the preserves within the preserves would be the Lohiau house sites and the known burial areas are treated extra special for now within the plans. And that the sites, especially the Lohiau complex has a good map done now and a report generated as to its condition.

Dr. Lydgate: Didn't you mention the bathrooms being on a site?

Mr. Wichman: Yes it's over burials and over house sites. It's actually over...

Ms. Yuen: There is a separate CIP project and I think there is an agreement between the County and State...

Mr. Wichman: Let's not touch the bathroom yet we will get to that the next time we see you. Right now they know we know.

Ms. Yuen: It would be, basically there is an existing comfort station and they are basically updating that and there was an agreement with the community and the State to do some mediation and try not to impact those as much as they can. So that's where they are at right now.

Mr. Wichman: And then in the mean time the Commission would also want you to continue investigating the State and National Registry just exactly how it is listed. It's kind of shocking that I haven't been able to find it and put my hands on it right away right? Haena not on the State and National Registry, where is it? So we need to settle down with that one. Just exactly

how the status of it over it now and just whether it has all the State and Federal protection measures for it to go on the registry is a standard operation procedures. Its part of it right? It's going to help the site that it is a National Historic Landmark or a district. It's already preserved but those we can discuss at a further and then we would be, we can help you with the actual nomination process if you need it. If it was on the registry we would have known about it already. But there is something different in the arrangement that they have out there.

Dr. Lydgate: Tell us what the word Haena means.

Mr. Wichman: Haena. It's actually Ha is the breath and ena – hot. The other one is Kee means that it's a very twisty, windy road but the end result is far worth the effort. That's what Kee means so Kokee same thing right. Anybody else, for now I think that will help you and it kind of lays out the County position to it at a specific point.

Dr. Lydgate: I am horrified that Parks and Recs (inaudible).

Ms. Yuen: No don't get Mel, there is a deeper story and so I just (inaudible).

Mr. Wichman: There is the County park right there in Kee also. That's County right there in front of the dry cave. That's a County park.

Ms. Yuen: Yes don't give Mel a hard time. He told me some stories about what was going on and it was hard for them. They tried. It's just one of those things that got a little bigger you know what I mean.

Mr. Wichman: Since this land was confiscated by the...

Ms. Yuen: Yes so I think part of what is going to come out of this plan is a bit of a management. You understand that they are going to be things driving this that will hopefully help the State to better manage.

Mr. Wichman: And you have room for different volunteer groups that could develop in there not just Huimakaaainana cause you have the whole maritime aspect of a group that has plenty room in there. You also have marine biology.

Ms. Yuen: Yes there is a fishery going on. There is a lot going on to help coordinate all that energy and get it focused in the right direction.

Mr. Wichman: I don't think you need a motion.

Ms. Sheehan: You have got a lot.

Chair: It's all in the minutes. Thank you very much for coming.

Mr. Wichman: This is a 1940s photo you have probably seen it.

Ms. Yuen: I haven't.

Mr. Wichman: That's just a zerox but the photograph is absolutely clear.

Ms. Yuen: That was one thing that shocked me to when we saw historic photos of the site it was such an open kind of space.

Mr. Wichman: These taro complexes are intense.

Ms. Yuen: It's such a different landscape. Thank you.

**Re: Letter (8/25/08) from Jim Niermann, AICP, Senior Planner – addendum to the Draft Environmental Assessment (EA) for proposed Nawiliwili – Ahukini Shared-Use Path Project, County of Kauai Job No. CMAQ-0700(57), TMK: (4)(por)3-2plats: 02, 03, 04, 06, 07; 3-3-03:3-5-plats 01, 02; 3-6-plats 02, 08; 3-7-02, Lihue District, County of Kauai, Hawaii.**

Chair: Welcome to the KHPRC.

Mr. Doug Haigh: I am Doug Haigh with the Department of Public Works. I am here to present and provide information cause Ricky told me to be here. We have just published the draft environmental assessment for the Nawiliwili to Ahukini bike and pedestrian path. We have submitted cultural survey and our archeological report to the State Historic Preservation Division and right now analyzing all of our responses from the various agencies and concerned people. So I guess what I would like to do is kind of give you an overview of what the project is and then maybe point out a couple of historic properties/issues that we have identified that may be near or may possibly be affecting. So if Randy wants to relinquish (laughter in the background).

Ok we have been to you folks before on the Ahukini to Lydgate project so this project is the last phase that we are working on but actually we have not come to you on the Kuna Bay to Anahola project because our first meeting in Anahola scared us. It's been 2 years and we are so scared but we will return to Anahola and hopefully after the election we will get underway. But any how we're here and the key of this phase is to go from Nawiliwili to Ahukini to make the final connection for the project going from Nawiliwili to Anahola.

I will start from the Ahukini side just because that's kind of easier for me and it (inaudible) of this parcel here which is primarily privately owned but I just got formal notice that the developer is doing the environmental assessment adding density in this area and they are planning on giving this land to the County. So we already have an easement for fishing access but it's in the process that this entire parcel, some of this is State parcels but the major portion of this land is private and is in the process of being donated to the County.

Our goal is to have a coastal path here. In our community meetings we have had 2 community meetings. There was mixed feelings about being along the coast but our feeling is to go along the coast. There are some historic properties (inaudible) a wall in this area in Ninini Point that could have been part of the heiau. We may be near that but clearly we would not touch it. We will potentially do an inventory survey in this area. I am trying to have a meeting with SHPD. My feeling is its not necessary because of the type of improvements we are doing we are not doing much disturbance and really its when we put our path in that we have an archeologist on board in the sensitive areas. But if SHPD feels that it is important for us to do a survey we move toward a survey.

So you come around Ninini Point and then there is a pedestrian path that the developer is doing that we will tie into for pedestrian that will actually go around the coast here and come up to the elevator and then you can get down and go along Kalapaki. But the bike/pedestrian path will come from here and use existing easements to get up to Kapule Highway. The developer for these projects is putting in a traffic signal so that (inaudible). Our goal is to make a connection to the Civic Center and the community of Lihue so that we can both provide recreational access to the community and provide work access for people in the community working at the resort area. We are working closely with the resort were area looking at a path so how we get up to the community we haven't finalized. Kaana Street right now we have developed Kaana Street up to the Police Station shared building. We are not sure we are meeting with Grove Farm to try to see if it's realistic to do a share use path or maybe there is a shared use path. So we need to make that connection preferably at Wilcox Elementary School will be a destination where you want to have a safe pedestrian access.

There really no historical issues in that. The developer is providing us a way to come down into their property in this manner. This is the limo road the carriage road and then coming around getting down to Kalapaki/Nawiliwili. In Nawiliwili there is the historic bridge crossing Nawiliwili Stream is the first historic property that we will affect if we go over the bridge. Of course we will be working to restore the historic character and will certainly come back here with designs for that.

And then when we come into Nawiliwili Park and that's the end of the major path. The major path is coming along like this and then coming back to coastal connection. This is a spur going into Lihue. We are also looking at a spur to go from Nawiliwili Park all the way to Niumalu Park and part of that is to provide a connection to the harbor and connection to the park. There is a historic bridge I believe its right here, an historic one way bridge that it would be part of. I can assure you that we will not be tearing down that bridge as part of this project. We are looking at a shared use road so basically we are going to just put signs on the road from the Harbor toward Niumalu Park so minor improvements for the bike/pedestrian path. So that's pretty much a quick summary of the project we are looking at.

Dr. Lydgate: Question is the airport Federal, State or County?

Mr. Haigh: The airport is State owned and the comments we got back from the airport, really their only concern is they have a navigation aide somewhere over here and we have to be at least



300 feet away from it. We are looking at a potential comfort station at Ninini Point and that we have to be sensitive of the navigational. There is a historic light house I am sorry I should have mentioned that of course the archeological they don't acknowledge that as being historical. That's funny you know it's not mentioned on their maps, wait, wait, 11-100 actually they are referring to the stone wall over there. They didn't even pick up the light house. Our goal of course would be to provide informational signage that would tell the story of the light house cause we are looking at that as being the trail head area because there is vehicular access easily access to that point. So we will be looking at some parking in the light house area and the comfort station.

Dr. Lydgate: How big is the comfort station?

Mr. Haigh: It would be a small one probably similar to the one at the Lihī Park or Kealia Kai. Just a small one, it's you know people use these things. There is a function and along these trails it's good to have places periodically where people can you know. We have had some comment from the public or at least one comment where they weren't happy with the idea of doing any kind of improvement.

Mr. Wichman: Sierra Club right?

Mr. Haigh: Yes and of all of these certainly is to try to treat it in a manner that is not a, in fact I even talked to consultant that might be an area we could do partially underground. I don't know how much elevation we have there but we are going to try to look at a creative way of doing a comfort station without having to have an impact.

Mr. Wichman: You have a leach field system that goes in right there.

Mr. Haigh: Yes we would have to put in a septic tank system.

Mr. Faye: Is this a, you know last time you showed some down town shared paths is that part of this whole plan?

Mr. Haigh: Ok we have, we are looking at a lot of options. Basically we were looking at one spur that gets to down town. And we were looking at going down Kaana Street as the primary. That's the primary one we are looking at but we need to meet with Grove Farm, Planning Department, go over Grove Farm's future plans in that area cause they are moving quite rapidly for developing that area and make sure we are putting that into the right place. And the key is to provide safe access use so that you will let your 10 year old 8 year old children ride their bike down to the light house to the beach and if you are coming to Lihue Town how can we create a path that's going to allow parents to feel that degree of comfort.

Chair: The new light you are referring to would be the light at the intersection of the road with no name by Vidiniha Stadium?

Mr. Haigh: Yes.

Chair: Why doesn't that road have a name?

Mr. Haigh: Because it's actually a driveway at this point I suppose. It's a stadium driveway.

Ms. Sheehan: Can I ask when you start at Ahukini if you wanted to sort of drive there and start are you, I can't see that far, is it where the road already goes to Ahukini and then you park your car and get on your bike and do that?

Mr. Haigh: Yes in the previous phase Ahukini to Lydgate we discuss the development of a trail head there at Ahukini Point. We work closely with State Parks and so we need to provide a comfort station and striping of the parking lot.

Ms. Sheehan: Is there anything historic about Ahukini?

Mr. Wichman: Oh yes.

Ms. Sheehan: So is that trail head there?

Mr. Wichman: Where the trail head is right now is where the existing gate is now right?

Mr. Haigh: Well the plan is for the trail head would be at Ahukini Park by the piers because there is already a big parking lot area there and it is a popular fishing area and the historic Ahukini Pier is there and so we are working closely with State Parks because that's their facility and we would build a comfort station there. They were concerns about impacts to traffic so our agreement was we'd stripe that parking lot so that you know you could delineate where the parking is and make sure you get adequate parking cause something I hear it gets very popular during certain fishing times.

Mr. Wichman: If you want I will go through some. This we have all the blue prints from the development of Ahukini and all its World War II function. Right here is the old camp, the Hanamaulu Mill Camp so you have one of the old camps and then we still have people who are researching it right there. As you go along here there really isn't all that much to worry about because my guess they are following the old footprint of the road, the cane road that is still there right? You are still drive it right?

Mr. Haigh: We are looking at pushing closer to the coast.

Mr. Wichman: How much off the road?

Mr. Haigh: We are trying to get as close to the coast as we can and still be outside of the shoreline setback.

Mr. Wichman: Yes there is some engineering problems but let's not get into that.

Mr. Haigh: Yea but see we didn't want to because we are leaving the road separately for safety reasons for fisherman access and so we don't want to interfere with that and we also don't want to have a joint use because then you would have vehicles in.

Mr. Wichman: (Inaudible) your path through here.

Mr. Haigh: I mean that's part of when we get farther along with the actual design. That's where that map was an earlier one and it doesn't show the actual roof.

Mr. Wichman: They may not be there, you will see the certain rock alignments but then we need to get some other people to take a hard look at that. There are some things but nothing really heavy so far as we know till you get here. Need to know exactly where the footprint of the comfort stations is going to be in relationship to the light house and the Ninini Heiau. I would need to see that, the footprint.

Mr. Haigh: We are actually going to need the guidance to help. I mean that is part of the design requirements to make sure that we are sensitive to the existing.

Mr. Wichman: It's compounded by you having to stay away 300 feet from that particular, that I need to see. I think that will compound it. It forces you into a specific area. But Ninini I am suspecting that the heiau is still underneath the construction cause actually when you look at it and we have all the photographs when you are ready I can bring them over to you. The whole sequence of the lighthouse but that retaining wall was built and then it was filled in for the upper main platform that the lighthouse is sitting on. The road area was also filled in because it was undulating on that side. Chances are part of the heiau is still underneath the road, portions of it could be underneath the road itself.

So there could be and we will walk it out and I will show you why and then you look at it and you make up your own mind. I haven't been able to, those walls that are going off of course I have looked at them really carefully for the last 6 months I have been out there a dozens times already but also within the photographs they don't show up so they are very late historic. Go figure that one and I will show you that through the sequence of photographs cause it took me a long time to figure out the walls are this tall right?

Mr. Haigh: So then it's probably, they probably weren't part of the heiau then?

Mr. Wichman: No however it was also part of Hanamaulu off loading certain things like they did in Kilauea off the rail so there is a period also that they may have off loaded certain things early, early plantation activity. As you get into the Coast Guard Station and the lighthouse that in its own way is quite historic as its own particular bid right there so it's exactly where you are going to be putting the comfort station is going to make all the difference in the world and before I go any further I need to see the exact footprint.

Mr. Haigh: And I can tell you we don't have one at this point.

Mr. Wichman: Yes but we would love to be able to go out there with you and spend, I don't think it will take you more than a half an hour or forty five minutes to get the gist of the way and then from then on you can now probably maneuver around those things right?

Mr. Haigh: What I will probably do is when our planning consultants are back on I will try to see if I can get in touch with you and see if we can set some kind of...

Mr. Wichman: Yes like I said it won't take long cause then after that after you have seen the photographs and the actual physical then you guys will make up your minds.

Ms. Sheehan: Are you constrained by having a comfort station every 5 or 6 miles?

Mr. Haigh: There is no set standard for how often you are supposed to have a comfort station.

Ms. Sheehan: So if you moved it around the corner or something...

Mr. Haigh: Yes there is actually a comfort station being put in by the developer on the other side of you know where Sharkys used to be on the other side over there. But it's really not conveniently located for the path cause that's not part of the bicycle path.

Ms. Sheehan: What's the mileage from the Ahukini start to the lighthouse?

Mr. Haigh: It's, I am not sure I would have to, there is a scale. Yes ok it's almost 2 miles then. And that's a, it would be very beneficial if we could get a comfort station somewhere in that area.

Mr. Wichman: I think so. If you could arrange it because you can develop that area into something that special but it will have everything to do with the exact footprint you choose. Not too close, not too far away and then it all depends on where you, the County property is right? Cause where you want to locate it may not be on County land. So I am not sure, we have to walk that.

Mr. Haigh: Yes unfortunately I don't think we are going to, with these neighboring landowners we have good relationships with all of them so it should be, if it becomes such that we need to acquire a little bit off of one of the lands and its feasible then that would not be a big stumbling block I don't think.

Mr. Wichman: The lighthouse is a beautiful area to hang out.

Mr. Faye: What's the schedule on the funding?

Mr. Haigh: The schedule we don't, right now we are completely in this environmental assessment. We hope to publish the final EA in January or end of this year early next year. Right now this phase is not on the statewide transportation improvement plan. It's too far out in the future. Our goal is to get the planning done so as the developer does things in this area we



can get them to you know at least make sure they allow room for us and prefer to have them do a lot of the improvements as part of their development. So it's really hard to say. Now federal funding right now especially federal highway funding is fairly questionable. So it's hard to know what's going to be happening in the future.

Mr. Wichman: So also this plan is actually encompassing 6 ahupuaa. I don't know if you are aware of that.

Mr. Haigh: In just this little area?

Mr. Wichman: Yes it's the most concentrated portion on Kauai where we have as many as 6 coming down. You have the Hanamaulu line that is coming through here right there. Then you have the Kalapaki and then you have Nawiliwili, then you have Haiku and then you have Niumalu, then you have Kipu. So there is actually, this encompasses 6 ahupuaa your plan. So we'll get to that later being able to divide it up. Also this whole sector right here as we look into the really, really old aerial photographs to see what was there as early as we can get no big flags come up in that sector. So that is why we are not even at this particular point there is no particular need to go there right? There is any big flags like you have at Ninini. I think at this particular point the camp and the Ninini but even the camp you know most of that is buried under rubbish anyways or dirt.

Mr. Haigh: Yes we also have an old dump that we are looking at going by and we are going to try to work with the State and hopefully by the time we are ready to go they will have already restored the dump, stabilized it so we can go over it rather than have to go around it.

Mr. Wichman: Hanamaulu is the most polluted bay in the nation supposedly.

Mr. Faye: It doesn't look polluted looks nice and crispy.

Mr. Haigh: I love to go snorkeling. It's gorgeous when the winds are light.

Staff: Randy didn't we have the Harbor Master's House site on the Ahukini side?

Mr. Wichman: Yes that's the one we reviewed and got moved over to Kealia right?

Staff: And I thin an archeological survey was done for Ninini Point or portions of it in one of the earlier Marriott or Westin.

Mr. Haigh: There have been a lot of surveys done in this area in the report and that's why the reason I am question a need to do another one. So we will be meeting with SHPD and going over that.

Dr. Lydgate: (Inaudible).

Mr. Haigh: Well it's the Kauai Lagoon owners. I am not sure, my guess it would be about 60 acres.

Mr. Faye: So they are going to build on the Mokihana Golf Course.

Mr. Haigh: They have got I believe 3 different sites within their development that are getting added density based on, cause what they are doing they are getting 22 building site density, 22 unit density by dedicating this land to the County of Kauai. That's what they are proposing.

Mr. Wichman: The other one too is the light house probably eligible for the State and National Registry so that's another consideration but that is something that you can work with the Commission to do.

Mr. Haigh: There is an opportunity too for any restoration work or appropriate work for the light house. Funds that we are using for the project are also used for lighthouse work. So we could if there was a group that was interested in doing some enhancements in preserving it or if there is stuff that needs to be done it could possibly be incorporated.

Mr. Wichman: And then there is also a vegetation plan you got going but I think you can review that later after we see the footprint or as you have developed your landscaping plan right?

Mr. Haigh: I mean right now would probably be minimal landscaping improvements cause if anything it would be when we finally get into design maybe around the light house but it's such a harsh environment you know so I wouldn't want to try to create that hotel resort environment there.

Ms. Sheehan: So actually the path is how wide?

Mr. Haigh: In that area probably about 10 to 12 feet wide.

Ms. Sheehan: And it's paved?

Mr. Haigh: It's paved.

Mr. Wichman: Yes cemented. Usually they go down to about 10 inches.

Mr. Haigh: 6 inches of concrete.

Mr. Wichman: So they are actually digging in 10 inches to 12 inches I think.

Mr. Haigh: Well we don't necessarily in a lot of places we just do the 6 inches so in fact I am trying to think any place I can't think of any part of the path where we put base course to actually build below the concrete cause the concrete is 6 inches thick so it's pretty self sustainable.



Mr. Wichman: Chances are they are really no burial issues along here not like they were in Wailua.

Mr. Haigh: Yes it's not a sandy area.

Chair: Thank you Doug.

Mr. Faye: I hope you get the money.

Mr. Wichman: Get Anahola done.

Mr. Haigh: My goal is in my career at least get from Lydgate Park to Kuna Bay.

Mr. Wichman: Talk to Kane, just go right to him.

Mr. Haigh: We'll be there, I mean Anahola I think is we have made a lot of we let Department of Hawaiian Homes Land do a lot of ground work for us so I think there is a solution there that we will find.

Chair: Thank you for coming by.

Mr. Faye: Very good.

#### NEW BUSINESS

There were no New Business matters.

#### SELECTION OF NEXT MEETING DATE AND AGENDA TOPICS

The next KHPRC Meeting is scheduled on November 6, 2008.

#### ADJOURNMENT

The meeting was adjourned at 4:27 p.m.

Respectfully Submitted,

Shanlee U. Jimenez  
Secretary

Date: \_\_\_\_\_



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February 22, 2015

Kaua'i Historic Preservation Review Commission  
c/o County of Kaua'i Planning Department  
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#### SUBJECT: PRE-CONSULTATION FOR THE PROPOSED HĀ ENA STATE PARK MASTER PLAN AND ENVIRONMENTAL IMPACT STATEMENT, HĀ ENA, KAUA I, HAWAII

Dear Chair & Commission Members,

Thank you for your letter dated September 9, 2008 responding to our request for pre-consultation comments and your letter dated October 22, 2008 following discussion of the above referenced project at your October 2, 2008 meeting.

As the planning consultant for the applicant, State of Hawai'i, Department of Land and Natural Resources, Division of State Parks, we acknowledge the comments from the Commission. We acknowledge your comments that areas of interest discussed at the Commission's October 2, 2008 meeting include: *"consider nominating the complex to the National/State Register, relationship of trails with respect to cultural resources and practices, fishing zones, interpretive program, maintenance and management/overlapping jurisdictions, mapping and buffers of specific resource preserves within the overall complex preserve"*.

The master plan addresses these areas of interest. Recognizing the importance of Hā'ena to Hawaiian history and culture along with the many known archaeological and ecological resources in Hā'ena State park, the Master Plan endeavors to elevate consideration for the Park's cultural and ecological resources in both site design and management recommendations.

In an effort to listen and expand understanding of Hā'ena's importance to the community, a 32-member Master Plan Community Advisory Committee (MPAC) was formed. This group has convened on several occasions to work together with State Parks in development of a plan that balances outdoor recreation with safety and respect for the park's many layered resources.

With respect to your comment regarding the National and State Registers of Historic Places, we note that the Hā'ena Archaeological Complex is on the National and State Registers of Historic Places (Site # 50-30-02-1600). We also note that Kūhiō Highway, within and adjacent to the park, is also listed in the National Register (Site #30-02-9346). The State Historic Preservation Department has been consulted as part of the Master Planning and environmental documentation process.

Kaua'i Historic Preservation Review Commission

PRE-CONSULTATION FOR THE PROPOSED HĀ'ENA STATE PARK MASTER PLAN AND  
ENVIRONMENTAL IMPACT STATEMENT, HĀ'ENA, KAUA'I, HAWAII  
PAGE 2 OF 3

With respect to trails and their proximity to cultural resources and practices, the Master Plan documents existing trails within the park, while recommending that the majority of park visitors utilize Kūhiō Highway to access the Park's outdoor recreational activities. Within the Park, the Master Plan limits vehicle access on Kūhiō Highway and anticipates that the road will serve as an Interpretive Corridor, accommodating most park visitors on foot. Trails through the restored lo'i are recommended to serve operations functions for restoration and maintenance of the agricultural complex. Trails leading to the Ka Ulu a Paoa heiau and Ke Ahu a Laka hula platform are recommended to remain in place for use by cultural practitioners.

With respect to an interpretive plan, a key Master Plan recommendation is that a Cultural Advisory Group be formed and consulted on park management actions, construction projects as well as the park's interpretive programs. The enhanced oversight is expected to result in improved interpretation of the park's cultural, ecological and archaeological resources, and as a result, a visiting public that is more aware and sensitive to the importance and fragility of these resources.

The Master Plan also identifies several alternatives for management of the Park's resources, including a variety of cooperative arrangements between the State and community groups. Please note that the Master Plan's physical improvements and management recommendations seek to provide the visiting public with greater understanding of the Park's resources, without restricting any areas within the park as a preserve. Limiting access to culturally sensitive areas was discussed at length at MPAC meetings, however, excluding classes of individuals from areas within the Park may potentially create a conflict with commitments that the State made when it accepted federal monies for the development of the park through the National Park administered Land and Water Conservation Fund (LWCF). Thus, the Master Plan includes development of an Education and Cultural Center (ECC) near the park entry which all visitors must pass through. The accompanying management recommendation is to require visitors to view a video that informs guests of the many sensitive resources within the Park. Visitors are then directed toward outdoor recreation areas such as Kē'ē Beach and the Kalalau trailhead via an Interpretive Corridor. Throughout the park, interpretive signage is proposed to educate visitors to their surroundings and advise on appropriate behavior. Specific details relating to interpretive content are recommended to be developed in consultation with the Cultural Advisory Group formed for the Park.

The Master Plan defers management of fishery resources to the Hā'ena Community-Based Subsistence Fishery, which has been an on-going community effort. The Master Plan anticipates special access parking for fishermen/women within the existing parking area at Kē'ē.

Thank you for contributing to the development of this document. Your comments will be included in the Environmental Impact Statement documents.

Sincerely,

PBR HAWAII

Kaua'i Historic Preservation Review Commission  
PRE-CONSULTATION FOR THE PROPOSED HĀ'ENA STATE PARK MASTER PLAN AND  
ENVIRONMENTAL IMPACT STATEMENT, HĀ'ENA, KAUA'I, HAWAII  
PAGE 3 OF 3

Catie Cullison, AICP  
Associate

cc: Lauren Tanaka, State Parks

O:\Job26\2627.01 DLNR-Haena State Park Master Plan\EIS\Pre-Consultation\Response Letters\2015  
Responses\Planning\_KHPRC2015.doc

2008-09-02 Hawaiian Tel com

From: Jimmy Sone [mailto:James.Sone@hawaiiantel.com]  
Sent: Tuesday, September 02, 2008 8:44 AM  
To: sysadmin  
Subject: Pre-consultation for the Proposed Haena State Park Master Plan & EIS  
Attn: Kimi M kami Yuen

Hawaiian Tel com has a pay phone and an emergency phone at Kee Beach. Both phones are serviced from a DLNR owned 6 pair cable running parallel to Kūhiō Hwy on the makai side of the road, originating from Limahuli Stream. Any proposed projects in the area should consider the possible impact to this State owned telephone cable.

Thank you for the opportunity to comment on the subject plan. Call or email should you have any questions.

Jimmy Sone  
Lead Network Engineer  
Hawaiian Tel com  
4040 Halau St.  
Līhue, HI 96766  
808-241-5052  
jimmy.sone@hawaiiantel.com



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PLANNING • LANDSCAPE ARCHITECTURE • ENVIRONMENTAL STUDIES • ENTITLEMENTS / PERMITTING • GRAPHIC DESIGN

February 22, 2015

Jimmy Sone  
Hawaiian Telcom  
4040 Halau Street  
Lihue, HI 96766

**SUBJECT: PRE-CONSULTATION FOR THE PROPOSED HĀ'ENA STATE PARK MASTER PLAN AND ENVIRONMENTAL IMPACT STATEMENT, HĀ'ENA, KAUA'I, HAWAII**

Dear Mr. Sone,

Thank you for your email dated September 2, 2008 regarding the above referenced pre-consultation request. As the planning consultant for the applicant, State of Hawai'i, Department of Land and Natural Resources, Division of State Parks, we acknowledge the comments from Hawaiian Telcom, indicating that there is a pay phone and an emergency phone at Kē'ē beach and that the phones are serviced from DLNR-owned 6 pair cable running parallel to the highway on the makai side of the road, originating near Limahuli Stream. We will include this information in the environmental documents so that if and when development improvements are made to the park this facility is considered.

Thank you for contributing to the development of this document. Your comments will be included in the Environmental Impact Statement documents.

Sincerely,

PBR HAWAII

Catie Cullison, AICP  
Associate

cc: Lauren Tanaka, State Parks

O:\Job26\2627.01 DLNR-Haena State Park Master Plan\EIS\Pre-Consultation\Response Letters\2015 Responses\Htelcom2015.doc



KAUA'I PLANNING & ACTION ALLIANCE

August 29, 2008

Kimi Mikami Yuen  
Associate  
PBR Hawaii & Associates, Inc.  
1001 Bishop Street, ASP Tower Suite 650  
Honolulu, HI 96813-3484

Dear Kimi:

I am delighted to see that the contract to prepare a master plan and EIS for Hā'ena State Park is moving forward. Further, I am pleased to see that the project is building upon the extensive work already done, which included substantial input from the community. I fully support that approach.

Kaua'i Planning & Action Alliance (KPAA) has secured a grant in aid to improve the first two miles of the Napali Coast Wilderness State Park trail, which is adjacent to your project site. I am uncertain when that work will begin, as the contract is not yet completed. However, we are hoping to start planning and design work before the end of this year and construction will take approximately another 15 months. We are working through the Division of State Parks on the project.

Please keep me informed of your project events and meetings. You can reach me at 808-632-2005 or [dzachary@kauainetwork.org](mailto:dzachary@kauainetwork.org).

Best regards,

Diane Zachary  
President & CEO

Cc: Ms. Lauren Tanaka, DLNR Division of State Parks

BRINGING PEOPLE TOGETHER TO CREATE A BETTER FUTURE FOR KAUA'I

2959 Umi Street, Suite 201, Lihue, HI 96766 Phone 808.632.2005 Fax 808.632.2018  
Email [kpaa@kauainetwork.org](mailto:kpaa@kauainetwork.org) [www.kauainetwork.org](http://www.kauainetwork.org)



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*Associate*

MARC SHIMATSU, ASLA  
*Associate*

CATIE CULLISON, AICP  
*Associate*

February 22, 2015

Diane Zachary  
Kauai Planning & Action Alliance  
2959 Umi Street, Suite 201  
Līhu'e, HI 96766

**SUBJECT: PRE-CONSULTATION FOR THE PROPOSED HĀ'ENA STATE  
PARK MASTER PLAN AND ENVIRONMENTAL IMPACT  
STATEMENT, HĀ'ENA, KAUA'I, HAWAII**

Dear Ms. Zachary,

Thank you for your letter dated August 29, 2008 regarding the above referenced pre-consultation request. As the planning consultant for the applicant, State of Hawai'i, Department of Land and Natural Resources, Division of State Parks, we acknowledge the comments from KPAA, informing the project team of the trail improvement work for the first two miles of the Kalalau Trail. We acknowledge your work on behalf of the area's recreational resources.

Thank you for contributing to the development of this document. Your comments will be included in the Environmental Impact Statement documents.

Sincerely,

PBR HAWAII

Catie Cullison, AICP  
Associate

cc: Lauren Tanaka, State Parks

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From: Dionne Talia  
Sent: Monday, August 25, 2008 12:17 PM  
To: Kimi Yuen  
Subject: FW: Ha'ena State Park

-----Original Message-----

From: fwichman@aloha.net [mailto:fwichman@aloha.net]  
Sent: Monday, August 25, 2008 11:15 AM  
To: sysadmin  
Subject: Ha'ena State Park

To Kimi Mikami Yuen  
PBR Hawaii & Associates, Ltd.

Re: Ha'ena State Park

The area covered by the Ha'ena State Park is rich with ancient Hawaiian place names, sites, legends and uses. I would like very much to enter into a dialogue with you concerning these. Meanwhile, here are preliminary thoughts:

1. The upper wet cave is an ancient sacred site and should be respected as such. There is also a room called "Blue Grotto" which can only be accessed by swimming through a water-filled tunnel and is therefore dangerous to a poor swimmer. The road leading up to the cave has already moved a named boulder, which, if possible, should be found and restored to its place.

2. Makana peak is the site of one of two "fireworks" cliffs. The last performance of this spectacle took place in 1912. Perhaps a plaque could illustrate this, as I doubt that anyone today could duplicate the fireworks display.

3. The lower cave used to have a flat-bottomed scow that took the curious deep into the darkness, up to the point where the cave splits into two. Curious stay out.

4. Lohiau's house site is now pretty well overgrown, but it should be preserved in its entirety. My mother, Juliet Rice Wichman, saved it from destruction when highway builders wished to take its rocks for road building. She stood between it and a bulldozer for several hours before the project was called off. This wall should date to at least the 1300s.

5. The restoration of the fishponds (loko) and taro fields (lo'i), already begun, should continue and be expanded. Indeed, the whole park should be aimed at reestablishing as many of its former uses as possible.

6. There are known burial sites within the park, one of which is being actively maintained by the 'ohana concerned. I would like to see this continued. There is an early photograph of the family that could be used in a memorial stele.

FW Ha'ena State Park.txt[6/12/2015 12:44:56 AM]



7. Parking should be confined at the site of the helicopter landing opposite the upper wet cave. There is no need for the congestion now occurring at the beach. As for the feasibility of asking people to walk a quarter mile, look to the park at Iao Valley on Maui, where a steep, narrow path of a quarter mile must be negotiated before seeing the needle itself.

8. There are petroglyphs within the park which are totally unprotected now. They should be properly studied and rubbings taken.

9. I would suggest that someone on your staff should familiarize themselves with the pertinent legends and history indicated within all six of my books. The Kauai Historical Society is another source of information.

As I say, these are preliminary thoughts. I would like to be added to your list and I can be contacted at fwichman@aloha.net.

Thank you,

Frederick B. Wichman



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February 22, 2015

Frederick B. Wichman  
PO Box 1050  
Hanalei, HI 96714

**SUBJECT: PRE-CONSULTATION FOR THE PROPOSED HĀ'ENA  
STATE PARK MASTER PLAN AND ENVIRONMENTAL  
IMPACT STATEMENT, HĀ'ENA, KAUA'I, HAWAII**

Dear Mr. Wichman,

As the planning consultant for the State of Hawai'i, Department of Land and Natural Resources, Division of State Parks, we thank you for your email comments dated August 25, 2008 in response to our pre-consultation request referenced above. Additionally, it is with gratitude we thank you for taking the time to share your mana'o by participating in the Cultural Impact Assessment interview process, conducted by Maria Orr (Ka'imipono Consulting).

The information provided in your email, interview and body of published writing contributed to a greater understanding of the park's cultural and archaeological resources, ultimately translating into recommendations for master plan physical improvements and management actions.

Recognizing the importance of Hā'ena to Hawaiian history and culture, the Master Plan endeavors to elevate consideration for these resources in both site design and management actions. In an effort to listen and expand understanding of Hā'ena's importance to the community, a 32-member Master Plan Community Advisory Committee (MPAC) was formed. This group has convened on several occasions to work together with State Parks in development of a plan that balances outdoor recreation with safety and respect for the park's many layered resources. MPAC and general community meeting notes are included within the appendices of the Environmental Assessment.

As a result of the MPAC discussions, and the Cultural Impact Assessment process, a key Master Plan recommendation is that a Cultural Advisory Group be formed and consulted on park management actions, construction projects as well as interpretive programs. The enhanced oversight is expected to result in improved interpretation of the park's cultural, ecological and archaeological resources, and as a result, a visiting public that is more aware and sensitive to the importance and fragility of these resources.

Frederick B. Wichman

**PRE-CONSULTATION FOR THE PROPOSED HĀ'ENA STATE PARK MASTER  
PLAN AND ENVIRONMENTAL IMPACT STATEMENT, HĀ'ENA, KAUA'I, HAWAII**

Page 2 of 2

Mahalo for your contribution to the development of the master plan and the supporting environmental documents. Your comments will be included in the Environmental Impact Statement documents.

Sincerely,

PBR HAWAII



Catie Cullison, AICP  
Associate

cc: Lauren Tanaka, State Parks

O:\Job26\2627.01 DLNR-Haena State Park Master Plan\EIS\Pre-Consultation\Response Letters\2015 Responses\FWichman2015.doc



**United States Department of the Interior**

**NATIONAL PARK SERVICE**  
Pacific West Region  
One Jackson Center  
1111 Jackson Street, Suite 700  
Oakland, CA 94607



IN REPLY REFER TO:  
L32 (PWR-PPR)  
15-00061

June 6, 2014

Mr. Daniel Quinn, Administrator  
Division of State Parks  
Department of Land and Natural Resources  
1151 Punchbowl Street, Room 310  
Honolulu, HI 96813

Dear Mr. Quinn:

As you know, since 1965 the Land and Water Conservation Fund (LWCF) State grant program has provided almost \$3.7 billion in financial assistance to States, Territories, the District of Columbia and local units of government for the acquisition and development of public outdoor recreation areas and facilities. This has amounted to over 40,000 grants to state and local governments. Hawai'i has received more than \$38 million in grants in LWCF assistance since 1965.

The State's commitment under the LWCF program is reflected in each grant agreement it executes with NPS in which the State agrees to perpetually preserve, protect and increase the quality and quantity of public outdoor recreation facilities and resources, consistent with the intent of the LWCF Act.

Signed in 1972, LWCF grant 15-00061 helped Hawaii create Ha'ena State Park as a public beach park offering swimming, fishing, picnicking, camping and other beach-oriented recreation opportunities. This popular State Park was inspected as recently as December 2012 to ensure compliance with the grant sponsor's perpetual stewardship requirements under section 6(f)3 of the LWCF Act.

I am aware that discussions occurred as long ago as 1995 between your Department of State Parks and NPS which eventually led to my predecessor's request to review the park's draft master plan. I am also aware that in recent years there has been controversy about an area within the park's interior (but not within the park's coastal recreational areas). Specifically, I understand that this central area is used by local citizens to grow traditional agricultural products consistent with their cultural heritage (kalo or taro). The management of the site is a community garden format. Although a community garden is somewhat unusual in a State Park, it is my understanding that the

State views such agricultural practices at Hā'ena State Park as a means of restoring the cultural landscape and an element of the park's interpretive and educational program. It is my understanding that the size of the area has provoked concern and discussion, as has the possibility of creating an "exclusive use" area within the park that could be out of compliance with LWCF program requirements.

#### Appropriateness of community gardens within LWCF-protected parks

The draft master plan for the park forwarded to me in August 2013 shows some changes to the park's use reflect contemporary sensitivities to cultural resources and the sensitive shoreline ecosystem. Table 7 (page 3-22) and Figure 30 of the master plan draft indicate outdoor recreation uses now and proposed in the future. The recreation opportunities include a variety of ocean recreation, walking, picnicking, nature viewing, sight-seeing, and interpretive exhibits with the potential for camping and bicycling. These provide assurance that the "public beach park" qualities that make this a valuable LWCF park are planned for the future.

The master plan draft also shows that the park will encompass a significant community gardening area with the proposed restoration of the lo'i kalo (wetlands). Although such an area is unusual within a state park and more common in local parks, such areas are not out of compliance with LWCF requirements. Community gardens are allowed in LWCF-protected parks with the understanding that they are accessible to the general public in an equitable manner and are not intended for any private or commercial use.

To be specific, Page 3-2 of the 2008 LWCF Manual (Chapter 3 Section C.4.k.), clearly calls out the eligibility of LWCF funding for community gardens and, thereby, their acceptability with the 6(f)2 boundary even if not funded by LWCF:

**"k. Community gardens.** LWCF assistance may be available for land preparation, perimeter fencing, storage bins and sheds, irrigation systems, benches, walkways, parking areas and restrooms related to a community garden. In such a project, community gardening must be clearly identified in the SCORP as a needed outdoor recreation activity and must be accessible to the general public in an equitable manner. Furthermore, LWCF assistance is not available for fertilizer, seeds, tools, water hoses, nor gardens planned as commercial enterprises."

In this case, the state is not asking for LWCF funding for community gardens, and therefore SCORP compliance is less of a guiding factor. This is an important point because community gardens are not mentioned prominently in the 2008 SCORP, although they are certainly allowed by the LWCF program in general. Instead, I am focusing on the local community's clear desire to continue a traditional agricultural practice within terraces on site used to grow *kalo* (taro) for several centuries.

Maintaining such a practice with an interpretive/ educational component is clearly consistent with several goals within the 2008 SCORP, as is the provision of a range of outdoor recreation opportunities for all ages and abilities broadly throughout the state. To that end, it is advisable to include trails and interpretive opportunities to ensure that all members of the public -- including visitors from afar and anyone not engaged in the community garden activities -- can still understand what is happening there, the cultural significance, and generally not feel excluded from this public place.

Naturally, any agricultural goods harvested within the community garden areas should be generally for park programs and personal use and not part of a formal commercial or for-profit farming operation.

#### Limits to daily visitation within LWCF-protected parks

It is my understanding that there may be concern about limiting access to park areas either to protect sensitive natural resources or to ensure appropriate management of recreation resources, including the community gardening area. The LWCF program allows grant sponsors to put reasonable limits on the size and frequency of park visitors. Page 8-2 of the 2008 LWCF Manual (Chapter 8, Section C.4. Reasonable use limitations) states:

**4. Reasonable use limitations.** Project sponsors may impose reasonable limits on the type and extent of use of areas and facilities acquired and/or developed with Fund assistance when such a limitation is necessary for maintenance or preservation. Thus, limitations may be imposed on the numbers of person using an area or facility or the type of users, such as "hunters only" or "hikers only." All limitations shall be in accord with the applicable grant agreement and amendments.

It is important that the management of the park not create an "exclusive use" situation that could provoke a conversion. As long as access to the park is managed by a reasonable standard, it will be in compliance with the LWCF program.

Please note that this is not really an "approval" because there is nothing to "approve". My review of the file indicates that Hawai'i has not submitted an official packet composed of LWCF Amendments, 424's, DNFs, new 6(f)3 maps, PD/ESF, EA/EIS, etc. for NPS evaluation. Therefore, no federal action has been initiated, NEPA and S.106 compliance have not been triggered.

I hope this clarifies the situation in a satisfactory manner. I look forward to continuing to be in discussion with one another as new questions come up. Please do not hesitate to contact me if you have further questions.

Mahalo,



Martha J. Droge  
Program Officer  
National Park Service, State & Local Assistance Programs  
909 First Avenue, 5th Floor  
Seattle, WA 98104-1060  
Phone: 206.220.4122  
Fax: 206.220.4224  
Email: [martha.j.droge@nps.gov](mailto:martha.j.droge@nps.gov)

## 12.0 EISPN COMMENTS AND RESPONSES

The EISPN was sent to the following agencies, organizations, and individuals indicated in the table below with a check mark (✓) or as noted. If an agency or individual were sent the EISPN multiple times it is also noted. The EISPN was also available on the OEQC website and published in the February 23, 2015 edition of *The Environmental Notice*. The public comment period was from February 23, 2015 to March 25, 2015. If comments were received on the EISPN, the date of the comment is indicated in the table next to the respective agency, organization, or individual's name. Copies of the comment letters and the respective responses are attached.

AGENCY/INDIVIDUAL	EISPN SENT	COMMENT DATED
<b><i>STATE AGENCIES</i></b>		
Department of Agriculture	✓	
Department of Accounting and General Services	✓	
Department of Accounting and General Services, Kauaʻi	✓	
Department of Business, Economic Development and Tourism (DBEDT)	✓	
DBEDT, Research Division Library	✓	
DBEDT, Office of Planning	✓	3/18/2015
DBEDT, Energy Division	✓	
Department of Defense	✓	
Department of Education	✓	
Department of Hawaiian Home Lands	✓	
Department of Health (DOH)	✓	
DOH, Environmental Planning	✓	2/25/2015
DOH, Environmental Management Clean Water Branch		3/11/2015
Department of Land and Natural Resources (DLNR)	✓	
DLNR, Land Division	✓	3/24/2015
DLNR, State Historic Preservation Division (SHPD)	✓	
DLNR, SHPD, Kauaʻi	✓	
DLNR, Division of Forestry and Wildlife (DOFAW), Kauaʻi	✓	
DLNR, DOFAW, Na Ala Hele	✓	
DLNR, Division of Aquatic Resources	Via DLNR Land Div.	3/31/2015
DLNR, Division of Boating and Ocean Recreation	Via DLNR Land Div.	3/2/2015
DLNR, Engineering Division	Via DLNR Land Div.	3/23/2015
DLNR, DOFAW	Via DLNR Land Div.	4/7/2015
DLNR, State Parks	Via DLNR Land Div.	
DLNR, Commission on Water Resource Management	Via DLNR Land Div.	3/16/2015
DLNR, Office of Conservation and Coastal Lands	Via DLNR Land Div.	3/25/2015
DLNR, Land Division, Kauaʻi District	Via DLNR Land Div.	3/5/2015



AGENCY/INDIVIDUAL	EISPN SENT	COMMENT DATED
DLNR, Historic Preservation	Via DLNR Land Div.	
Department of Transportation	√	4/1/2015
Department of Transportation, Kauaʻi	√	
Office of Hawaiian Affairs	√	4/1/2015
Legislative Reference Bureau Library	√	
Hawaiʻi Tourism Authority	√	
<b>UNIVERSITY OF HAWAII (UH)</b>		
UH Water Resources Research Center	√	
UH Environmental Center	√	
UH Marine Option Program	√	
UH Thomas H. Hamilton Library	√	
UH Edwin H. Moʻokini Library	√	
UH Maui College Library	√	
UH Kauaʻi Community College Library	√	
<b>FEDERAL</b>		
U.S. Army Corps of Engineers, Honolulu District	√	3/13/2015
U.S. Fish and Wildlife Service	√	3/31/2015
National Marine Fisheries Service	√	
Federal Highways Administration	√	
U.S. Department of the Interior, U.S. Geological Survey, Pacific Islands Water Science Center	√	
U.S. Department of the Interior, National Park Service	√	
U.S. Department of Agriculture, Natural Resource Conservation Service	√	
U.S. Department of the Navy	√	
Federal Aviation Administration	√	
Federal Transit Administration	√	
U.S. Coast Guard	√	
Environmental Protection Agency, Pacific Islands Contact Office	√	
<b>COUNTY OF KAUAI</b>		
Fire Department	√	
Department of Planning	√	
Police Department	√	
Department of Public Works	√	
Department of Public Works, Engineering Division	√	3/25/2015
Transportation Agency	√	
Department of Water	√	4/2/2015
Office of Economic Development	√	
Department of Parks and Recreation	√	



AGENCY/INDIVIDUAL	EISPN SENT	COMMENT DATED
Kaua‘i Historic Preservation Review Commission	√	
<b><i>LIBRARIES</i></b>		
Hawai‘i State Library, Hawai‘i Documents Center	√	
Kaimukī Regional Library	√	
Kāne‘ohe Regional Library	√	
Pearl City Regional Library	√	
Hawai‘i Kai Regional Library	√	
Hilo Regional Library	√	
Kahului Regional Library	√	
Līhu‘e Regional Library	√	
Princeville Library	√	
<b><i>NEWS MEDIA</i></b>		
Honolulu Star Advertiser	√	
Hawai‘i Tribune Herald	√	
West Hawai‘i Today	√	
The Garden Island	√	
Maui News	√	
Moloka‘i Dispatch	√	
Honolulu Civil Beat	√	
<b><i>ELECTED OFFICIALS</i></b>		
U.S. Senator Brian Schatz		
U.S. Senator Mazie Hirono	√	
U.S. Representative Tulsi Gabbard	√	
State Senator Ronald Kouchi	√	
State Representative Derek Kawakami	√	
Kaua‘i County Mayor Bernard Carvalho	√	
Kaua‘i County Council Chair Mel Rapozo	√	
Kaua‘i County Council Vice Chair Ross Kagawa	√	
Kaua‘i County Councilmember Mason Chock	√	
Kaua‘i County Councilmember Gary Hooser	√	
Kaua‘i County Councilmember Arryl Kaneshiro	√	
Kaua‘i County Councilmember KipuKai Kuali‘i	√	
Kaua‘i County Councilmember JoAnn Yukimura	√	
<b><i>UTILITIES</i></b>		
Hawaiian Telcom	√	
Kaua‘i Island Utility Cooperative	√	
<b><i>OTHER ORGANIZATIONS AND INDIVIDUALS</i></b>		
Kua‘aina Ulu ‘Auamo (formerly Hawai‘i Community Stewardship Network)	√	
Kaua‘i Planning and Action Alliance	√	

AGENCY/INDIVIDUAL	EISPN SENT	COMMENT DATED
B. Frederick Wichman	√	
Hawai'i Ecotourism Association	√	
Thomas and Annie Hashimoto, MPAC	√	
Henrietta Phillips, MPAC	√	
Lono Brede, MPAC	√	
Presley Wann, MPAC	√	
Kehaulani Kekua, MPAC	√	
ʻAikane Alapaʻi, MPAC	√	
Sabra Kauka, MPAC	√	
Victoria Wichman, MPAC	√	
Chipper Wichman, MPAC	√	
Hauʻoli Wichman, MPAC	√	
Jeff Chandler, MPAC	√	
Kaʻimi Hermosura, MPAC	√	
Keliʻi Alapaʻi, MPAC	√	
Naomi Yokotake, MPAC	√	
Carlos Andrade, MPAC	√	
Makaʻala Kaʻaumoana, MPAC	√	3/18/2015
Kawika Winter, MPAC	√	
Barbara Robeson, MPAC	√	3/18/2015
Caren Diamond, MPAC	√	
Carl Berg, MPAC	√	
Carl Imparato, MPAC	√	
Sue Kanoho, MPAC	√	
Julie Schuller, MPAC	√	
Joel Guy, MPAC	√	
Mehana Vaughn, MPAC	√	
Micco Godinez, MPAC	√	
Chino Godinez, MPAC	√	
Kathryn Keala, MPAC	√	
D. Kaliko Santos, MPAC	√	
Atta Forrest, MPAC	√	
Michael Dahilig/County of Kauaʻi, Planning Department, MPAC	√	
Nani Sadora/County of Kauaʻi, Planning Department, Open Space Commission, MPAC	√	



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STATE OF HAWAII**

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Ref. No. P-14681

March 18, 2015

Ms. Catie Cullison, AICP  
Project Manager/Associate  
PBR HAWAII & Associates, Inc.  
1001 Bishop Street, Suite 650  
Honolulu, Hawaii 96813

Dear Ms. Cullison:

Subject: Environmental Impact Statement Preparation Notice for the Haena State Park Master Plan, Hanalei, Kauai;  
TMK: (4) 5-6-008:001, (4) 5-9-001:025, (4) 5-9-001:022 (por)

Thank you for the opportunity to provide comments on the Environmental Impact Statement Preparation Notice (EISP) for the Haena State Park Master Plan. The review material was transmitted to our office by letter, dated February 22, 2015.

It is our understanding that this master plan calls for a number of foundational and cultural improvements that will affect the long-term future of this state park. These improvements include the creation of a Welcome Pavilion, the construction of an Education and Cultural Center, increased public comfort stations, outdoor event space, and an information desk. The master plan calls for dedicated areas for interpretive displays, exhibits, picnic areas, and bicycle parking. In the short-term, a central island turnaround will feature a large hala tree or native tree significant to Haena. In the long-term, a new main gate is proposed which will have a large turnaround and entry kiosk which will control the gates to the main parking lot.

A refurbished vehicle parking area will utilize permeable pavement or structural grass to reduce runoff and soil erosion. An interpretive path will be situated makai of the highway and will connect the Welcome Pavilion to Kee Beach and the rest of the pathways that run throughout the park. Interpretive displays and directional signage will be incorporated in this pathway. Finally, a caretaker cottage, helipad, baseyard/staging area, a hula complex, a new lifeguard tower, sand dune restoration, wetland restoration, stream restoration, and an agricultural complex are some of the many recommendations called for in the master plan.

The Office of Planning has reviewed the EISP and has the following comments to offer:

1. The EISP does not include the goals and objectives listed in the Hawaii State Plan, Hawaii Revised Statutes (HRS) Chapter 226. HRS Chapter 226 provides goals,

Ms. Catie Cullison, AICP  
March 18, 2015  
Page 2

objectives, priorities, and priority guidelines for growth, development, and the allocation of resources throughout the State. It contains diverse policies and objectives on topics of state interest including but not limited to, the economy, agriculture, the visitor industry, federal expenditure, the physical environment, facility systems, socio-cultural advancement, climate change adaptation, and sustainability.

The Draft Environmental Impact Statement (Draft EIS) should contain an analysis that addresses whether the proposed project conforms or is in conflict with the objectives, policies, and priority guidelines listed in the Hawaii State Plan.

2. The Draft EIS should provide an analysis on the risk of coastal hazards surrounding the north shore of Kauai and the marine environment adjoining Haena State Park. The Draft EIS should discuss site-specific mitigation measures regarding the risk of coastal hazards, and consider the climate change adaptation priority guidelines set forth in HRS § 226-109, to reduce hazard to life and property from coastal hazards.
3. The EISP does not contain an analysis on the project's conformity with the Coastal Zone Management (CZM) objectives and policies found in HRS § 205A-2. EISP Section 3.2.3, page 3-5, incorrectly concludes that the Coastal Zone Management Act is primarily implemented by the counties through the Special Management Area (SMA) process and the SMA permit will address these policies and objectives.  
  
HRS § 205A-1 defines the entire state as being within the coastal zone management area. Therefore the Draft EIS should include an assessment as to how the proposed project conforms to the CZM objectives and its supporting policies set forth in HRS § 205A-2. Where a conflict or inconsistency exists, the analysis must describe the extent to which the project proponent has reconciled its proposed action with this statute. These objectives and policies include: recreational resources, historic resources, scenic and open space resources, coastal ecosystems, economic uses, coastal hazards, managing development, public participation, beach protection, and marine resources.
4. The SMA guidelines, articulated in HRS § 205A-26, apply specifically to the SMA permit process. If the Environmental Impact Statement (EIS) serves as the primary technical supporting document for the SMA use permit application, we recommend the EIS assess the compliance of the proposed project to the SMA guidelines.
5. The County Shoreline Setback information found in EISP Section 3.3.5, page 3-10, should be updated by referring to Ordinance No. 979, which took effect on December 5, 2014. In the Draft EIS, Table 4 - County Shoreline Setback Requirements, should be updated accordingly. The County of Kauai Planning Department should be consulted for

Ms. Catie Cullison, AICP  
March 18, 2015  
Page 3

the SMA use and shoreline setbacks.

If you have any questions regarding this comment letter, please contact Josh Hekeia of our office at 587-2845.

Sincerely,



Leo R. Asuncion  
Acting Director

c: Lauren Tanaka, Department of Land and Natural Resources, Division of State Parks



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May 8, 2015

Mr. Leo R. Asuncion  
Acting Director  
Office of Planning  
State of Hawai'i  
P.O. Box 2359  
Honolulu, HI 96804

**SUBJECT: PROPOSED HĀ'ENA STATE PARK MASTER PLAN AND ENVIRONMENTAL IMPACT STATEMENT PREPARATION NOTICE, HĀ'ENA, KAUA'I, HAWAII**

Dear Mr. Asuncion,

Thank you for your agency's letter dated March 18, 2015 (your Reference No. P-14681) regarding the above referenced Environmental Impact Statement (EIS) Preparation Notice (EISP). As the planning consultant for the State of Hawai'i, Department of Land and Natural Resources, Division of State Parks, we appreciate your comments from the Office of Planning and provide the following responses.

#### Comment #1:

*"The EISP does not include goals and objectives listed in the Hawai'i State Plan, Hawai'i Revised Statutes (HRS) Chapter 226."*

Response: Per §11-200-17(H), Hawai'i Administrative Rules (HAR), the Draft Environmental Impact Statement (DEIS) will contain an analysis that addresses whether the proposed project conforms or is in conflict the relevant objectives, policies and priority guidelines listed in the Hawai'i State Plan. The EISP was issued according to §11-200-11.2, HAR and prepared in accordance with §11-200-9, HAR, which references the content requirements for an Environmental Assessment (§11-200-10, HAR). Section 11-200-10, HAR does not require "a statement of the relationship of the proposed action to land use plans, policies, and controls for the affected area," which is quoted from the content requirements of a DEIS (§11-200-17(H), HAR). However, as noted, we will include this discussion in the forthcoming DEIS. Thank you for the comment.

#### Comment #2:

*"The Draft EIS should provide an analysis on the risk of coastal hazards surrounding the north shore of Kaua'i and the marine environment adjoining Hā'ena State Park."*

Response: The risk of coastal hazards and the marine environment adjoining Hā'ena State Park were discussed in sections 4.11.4 "Shoreline Erosion," Section 4.6 "Marine Environment," and "Section 2.5.11 Dune Restoration" of the EISP. However, references to §226-109, Hawai'i Revised Statutes (HRS) will be made in the appropriate sections of the Draft EIS.

#### Comment #3:

*"The EISP does not contain an analysis on the project's conformity with the Coastal Zone Management (CZM) objectives and policies found in HRS subsection 205A-2. EISP Section 3.2.3, page 3-5, incorrectly concludes that the Coastal Zone Management Act is primarily implemented by the counties through the Special Management Area (SMA) process and the SMA permit will address these policies and objectives."*

*HRS §205A-1 defines the entire state as being within the coastal zone management area.*

...

**Response:** We appreciate your clarification of the CZM and SMA processes. Per §11-200-17(H), HAR, the DEIS will include an assessment as to how the proposed project conforms to the CZM objectives and its supporting policies set forth in §205A-2, HRS. As noted earlier, the EISPN was prepared according to the content requirements for Environmental Assessment (§11-200-10, HAR), which do not require "a statement of the relationship of the proposed action to land use plans, policies, and controls for the affected area" (§11-200-17(H), HAR). However, we will include the clarification that all of the state is included within the coastal zone management area and will include the required §205A-2, HRS discussion in the DEIS.

**Comment #4:**

*"The SMA guidelines, articulated in HRS subsection 205A-26, apply specifically to the SMA permit process. If the Environmental Impact Statement (EIS) serves as the primary technical supporting document for the SMA use permit application, we recommend the EIS assess the compliance of the proposed project to the SMA guidelines."*

**Response:** We appreciate the advice provided. While we would anticipate that at least one or more actions proposed in the Master Plan may require a SMA Use Permit, at this time, it is not anticipated that an application for such a permit will immediately follow the acceptance of the Final EIS. However, the EIS will be written to address the range of actions proposed by the Master Plan and individual SMA permits will be sought as needed in the future.

**Comment #5:**

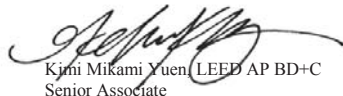
*"The County Shoreline Setback information found in EISPN Section 3.3.5, page 3-10, should be updated by referring to Ordinance No. 979, which took effect on December 5, 2014. In the Draft EIS, Table 4 – County Shoreline Setback Requirements, should be updated accordingly."*

**Response:** We appreciate the information provided, and will provide the updated information in the DEIS.

Thank you for contributing to the development of this document. Your comments will be included in the Environmental Impact Statement documents.

Sincerely,

PBR HAWAII

  
Kimi Mikami Yuen, LEED AP BD+C  
Senior Associate

cc: Lauren Tanaka, Division of State Parks

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DAVID Y. IGE  
GOVERNOR OF HAWAII



VIRGINIA PRESSLER, M.D.  
DIRECTOR OF HEALTH

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

In reply, please refer to:  
File:

EPO 15-044

February 25, 2015

Ms. Lauren Tanaka  
Department of Land and Natural Resources  
Division of State Parks  
1151 Punchbowl Street, #310  
Honolulu, Hawaii 96804

Dear Ms. Tanaka:

**SUBJECT: Environmental Impact Statement Preparation Notice (EISPN) for  
Haena State Park Master Plan, Hanalei, Kauai**

The Department of Health (DOH), Environmental Planning Office (EPO), acknowledges receipt of your EISPN to our office on February 22, 2015. Thank you for allowing us to review and comment on the proposed Haena State Park Master Plan available on the OEQC website at:  
[http://oegc.doh.hawaii.gov/Shared%20Documents/EA\\_and\\_EIS\\_Online\\_Library/Kauai/2010s/2015-02-23-KA-5B-EISPN-Haena-State-Park-Master-Plan.pdf](http://oegc.doh.hawaii.gov/Shared%20Documents/EA_and_EIS_Online_Library/Kauai/2010s/2015-02-23-KA-5B-EISPN-Haena-State-Park-Master-Plan.pdf)

The EISPN was routed to the Kauai Department of Health and the Clean Water Branch. The various branches will provide specific comments to you if necessary. EPO recommends that you review the standard comments and available strategies to support sustainable and healthy design provided at:  
<http://health.hawaii.gov/epo/home/landuse-planning-review-program/>. Projects are required to adhere to all applicable standard comments.

We encourage you to examine and utilize the Hawaii Environmental Health Portal. The portal 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. The Portal is continually updated. Please visit it regularly at:  
<https://eha-cloud.doh.hawaii.gov>

You may also wish to review the revised Water Quality Standards Maps that have been updated for all islands. The Water Quality Standards Maps can be found at:  
<http://health.hawaii.gov/cwb/site-map/clean-water-branch-home-page/water-quality-standards/>.

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

Mahalo nui loa,

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

c: Ms. Catie Cullison, PBR Hawaii & Associates, Inc. (via email: [sysadmin@pbrhawaii.com](mailto:sysadmin@pbrhawaii.com))  
DHO Kauai, CWB (via email only)





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PLANNING • LANDSCAPE ARCHITECTURE • ENVIRONMENTAL STUDIES • ENTITLEMENTS / PERMITTING • GRAPHIC DESIGN

May 8, 2015

Ms. Laura Leialoha Phillips McIntyre, AICP  
Program Manager, Environmental Planning Office  
State of Hawai'i  
Department of Health  
P.O. Box 3378  
Honolulu, Hawai'i 96801-3378

**SUBJECT: PROPOSED HĀ'ENA STATE PARK MASTER PLAN AND ENVIRONMENTAL IMPACT STATEMENT PREPARATION NOTICE, HĀ'ENA, KAUA'I, HAWAII**

Dear Ms. McIntyre,

Thank you for your Department's letter dated February 25, 2015 (your Reference No. EPO 15-044) regarding the above referenced Environmental Impact Statement (EIS) Preparation Notice (EISPN). As the planning consultant for the State of Hawai'i, Department of Land and Natural Resources (DLNR), Division of State Parks, we have reviewed your comments and provide the following responses.

We reviewed the Environmental Planning Office's (EPO) standard comments relating to Environmental Health programs. We understand that all standard comments specifically applicable to the Hā'ena State Park Master Plan must be adhered to. The organization of this letter follows the list of standard comments on your website.

#### Clean Air Branch

We acknowledge that there is a potential for fugitive dust emissions during all phases of construction and operations. The Draft EIS will address construction-related impacts related to fugitive dust. All construction activities will comply with the provisions of Section 11-60.1-33, Hawai'i Administrative Rules (HAR) related to Fugitive Dust. Adequate measures to control dust during various phases of construction will be required to be implemented by whatever contractor is employed by the DLNR to effect the project's development.

#### Clean Water Branch

We reviewed and understand the standard comments provided by the Clean Water Branch (CWB).

1. **Potential Impacts to State Waters.** The EIS identifies the type and class of State waters off the coast of Hā'ena as "AA." Any potential impacts to these waters caused by the construction and/or operation of the proposed project will meet the provisions of the: a) anti-degradation policy (Chapter 11-54-1.1, HAR); b) designated uses (Chapter 11-54-3, HAR); and c) water quality criteria (Chapter 11-54-4 through 11-54-8, HAR). However, direct discharges of storm water runoff into marine waters are not expected to occur due to best management practices to reduce airborne dust and waterborne silt during construction.
2. **National Pollutant Discharge Elimination System permit coverage.** It is acknowledged that if soil disturbance of any single project exceeds one acre in area or any of the other activities listed, a National Pollutant Discharge Elimination System (NPDES) permit for Storm Water Associated with Construction Activity will be necessary. All relevant rules and requirements will be followed for the construction activities.
3. **Clean Water Act.** Pursuant to the "Clean Water Act," a Section 401 Water Quality Certification from the State Department of Health, Clean Water Branch will be obtained if it is determined that the project may result in any discharge into navigable waters or as otherwise triggered.

Ms. Laura Leialoha Phillips McIntyre, AICP  
May 8, 2015  
Page 2

4. **State Water Quality Standards (Chapter 11-54 and 11-55, HAR).** All discharges related to the construction and operation of the proposed project will comply with the State's Water Quality requirements contained in Chapters 11-54 and 11-55, HAR.
5. **Federal Permits or Approvals.** The following federal agencies were solicited for comments on the EISPN and will be sent the Draft EIS. State Parks will follow up with any agencies should any permit or approval be necessary from the appropriate agency(ies).

- U.S. Army Corps of Engineers, Honolulu District
- U.S. Fish and Wildlife Service
- National Marine Fisheries Service
- Federal Highways Administration
- Department of the Interior USGS Pacific Islands Water Science Center
- Department of the Interior National Park Service
- Department of Agriculture NRCS
- Department of the Navy
- Federal Aviation Administration
- Federal Transit Administration
- U.S. Coast Guard
- Environmental Protection Agency

#### Hazard Evaluation and Emergency Response Office

We understand that the Hazard Evaluation and Emergency Response (HEER) Office provides leadership, support, and partnership in preventing, planning for, responding to, and enforcing environmental laws relating to releases or threats of releases of hazardous substances. There may be hazardous substances, pollutants, or contaminants to be present at the project site, particularly in the areas where there were abandoned vehicles. State Parks will work with the State HEER Office to determine the appropriate actions to comply with the relevant environmental laws.

#### Indoor and Radiological Health (IRH) Branch

As required, the Hā'ena State Park Master Plan project activities will comply with the following HAR:

- Chapter 11-39 Air Conditioning and Ventilation
- Chapter 11-45 Radiation Control
- Chapter 11-46 Community Noise Control
- Chapter 11-501 Asbestos Requirements
- Chapter 11-503 Fees for Asbestos Removal and Certification
- Chapter 11-504 Asbestos Abatement Certification Program

#### Safe Drinking Water Branch

We note that the Safe Drinking Water Branch administers programs to protect drinking water sources from contamination.

1. **Public Water System.** A public water system will not be developed as part of the proposed project. Potable water will continue to be supplied by the County of Kaua'i Department of Water, which serves the Park with a four-inch waterline.
2. **Dual Water System.** If the Park implements dual water systems, it will be carefully designed and operated to prevent the cross-connection of the two systems including backflow prevention. Both systems including any non-potable spigots and irrigated areas will be clearly labeled. The two systems must be physically separated by air gaps or reduced-pressure backflow prevention devices to avoid contaminating the potable water supply. Backflow devices must be tested periodically and will comply with Chapter 11-21, HAR, Cross-Connection and Backflow Control.
3. **Underground Injection Control.** No underground injection wells are proposed.

#### Solid and Hazardous Waste Branch

Although fewer users to the Park will likely result in less trash generated at the park, facilities will be dispersed and new trash receptacles will be necessary at improved areas proposed around the Park so that waste disposal is convenient to park users.

Ms. Laura Leialoha Phillips McIntyre, AICP  
May 8, 2015  
Page 3

All receptacles are proposed to have animal-proof lids to minimize foraging by feral cats, dogs, rats and chickens. Receptacles that support the separation of recyclables from non-recyclable materials are recommended. No additional mitigation measures are anticipated. The implementation of the Hā'ena State Park Master Plan will also comply with the appropriate provisions of Chapters 342H and 342 I, Hawai'i Revised Statutes (HRS). No underground storage tank is anticipated as part of the Master Plan, however, if one is planned in the future, State Parks will comply with Chapter 11-281, HAR.

#### **Wastewater Branch**

In 2011, a subsurface flow-based wastewater treatment system was built at the Park. (A "subsurface" system is one where the constructed wetland is contained within a liner, but the wastewater flows beneath the surface of a gravel medium within the liner so there is no exposed water under normal operating conditions.) Based on strong community preference, the Master Plan proposes that any new wastewater systems include a treatment system that brings wastewater to an "R-2" water quality level. A description and analysis of wastewater alternatives will be provided in an Appendix to the Draft EIS (Wastewater Preliminary Engineering Report). The Wastewater Preliminary Engineering Report provides a Wastewater Alternatives Matrix that will assist in specific system selection at the time of building design. Beyond recommending that secondary treatment be provided, the Master Plan does not prescribe the type of systems to be employed at the future master planned facilities, allowing maximum flexibility for building designers to take advantage of emerging technologies in wastewater management. However, no new cesspools are recommended as part of the Master Plan. If defunct cesspools are located during the construction process, they will be abandoned or removed in accordance with current regulations.

#### **Sustainable and Healthy Design**

We have examined the available resources on strategies to support the sustainable and healthy design of communities and buildings. As such, the following concepts will be incorporated into the development of the proposed project.

- Implement best management practices to reduce pollutant loads.
- Incorporate green building design and renewable energy into all new construction and major renovation projects.
- Develop and deploy operational controls for leak detection including a distribution system audit, leak detection, and repair programs.
- Design integrated water/wastewater/drainage systems to minimize potable water use.
- Design, install, and maintain landscape to reduce potable water use as well as pesticides or herbicides. The proposed bioswales, catchment systems, and restored 'auwai will help collect and direct rainwater to appropriate landscaped areas.

#### **Water Quality Standards Maps**

The June 2014 revised Water Quality Standards Maps have been referenced in the Draft EIS and included as Figure 24.

Thank you for contributing to the development of this document. Your comments will be included in the Environmental Impact Statement documents.

Sincerely,

PBR HAWAII

  
Kimi Mikami Yuen, LEED AP BD+C  
Senior Associate

cc: Lauren Tanaka, Division of State Parks

DAVID Y. IGE  
GOVERNOR OF HAWAII



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In reply, please refer to:  
File:

03008PCTM.15

March 11, 2015

Ms. Catie Cullison, AICP  
Associate  
PBR Hawaii & Associates, Inc.  
1001 Bishop Street, Suite 650  
Honolulu, Hawaii 96813-3484

Dear Ms. Cullison:

**SUBJECT: Comments on Environmental Impact Statement Preparation Notice (EISP) for Proposed Haena State Park Master Plan  
Kapaa, Island of Kauai, Hawaii**

The Department of Health (DOH), Clean Water Branch (CWB), acknowledges receipt of your letter, dated February 9, 2015, requesting comments on your project. The DOH-CWB has reviewed the subject document and offers these comments. Please note that our review is based solely on the information provided in the subject document and its compliance with the Hawaii Administrative Rules (HAR), Chapters 11-54 and 11-55. You may be responsible for fulfilling additional requirements related to our program. We recommend that you also read our standard comments on our website at: <http://health.hawaii.gov/epo/files/2013/05/Clean-Water-Branch-Std-Comments.pdf>

1. Any project and its potential impacts to State waters must meet the following criteria:
  - a. Antidegradation policy (HAR, Section 11-54-1.1), which requires that the existing uses and the level of water quality necessary to protect the existing uses of the receiving State water be maintained and protected.
  - b. Designated uses (HAR, Section 11-54-3), as determined by the classification of the receiving State waters.
  - c. Water quality criteria (HAR, Sections 11-54-4 through 11-54-8).
2. You may be required to obtain National Pollutant Discharge Elimination System (NPDES) permit coverage for discharges of wastewater, including storm water runoff, into State surface waters (HAR, Chapter 11-55).

For NPDES general permit coverage, a Notice of Intent (NOI) form must be submitted at least 30 calendar days before the commencement of the discharge. An application for a NPDES individual permit must be submitted at least 180 calendar days before the commencement of the discharge. To request NPDES permit coverage, you must submit the applicable form ("CWB Individual NPDES Form" or "CWB NOI Form") through the e-Permitting Portal and the hard copy certification statement with the respective filing fee (\$1,000 for an individual NPDES permit or \$500 for a Notice of General Permit Coverage). Please open the e-Permitting Portal website located at: <https://eha-cloud.doh.hawaii.gov/epermit/>. You will be asked to do a one-time registration to obtain your login and password. After you register, click on the Application Finder tool and locate the appropriate form. Follow the instructions to complete and submit the form.

3. If your project involves work in, over, or under waters of the United States, it is highly recommended that you contact the Army Corp of Engineers, Regulatory Branch (Tel: 835-4303) regarding their permitting requirements.

Pursuant to Federal Water Pollution Control Act [commonly known as the "Clean Water Act" (CWA)], Paragraph 401(a)(1), a Section 401 Water Quality Certification (WQC) is required for "[a]ny applicant for Federal license or permit to conduct any activity including, but not limited to, the construction or operation of facilities, which may **result** in any discharge into the navigable waters..." (emphasis added). The term "discharge" is defined in CWA, Subsections 502(16), 502(12), and 502(6); Title 40 of the Code of Federal Regulations, Section 122.2; and Hawaii Administrative Rules (HAR), Chapter 11-54.

4. Please note that all discharges related to the project construction or operation activities, whether or not NPDES permit coverage and/or Section 401 WQC are required, must comply with the State's Water Quality Standards. Noncompliance with water quality requirements contained in HAR, Chapter 11-54, and/or permitting requirements, specified in HAR, Chapter 11-55, may be subject to penalties of \$25,000 per day per violation.
5. It is the State's position that all projects must reduce, reuse, and recycle to protect, restore, and sustain water quality and beneficial uses of State waters. Project planning should:
- a. Treat storm water as a resource to be protected by integrating it into project planning and permitting. Storm water has long been recognized as a source of irrigation that will not deplete potable water resources. What is often overlooked is that storm water recharges ground water supplies and feeds streams and estuaries; to ensure that these water cycles are not disrupted, storm water cannot be relegated as a waste product of impervious surfaces. Any project planning must recognize storm water as an asset that sustains and protects natural ecosystems and traditional beneficial uses of State waters, like community beautification, beach going, swimming, and fishing. The approaches necessary to do so, including low impact development methods or ecological

bio-engineering of drainage ways must be identified in the planning stages to allow designers opportunity to include those approaches up front, prior to seeking zoning, construction, or building permits.

- b. Clearly articulate the State's position on water quality and the beneficial uses of State waters. The plan should include statements regarding the implementation of methods to conserve natural resources (e.g. minimizing potable water for irrigation, gray water re-use options, energy conservation through smart design) and improve water quality.
- c. Consider storm water Best Management Practice (BMP) approaches that minimize the use of potable water for irrigation through storm water storage and reuse, percolate storm water to recharge groundwater to revitalize natural hydrology, and treat storm water which is to be discharged.
- d. Consider the use of green building practices, such as pervious pavement and landscaping with native vegetation, to improve water quality by reducing excessive runoff and the need for excessive fertilization, respectively.
- e. Identify opportunities for retrofitting or bio-engineering existing storm water infrastructure to restore ecological function while maintaining, or even enhancing, hydraulic capacity. Particular consideration should be given to areas prone to flooding, or where the infrastructure is aged and will need to be rehabilitated.

If you have any questions, please visit our website at: <http://health.hawaii.gov/cwb/>, or contact the Engineering Section, CWB, at (808) 586-4309.

Sincerely,



ALEC WONG, P.E., CHIEF  
Clean Water Branch

CTM:bk

c: DOH-EPO #15-044 [via e-mail only]





#### PRINCIPALS

THOMAS S. WITTEN, ASLA  
Chairman

R. STAN DUNCAN, ASLA  
President

RUSSELL Y. I. CHUNG, FASLA, LEED AP BD+C  
Executive Vice-President

VINCENT SHIGEKUNI  
Vice-President

GRANT T. MURAKAMI, AICP, LEED AP BD+C  
Vice-President

TOM SCHINELL, AICP  
Principal

W. FRANK BRANDT, FASLA  
Chairman Emeritus

#### ASSOCIATES

RAYMOND T. HIGA, ASLA  
Senior Associate

KIMI MIKAMI YUEN, LEED AP BD+C  
Senior Associate

SCOTT ALIKA ABRIGO, LEED AP BD+C  
Managing Director - Kapolei

ROY TAKEMOTO  
Managing Director - Hilo

SCOTT MURAKAMI, ASLA, LEED AP  
Associate

DACHENG DONG, LEED AP  
Associate

MARC SHIMATSU, ASLA  
Associate

CATIE CULLISON, AICP  
Associate

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Tel: (808) 521-5631  
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1001 Kamekila Boulevard  
Kapolei Building, Suite 313  
Kapolei, Hawaii 96707-2005  
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1719 Haleloka Street  
Hilo, Hawaii 96720-1553  
Tel/Cel: (808) 315-6878

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PLANNING • LANDSCAPE ARCHITECTURE • ENVIRONMENTAL STUDIES • ENTITLEMENTS / PERMITTING • GRAPHIC DESIGN

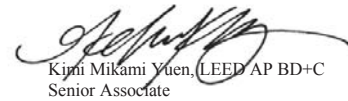
Mr. Alec Wong, P.E.  
May 8, 2015  
Page 2

and filtration of stormwater runoff. Native ecosystem restoration and native plants are recommended throughout the Master Plan as well as green building practices and the use of renewable energy.

Thank you for contributing to the development of this document. Your comments will be included in the Environmental Impact Statement documents.

Sincerely,

PBR HAWAII



Kimi Mikami Yuen, LEED AP BD+C  
Senior Associate

cc: Lauren Tanaka, Division of State Parks

O:\Job26\2627.01 DLNR-Haena State Park Master Plan\EIS\EISPN\Responses\DOH CWB.doc

May 8, 2015

Mr. Alec Wong, P.E., Chief  
State of Hawai'i  
Department of Health  
Clean Water Branch  
P.O. Box 3378  
Honolulu, Hawai'i 96801-3378

**SUBJECT: PROPOSED HÄ'ENA STATE PARK MASTER PLAN AND ENVIRONMENTAL IMPACT STATEMENT PREPARATION NOTICE, HÄ'ENA, KAUA'I, HAWAII**

Dear Mr. Wong,

Thank you for your Department's letter dated March 11, 2015 (your Reference No. 03008PCTM.15) regarding the above referenced Environmental Impact Statement (EIS) Preparation Notice (EISPN). As the planning consultant for the State of Hawai'i, Department of Land and Natural Resources (DLNR), Division of State Parks, we have reviewed your comments and provide the following responses.

We reviewed and understand the standard comments provided on your website. In addition, we have addressed your specific comments below.

1. The EISPN noted that the type and classification of State waters off the coast of Hä'ena State Park is "Class AA". Any potential impacts to these waters caused by the implementation of the Hä'ena State Park Master Plan will meet the provisions of the:
  - a) Anti-degradation policy (Chapter 11-54-1.1, Hawai'i Administrative Rules (HAR));
  - b) Designated uses (Chapter 11-54-3, HAR); and
  - c) Water quality criteria (Chapter 11-54-4 through 11-54-8, HAR).
2. A National Pollutant Discharge Elimination System (NPDES) permit for discharges of storm water runoff into State surface waters (Chapter 11-55, HAR) will be obtained as required. All NPDES permit requirements will be implemented. Thank you for the application information.
3. As recommended, DLNR will consult with the US Army Corps of Engineers (ACOE) for all future plans that may impact the "Waters of the U.S." Pursuant to the "Clean Water Act," a Section 401 Water Quality Certification from the State Department of Health, Clean Water Branch will be obtained as required.
4. All discharges related to the implementation of the Hä'ena State Park Master Plan will comply with the State's Water Quality requirements contained in Chapters 11-54 and 11-55, HAR.
5. We appreciate the information provided regarding possible measures to reduce, reuse and recycle to protect, restore and sustain water quality and beneficial uses of State waters. All of the concepts are included in the design of the Hä'ena State Park Master Plan. For example, the plan recommends that the water, wastewater, and drainage systems be designed as an integrated system to maximize the use of captured rainwater for use onsite and to reduce the use of potable water for irrigation, toilet flushing, and other nonpotable water uses. Bioswales and restored 'auwai are also discussed as possible solutions to irrigate landscaped areas and the lo'i and to increase percolation

DAVID Y. IGE  
GOVERNOR OF HAWAII



STATE OF HAWAII  
DEPARTMENT OF LAND AND NATURAL RESOURCES

POST OFFICE BOX 621  
HONOLULU, HAWAII 96809

March 24, 2015

PBR HAWAII & Associates, Inc.  
Attention: Catie Cullison, AICP, Project Manager/Associate  
1001 Bishop Street, Suite 650  
Honolulu, HI 96813-3484

via email: [ccullison@pbrhawaii.com](mailto:ccullison@pbrhawaii.com)

State of Hawai'i, Department of Land and Natural Resources  
Division of State Parks  
Attention: Lauren Tanaka  
1151 Punchbowl St. #310  
Honolulu, HI 96804

via email: [lauren.a.tanaka@hawaii.com](mailto:lauren.a.tanaka@hawaii.com)

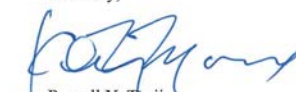
Dear Ms. Cullison and Ms. Tanaka,

SUBJECT: Environmental Impact Statement Preparation Notice for the Ha'ena State Park Master Plan

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

At this time, enclosed are comments from (1) Land Division - Kauai District; (2) Division of Boating & Ocean Recreation; (3) Commission on Water Resource Management; and (4) Engineering Division. No other comments were received as of our suspense date. Should you have any questions, please feel free to call Supervising Land Agent Steve Molmen at 587-0439. Thank you.

Sincerely,

  
Russell Y. Tsuji  
Land Administrator

Enclosure(s)

CARTY S. CHANG  
INTERIM CHAIRPERSON  
BOARD OF LAND AND NATURAL RESOURCES  
COMMISSION ON WATER RESOURCE MANAGEMENT

DANIEL S. QUINN  
INTERIM FIRST DEPUTY

W. ROY HARDY  
ACTING DEPUTY DIRECTOR - WATER

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

DAVID Y. IGE  
GOVERNOR OF HAWAII



STATE OF HAWAII  
DEPARTMENT OF LAND AND NATURAL RESOURCES

POST OFFICE BOX 621  
HONOLULU, HAWAII 96809

February 25, 2015

MEMORANDUM

TO:

DLNR Agencies:

- ☒ Div. of Aquatic Resources
- ☒ Div. of Boating & Ocean Recreation
- ☒ Engineering Division
- ☒ Div. of Forestry & Wildlife
- ☒ Div. of State Parks
- ☒ Commission on Water Resource Management
- ☒ Office of Conservation & Coastal Lands
- ☒ Land Division - Kauai District
- ☒ Historic Preservation

FROM:

Russell Y. Tsuji, Land Administrator

SUBJECT:

Environmental Impact Statement Preparation Notice for the Ha'ena State Park Master Plan  
Ha'ena State Park; Island: Kaua'i; District: Hanalei; Tax Map Keys: (4) 5-6-008:001, (4) 5-9-001:025, (4) 5-9-001:022 (portion)

LOCATION:

APPLICANT:

State of Hawai'i Department of Land and Natural Resources, Division of State Parks by its consultant, PBR HAWAII & Associates, Inc.

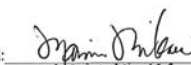
Transmitted for your review and comment on the above-referenced document. We would appreciate your comments on this document which can be found here:

1. Go to: <https://sp01.ld.dlnr.hawaii.gov/LD>
2. Login: Username: LD\Visitor Password: Opa\$\$word0 (first and last characters are zeros)
3. Click on: Requests for Comments. Click on the subject file "Environmental Impact Statement Preparation Notice for the Ha'ena State Park Master Plan", then click on "Files" and "Download a copy". (Any issues accessing the document should be directed to Jonathan Real, Applications/Systems Analyst at 587-0427 or [Jonathan.C.Real@hawaii.gov](mailto:Jonathan.C.Real@hawaii.gov))

Please submit any comments by **March 23, 2015**. If no response is received by this date, we will assume your agency has no comments. If you have any questions about this request, please contact Supervising Land Agent Steve Molmen at (808) 587-0439. Thank you.

Attachments

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

Signed:   
Print Name: MARVIN MIKALA, DISTRICT LAND AGENT, KULO  
Date: MARCH 5, 2015



DAVID Y. IGE  
GOVERNOR OF HAWAII



STATE OF HAWAII  
DEPARTMENT OF LAND AND NATURAL RESOURCES

POST OFFICE BOX 621  
HONOLULU, HAWAII 96809

February 25, 2015

MEMORANDUM

TO:

DLNR Agencies:

- ☒ Div. of Aquatic Resources
- ☒ Div. of Boating & Ocean Recreation
- ☒ Engineering Division
- ☒ Div. of Forestry & Wildlife
- ☒ Div. of State Parks
- ☒ Commission on Water Resource Management
- ☒ Office of Conservation & Coastal Lands
- ☒ Land Division - Kauai District
- ☒ Historic Preservation

FROM:

Russell Y. Tsuji, Land Administrator

SUBJECT:

Environmental Impact Statement Preparation Notice for the Ha'ena State Park Master Plan  
Ha'ena State Park; Island: Kaua'i; District: Hanalei; Tax Map Keys: (4) 5-6-008:001, (4) 5-9-001:025, (4) 5-9-001:022 (portion)

LOCATION:

APPLICANT: State of Hawai'i Department of Land and Natural Resources, Division of State Parks by its consultant, PBR HAWAII & Associates, Inc.

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Please submit any comments by **March 23, 2015**. If no response is received by this date, we will assume your agency has no comments. If you have any questions about this request, please contact Supervising Land Agent Steve Molmen at (808) 587-0439. Thank you.

Attachments

- ( ) We have no objections.
- (x) We have no comments.
- ( ) Comments are attached.

Signed:

Print Name: W. Roy Hardy

Date: 3/2/15

FEB27 15PM 2:47BDR ADN

DAVID Y. IGE  
GOVERNOR OF HAWAII



STATE OF HAWAII  
DEPARTMENT OF LAND AND NATURAL RESOURCES

POST OFFICE BOX 621  
HONOLULU, HAWAII 96809

February 25, 2015

MEMORANDUM

TO:

DLNR Agencies:

- ☒ Div. of Aquatic Resources
- ☒ Div. of Boating & Ocean Recreation
- ☒ Engineering Division
- ☒ Div. of Forestry & Wildlife
- ☒ Div. of State Parks
- ☒ Commission on Water Resource Management
- ☒ Office of Conservation & Coastal Lands
- ☒ Land Division - Kauai District
- ☒ Historic Preservation

FROM:

Russell Y. Tsuji, Land Administrator

SUBJECT:

Environmental Impact Statement Preparation Notice for the Ha'ena State Park Master Plan  
Ha'ena State Park; Island: Kaua'i; District: Hanalei; Tax Map Keys: (4) 5-6-008:001, (4) 5-9-001:025, (4) 5-9-001:022 (portion)

LOCATION:

APPLICANT:

State of Hawai'i Department of Land and Natural Resources, Division of State Parks by its consultant, PBR HAWAII & Associates, Inc.

Transmitted for your review and comment on the above-referenced document. We would appreciate your comments on this document which can be found here:

1. Go to: <https://sp01.ld.dlnr.hawaii.gov/LD>
2. Login: Username: LD\Visitor Password: 0pa\$\$word0 (first and last characters are zeros)
3. Click on: Requests for Comments. Click on the subject file "Environmental Impact Statement Preparation Notice for the Ha'ena State Park Master Plan", then click on "Files" and "Download a copy". (Any issues accessing the document should be directed to Jonathan Real, Applications/Systems Analyst at 587-0427 or [Jonathan.C.Real@hawaii.gov](mailto:Jonathan.C.Real@hawaii.gov))

Please submit any comments by **March 23, 2015**. If no response is received by this date, we will assume your agency has no comments. If you have any questions about this request, please contact Supervising Land Agent Steve Molmen at (808) 587-0439. Thank you.

Attachments

- ( ) We have no objections.
- ( ) We have no comments.
- (x) Comments are attached.

Signed: /s/ W. ROY HARDY

Print Name: W. Roy Hardy, Acting Deputy Director

Date: March 16, 2015





STATE OF HAWAII  
DEPARTMENT OF LAND AND NATURAL RESOURCES  
COMMISSION ON WATER RESOURCE MANAGEMENT  
P.O. BOX 621  
HONOLULU, HAWAII 96809

March 16, 2015

REF: RFD.4138.2

TO: Russell Tsuji, Administrator  
Land Division

FROM: W. Roy Hardy, Acting Deputy Director  
Commission on Water Resource Management

SUBJECT: Haena State Park Master Plan and EIS

FILE NO.:  
TMK NO.: (4) 5-6-008:001, (4) 5-9-001:025, (4) 5-9-001:002 (portion)

Thank you for the opportunity to review the subject document. The Commission on Water Resource Management (CWRM) is the agency responsible for administering the State Water Code (Code). Under the Code, all waters of the State are held in trust for the benefit of the citizens of the State, therefore, all water use is subject to legally protected water rights. CWRM strongly promotes the efficient use of Hawaii's water resources through conservation measures and appropriate resource management. For more information, please refer to the State Water Code, Chapter 174C, Hawaii Revised Statutes, and Hawaii Administrative Rules, Chapters 13-167 to 13-171. These documents are available via the Internet at <http://www.hawaii.gov/dlnr/cwrn>.

Our comments related to water resources are checked off below.

- ☐ 1. We recommend coordination with the county to incorporate this project into the county's Water Use and Development Plan. Please contact the respective Planning Department and/or Department of Water Supply for further information.
- ☐ 2. We recommend coordination with the Engineering Division of the State Department of Land and Natural Resources to incorporate this project into the State Water Projects Plan.
- ☐ 3. We recommend coordination with the Hawaii Department of Agriculture (HDOA) to incorporate the reclassification of agricultural zoned land and the redistribution of agricultural resources into the State's Agricultural Water Use and Development Plan (AWUDP). Please contact the HDOA for more information.
- ☐ 4. We recommend that water efficient fixtures be installed and water efficient practices implemented throughout the development to reduce the increased demand on the area's freshwater resources. Reducing the water usage of a home or building may earn credit towards Leadership in Energy and Environmental Design (LEED) certification. More information on LEED certification is available at <http://www.usgbc.org/leed>. A listing of fixtures certified by the EPA as having high water efficiency can be found at <http://www.epa.gov/watersense/>.
- ☐ 5. We recommend the use of best management practices (BMP) for stormwater management to minimize the impact of the project to the existing area's hydrology while maintaining on-site infiltration and preventing polluted runoff from storm events. Stormwater management BMPs may earn credit toward LEED certification. More information on stormwater BMPs can be found at <http://hawaii.gov/dbedt/czm/initiative/lid.php>.
- ☐ 6. We recommend the use of alternative water sources, wherever practicable.
- ☐ 7. We recommend participating in the Hawaii Green Business Program, that assists and recognizes businesses that strive to operate in an environmentally and socially responsible manner. The program description can be found online at <http://energy.hawaii.gov/green-business-program>

DRF-IA 03/20/2013

Russell Tsuji, Administrator  
Page 2  
March 16, 2015

- ☐ 8. We recommend adopting landscape irrigation conservation best management practices endorsed by the Landscape Industry Council of Hawaii. These practices can be found online at [http://www.hawaiilandscape.com/wp-content/uploads/2013/04/LICH\\_Irrigation\\_Conservation\\_BMPs.pdf](http://www.hawaiilandscape.com/wp-content/uploads/2013/04/LICH_Irrigation_Conservation_BMPs.pdf)
- ☐ 9. There may be the potential for ground or surface water degradation/contamination and recommend that approvals for this project be conditioned upon a review by the State Department of Health and the developer's acceptance of any resulting requirements related to water quality.

Permits required by CWRM:

Additional information and forms are available at [http://hawaii.gov/dlnr/cwrn/info\\_permits.htm](http://hawaii.gov/dlnr/cwrn/info_permits.htm).

- ☐ 10. The proposed water supply source for the project is located in a designated water management area, and a Water Use Permit is required prior to use of water. The Water Use Permit may be conditioned on the requirement to use dual line water supply systems for new industrial and commercial developments.
- ☐ 11. A Well Construction Permit(s) is (are) required before any well construction work begins.
- ☐ 12. A Pump Installation Permit(s) is (are) required before ground water is developed as a source of supply for the project.
- ☐ 13. There is (are) well(s) located on or adjacent to this project. If wells are not planned to be used and will be affected by any new construction, they must be properly abandoned and sealed. A permit for well abandonment must be obtained.
- ☐ 14. Ground water withdrawals from this project may affect streamflows, which may require an instream flow standard amendment.
- ☐ 15. A Stream Channel Alteration Permit(s) is (are) required before any alteration(s) can be made to the bed and/or banks of a stream channel.
- ☐ 16. A Stream Diversion Works Permit(s) is (are) required before any stream diversion works is (are) constructed or altered.
- ☐ 17. A Petition to Amend the Interim Instream Flow Standard is required for any new or expanded diversion(s) of surface water.
- ☐ 18. The planned source of water for this project has not been identified in this report. Therefore, we cannot determine what permits or petitions are required from our office, or whether there are potential impacts to water resources.
- ☒ OTHER:  
Planning: The DEA should summarize the projected potable and non-potable water needs of the master plan, include the calculations used to derive the projected water needs, and identify water conservation and efficiency measures that will be implemented.

Surface Water: Need more information

If there are any questions, please contact Lenore Ohye of the Planning Branch at 587-0216 or Rebecca Alakai of the Stream Protection and Management Branch at 587-0234.

DRF-IA 06/19/2008



DAVID Y. IGE  
GOVERNOR OF HAWAII



STATE OF HAWAII  
DEPARTMENT OF LAND AND NATURAL RESOURCES

POST OFFICE BOX 621  
HONOLULU, HAWAII 96809

February 25, 2015

MEMORANDUM

DLNR Agencies:

- ☒ Div. of Aquatic Resources
- ☒ Div. of Boating & Ocean Recreation
- ☒ Engineering Division
- ☒ Div. of Forestry & Wildlife
- ☒ Div. of State Parks
- ☒ Commission on Water Resource Management
- ☒ Office of Conservation & Coastal Lands
- ☒ Land Division - Kauai District
- ☒ Historic Preservation

Russell Y. Tsuji, Land Administrator  
Environmental Impact Statement Preparation Notice for the Ha'ena State Park Master Plan  
Ha'ena State Park; Island: Kaua'i; District: Hanalei; Tax Map Keys: (4) 5-6-008:001, (4) 5-9-001:025, (4) 5-9-001:022 (portion)  
APPLICANT: State of Hawai'i Department of Land and Natural Resources, Division of State Parks by its consultant, PBR HAWAII & Associates, Inc.

Transmitted for your review and comment on the above-referenced document. We would appreciate your comments on this document which can be found here:

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Please submit any comments by **March 23, 2015**. If no response is received by this date, we will assume your agency has no comments. If you have any questions about this request, please contact Supervising Land Agent Steve Molmen at (808) 587-0439. Thank you.

Attachments

- ☐ We have no objections.
- ☐ We have no comments.
- ☒ Comments are attached.

Signed:  
Print Name:  
Date:

*Chris Imada*  
Chris S. Chang, Chief Engineer  
3/22/15

CARTY S. CHANG  
INTERIM CHAIRPERSON  
BOARD OF LAND AND NATURAL RESOURCES  
COMMISSION ON WATER RESOURCES MANAGEMENT

DANIEL S. QUINN  
INTERIM FIRST DEPUTY

W. ROY HARDY  
ACTING DEPUTY DIRECTOR - WATER

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

DEPARTMENT OF LAND AND NATURAL RESOURCES  
ENGINEERING DIVISION

LD/ Russell Y. Tsuji  
REF: EISPN for Haena State Park Master Plan  
Kauai.003

COMMENTS

- (X) We confirm that the project site, according to the Flood Insurance Rate Map (FIRM), is located in Flood Zones VE, AE, and A. The National Flood Insurance Program regulates developments within Zones VE, AE and A as indicated in bold letters below.
- ( ) Please take note that the project site, according to the Flood Insurance Rate Map (FIRM), is located in Zone \_\_\_\_.
- (X) Please note that the correct Flood Zone Designation for interior portions of the project site according to the Flood Insurance Rate Map (FIRM) X.
- (X) Please note that the project site must comply with the rules and regulations of the National Flood Insurance Program (NFIP) presented in Title 44 of the Code of Federal Regulations (44CFR), whenever development within a Special Flood Hazard Area is undertaken. If there are any questions, please contact the State NFIP Coordinator, Ms. Carol Tyau-Beam, of the Department of Land and Natural Resources, Engineering Division at (808) 587-0267.

Please be advised that 44CFR indicates the minimum standards set forth by the NFIP. Your Community's local flood ordinance may prove to be more restrictive and thus take precedence over the minimum NFIP standards. If there are questions regarding the local flood ordinances, please contact the applicable County NFIP Coordinators below:

- ( ) Mr. Mario Siu Li at (808) 768-8098 or Ms. Ardis Shaw-Kim at (808) 768-8296 of the City and County of Honolulu, Department of Planning and Permitting.
- ( ) Mr. Frank DeMarco at (808) 961-8042 of the County of Hawaii, Department of Public Works.
- ( ) Mr. Carolyn Cortez at (808) 270-7253 of the County of Maui, Department of Planning.
- (X) Mr. Stanford Iwamoto at (808) 241-4896 of the County of Kauai, Department of Public Works.
- ( ) The applicant should include project water demands and infrastructure required to meet water demands. Please note that the implementation of any State-sponsored projects requiring water service from the Honolulu Board of Water Supply system must first obtain water allocation credits from the Engineering Division before it can receive a building permit and/or water meter.
- ( ) The applicant should provide the water demands and calculations to the Engineering Division so it can be included in the State Water Projects Plan Update.
- ( ) Additional Comments: \_\_\_\_\_
- ( ) Other: \_\_\_\_\_

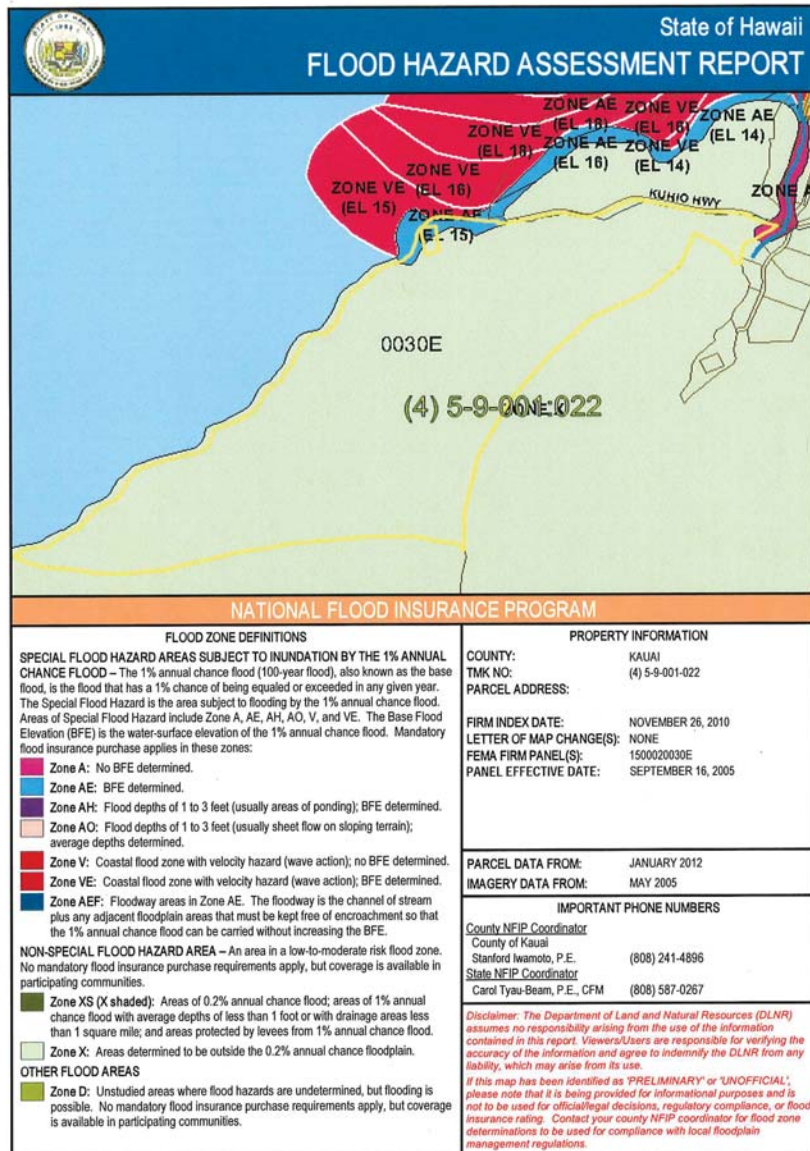
Should you have any questions, please call Mr. Dennis Imada of the Planning Branch at 587-0257.

Signed:

*Chris Imada*  
CARTY S. CHANG, CHIEF ENGINEER

Date:

3/22/15



#### PRINCIPALS

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Chairman

R. STAN DUNCAN, ASLA  
President

RUSSELL Y. I. CHUNG, FASLA, LEED® AP BD-C  
Executive Vice-President

VINCENT SHIGEKUNI  
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GRANT T. MURAKAMI, AICP, LEED® AP BD-C  
Vice-President

TOM SCHINELL, AICP  
Principal

W. FRANK BRANDT, FASLA  
Chairman Emeritus

#### ASSOCIATES

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Managing Director - Hilo

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MARC SHIMATSU, ASLA  
Associate

CATIE CULLISON, AICP  
Associate

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**KAPOLEI OFFICE**  
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1719 Haleloka Street  
Hilo, Hawaii 96720-1553  
Tel/Cel: (808) 315-6878

printed on recycled paper

May 8, 2015

Mr. Russell Y. Tsuji  
Land Administrator  
State of Hawai'i  
Department of Land and Natural Resources  
P.O. Box 621  
Honolulu, HI 96809

**SUBJECT: PROPOSED HĀ'ENA STATE PARK MASTER PLAN AND ENVIRONMENTAL IMPACT STATEMENT PREPARATION NOTICE, HĀ'ENA, KAUAI, HAWAII**

Dear Mr. Tsuji,

Thank you for your Department's letter dated March 24, 2015 regarding the above referenced Environmental Impact Statement (EIS) Preparation Notice (EISPN). As the planning consultant for the State of Hawai'i, Department of Land and Natural Resources, Division of State Parks, we acknowledge receipt of the following memorandums from the: (1) Land Division – Kaua'i District, (2) Division of Boating & Ocean Recreation, (3) Commission on Water Resource Management, and (4) Engineering Division, and provide the following responses.

#### Memorandum from Land Division – Kaua'i District

Comment: "We have no objections."

Response: We acknowledge that Land Division – Kaua'i District has no objections.

#### Memorandum from Division of Boating & Ocean Recreation

Comment: "We have no comments."

Response: We acknowledge that Division of Boating & Ocean Recreation has no comments.

#### Memorandum from Commission on Water Resource Management (REF: RFD.4138.2)

Comment:

"Planning: The DEA should summarize the projected potable and non-potable water needs of the master plan, include the calculations used to derive the projected water needs, and identify water conservation and efficiency measures that will be implemented.

Response: Because the Master Plan is conceptual in nature, the exact number of fixtures which would be needed for the calculations to derive the projected potable water needs is not available at this time. However, the Master Plan recommends a significant reduction in the number of daily visitors to the Park which will in turn reduce potable water use. Therefore, the existing four-inch waterline serving the Park is expected to be sufficient for the proposed Master Plan improvements. On the other hand, while potable water usage may actually decrease with the implementation of the Master Plan, non-potable water needs may increase. As additional lo'i are cleared, there may be more demand for irrigation water. Bioswales and more efficient use of the site's historic 'auwai are recommended to help capture and divert rainfall to desired locations including the lo'i and landscaped areas. The Master Plan also suggests redesigning the Kūhiō Highway culverts so that rainwater that passes beneath it flows more naturally and can be filtered and used in the 'auwai system. To further reduce the need for potable water, the Master Plan recommends installing rainwater catchment cisterns at the new facilities to collect rainwater from the rooftops and filtering and treating the rainwater for reuse for irrigation, toilet flushing, and other nonpotable uses. The Draft EIS will include the above discussion and the integrated

water/wastewater/drainage system proposed for the Park.

Comment:

*"Surface Water: Need more information."*

Response: The Master Plan includes recommendations for the restoration of Limahuli Stream and an integrated water/wastewater/drainage system that will be included and discussed in the Draft EIS.

**Memorandum from Engineering Division**

Comment: "We confirm that the project site, according to the Flood Insurance Rate Map (FIRM), is located in Flood Zones VE, AE, and A. The National Flood Insurance Rate Program regulates developments within Zones VE, AE and A as indicated in the bold letters below."

Response: We appreciate Engineering Division's confirmation of the flood zone designations.

Comment: "Please note that the correct Flood Zone Designation for interior portions of the project site according to the Flood Insurance Rate Map (FIRM) X."

Response: We appreciate Engineering Division's confirmation of the flood zone designations.

Comment: "Please note that the project site must comply with the rules and regulations of the National Flood Insurance Program (NFIP) presented in Title 44 of the Code of Federal Regulations (44CFR), whenever development within a Special Flood Hazard Area is undertaken. If there are any questions, please contact the State NFIP Coordinator, Ms. Carol Tyau-Beam, of the Department of Land and Natural Resources, Engineering Division at (808) 587-0267."

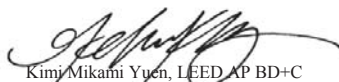
*Please be advised that 44CFR indicates the minimum standards set forth by the NFIP. Your Community's local flood ordinance may prove to be more restrictive and thus take precedence over the minimum NFIP standards. If there are questions regarding the local flood ordinances, please contact the applicable County NFIP Coordinator...Mr. Stanford Iwamoto at (808) 241-4896 of the County of Kaua'i, Department of Public Works."*

Response: We appreciate the information provided regarding the NFIP.

Thank you for contributing to the development of this document. Your comments will be included in the Environmental Impact Statement documents.

Sincerely,

PBR HAWAII

  
Kimi Mikami Yuen, LEED AP BD+C  
Senior Associate

cc: Lauren Tanaka, Division of State Parks  
Marvin Mikasa, Acting District Land Agent, DLNR Land Division - Kaua'i District  
Edward Underwood, Administrator, DLNR Division of Boating and Ocean Recreation  
W. Roy Hardy, Acting Deputy Director, Commission on Water Resource Management  
Carty Chang, Chief Engineer, DLNR Engineering Division

O:\Job26\2627.01 DLNR-Haena State Park Master Plan\EIS\Responses\DLNR Land 3-24-15.doc

DAVID Y. IGE  
GOVERNOR OF HAWAII



STATE OF HAWAII  
DEPARTMENT OF LAND AND NATURAL RESOURCES

POST OFFICE BOX 621  
HONOLULU, HAWAII 96809

CARTY S. CHANG  
INTERIM CHAIRPERSON  
BOARD OF LAND AND NATURAL RESOURCES  
COMMISSION ON WATER RESOURCE MANAGEMENT  
  
DANIEL S. QUINN  
INTERIM FIRST DEPUTY  
  
W. ROY HARDY  
ACTING DEPUTY DIRECTOR - WATER  
  
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ENGINEERING  
FORESTRY AND WILDLIFE  
HISTORIC PRESERVATION  
KAIROGLAWE ISLAND RESERVE COMMISSION  
LAND  
STATE PARKS

March 31, 2015

PBR HAWAII & Associates, Inc.  
Attention: Catie Cullison, AICP, Project Manager/Associate  
1001 Bishop Street, Suite 650  
Honolulu, HI 96813-3484

via email: [ccullison@pbrhawaii.com](mailto:ccullison@pbrhawaii.com)

State of Hawai'i, Department of Land and Natural Resources  
Division of State Parks  
Attention: Lauren Tanaka  
1151 Punchbowl St. #310  
Honolulu, HI 96804

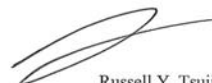
via email: [lauren.a.tanaka@hawaii.com](mailto:lauren.a.tanaka@hawaii.com)

Dear Ms. Cullison and Ms. Tanaka,

SUBJECT: Environmental Impact Statement Preparation Notice for the Ha'ena State Park Master Plan

Thank you for the opportunity to review and comment on the subject matter. In addition to the comments sent to you dated March 24 and 25, 2015, enclosed are additional comments from the Division of Aquatic Resources on the subject matter. Should you have any questions, please feel free to call Supervising Land Agent Steve Molmen at (808) 587-0439. Thank you.

Sincerely,

  
Russell Y. Tsuji  
Land Administrator

Enclosure(s)



DAVID Y. IGE  
GOVERNOR OF HAWAII



STATE OF HAWAII  
DEPARTMENT OF LAND AND NATURAL RESOURCES

POST OFFICE BOX 621  
HONOLULU, HAWAII 96809

February 25, 2015

MEMORANDUM

TO:

DLNR Agencies:

- ☒ Div. of Aquatic Resources
- ☒ Div. of Boating & Ocean Recreation
- ☒ Engineering Division
- ☒ Div. of Forestry & Wildlife
- ☒ Div. of State Parks
- ☒ Commission on Water Resource Management
- ☒ Office of Conservation & Coastal Lands
- ☒ Land Division - Kauai District
- ☒ Historic Preservation

FROM:

Russell Y. Tsuji, Land Administrator

SUBJECT:

Environmental Impact Statement Preparation Notice for the Ha'ena State Park Master Plan  
Ha'ena State Park; Island: Kauai; District: Hanalei; Tax Map Keys: (4) 5-6-008:001, (4) 5-9-001:025, (4) 5-9-001:022 (portion)

APPLICANT:

State of Hawai'i Department of Land and Natural Resources, Division of State Parks by its consultant, PBR HAWAII & Associates, Inc.

Transmitted for your review and comment on the above-referenced document. We would appreciate your comments on this document which can be found here:

1. Go to: <https://sp01.ld.dlnr.hawaii.gov/LD>
2. Login: Username: LD/Visitor Password: Opa\$\$word0 (first and last characters are zeros)
3. Click on: Requests for Comments. Click on the subject file "Environmental Impact Statement Preparation Notice for the Ha'ena State Park Master Plan", then click on "Files" and "Download a copy". (Any issues accessing the document should be directed to Jonathan Real, Applications/Systems Analyst at 587-0427 or [Jonathan.C.Real@hawaii.gov](mailto:Jonathan.C.Real@hawaii.gov))

Please submit any comments by **March 23, 2015**. If no response is received by this date, we will assume your agency has no comments. If you have any questions about this request, please contact Supervising Land Agent Steve Molmen at (808) 587-0439. Thank you.

Attachments

- ☐ We have no objections.
- ☐ We have no comments.
- ☒ Comments are attached.

Signed:

Print Name: Carty S. Chang

Date: 3/25/15

CARTY S. CHANG  
INTERIM CHAIRPERSON  
BOARD OF LAND AND NATURAL RESOURCES  
COMMISSION ON WATER RESOURCE MANAGEMENT

DANIEL S. QUINN  
INTERIM FIRST DEPUTY

W. ROY HARDY  
ACTING DEPUTY DIRECTOR - WATER

AQUATIC RESOURCES  
BOATING AND OCEAN RECREATION  
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HISTORIC PRESERVATION  
KAOIOLANE ISLAND RESERVE COMMISSION  
LAND  
STATE PARKS



DAR #5080

JKV  
BK

DAVID Y. IGE  
GOVERNOR OF HAWAII



STATE OF HAWAII  
DEPARTMENT OF LAND AND NATURAL RESOURCES

POST OFFICE BOX 621  
HONOLULU, HAWAII 96809

CARTY S. CHANG  
INTERIM CHAIRPERSON  
BOARD OF LAND AND NATURAL RESOURCES  
COMMISSION ON WATER RESOURCE MANAGEMENT

DANIEL S. QUINN  
INTERIM FIRST DEPUTY

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AQUATIC RESOURCES  
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FORESTRY AND WILDLIFE  
HISTORIC PRESERVATION  
KAOIOLANE ISLAND RESERVE COMMISSION  
LAND  
STATE PARKS

Date: 3/20/15  
DAR # 5080

MEMORANDUM

TO: Carty S. Chang, Acting Chairperson, BLNR

DATE:

FROM: Brian Kanenaka, Aquatic Biologist (bkk)

SUBJECT: EIS Prep Notice for Haena State Park Master Plan

Comment	Date Request	Receipt	Referral	Due Date
	2/25/15	3/3/15	3/5/15	3/23/15

Requested by: Russell Y. Tsuji, Land Administrator

Summary of Proposed Project

Title: EIS Prep Notice for Haena State Park Master Plan

Project by: Department of Land & Natural Resources, Division of State Parks

Location: Haena State Park, Hanalei District, Island of Kauai

**Brief Description:** The applicant is submitting an Environmental Impact Statement Preparation Notice for the Haena State Park Master Plan covering 63.7 acres of shoreline property. The existing uses of the park include beach activities, picnicking, sightseeing, and a hiking trailhead. Other uses include traditional agriculture, fishing, hula, and care of a cemetery. Proposed uses include an education and cultural center; interpretive corridor and associated interpretive devices; caretaker's cottage; baseyard; picnic area; Halau Wa'a; reconfigured parking and access; relocated lifeguard tower; ecosystem and agricultural restoration activities.

**Comments:** We recommend during the construction of the new or improved facilities (comfort stations, parking areas, etc.) the applicant will need to follow BMP's to prevent construction debris, petroleum products and other pollutants from entering near by waterways such as Limahuli Stream which borders the eastern or Hanalei side of the park and coastal waters.

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



#### PRINCIPALS

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Associate

DACHENG DONG, LEED AP  
Associate

MARC SHIMATSU, ASLA  
Associate

CATIE CULLISON, AICP  
Associate

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Fax: (808) 535-3163

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PLANNING • LANDSCAPE ARCHITECTURE • ENVIRONMENTAL STUDIES • ENTITLEMENTS / PERMITTING • GRAPHIC DESIGN

May 8, 2015

Mr. Russell Y. Tsuji  
Land Administrator  
State of Hawai'i  
Department of Land and Natural Resources  
P.O. Box 621  
Honolulu, HI 96809

**SUBJECT: PROPOSED HĀ'ENA STATE PARK MASTER PLAN AND ENVIRONMENTAL IMPACT STATEMENT PREPARATION NOTICE, HĀ'ENA, KAUA'I, HAWAII**

Dear Mr. Tsuji,

Thank you for your Department's letter dated March 31, 2015 regarding the above referenced Environmental Impact Statement Preparation Notice. As the planning consultant for the State of Hawai'i, Department of Land and Natural Resources, Division of State Parks, we appreciate your comments from the Division of Aquatic Resources (DAR), and provide the following responses.

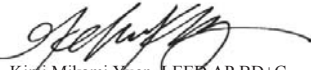
Comment: "We recommend during the construction of the new or improved facilities (comfort stations, parking areas, etc.) the applicant will need to follow BMP's to prevent construction debris, petroleum products and other pollutants from entering nearby waterways such as Limahuli Stream which borders the eastern or Hanalei side of the park and coastal waters."

Response: During construction of park elements, best management practices (BMPs) to control sediment or polluting runoff from flowing into waterways will be employed. Certain construction activities within the Park may trigger the need for a National Pollutant Discharge Elimination System permit and would be required to follow BMPs.

Thank you for contributing to the development of this document. Your comments will be included in the Environmental Impact Statement documents.

Sincerely,

PBR HAWAII



Kimi Mikami Yuen, LEED AP BD+C  
Senior Associate

cc: Lauren Tanaka, Division of State Parks  
Carty Chang, Interim Chairperson/BLNR  
Alton Miyasaka, Acting Administrator/DAR  
Brian Kanenaka, Aquatic Biologist/DAR

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DAVID Y. IGE  
GOVERNOR OF HAWAII



#### STATE OF HAWAII DEPARTMENT OF LAND AND NATURAL RESOURCES

POST OFFICE BOX 621  
HONOLULU, HAWAII 96809

April 7, 2015

PBR HAWAII & Associates, Inc.  
Attention: Catie Cullison, AICP, Project Manager/Associate  
1001 Bishop Street, Suite 650  
Honolulu, HI 96813-3484

via email: [ccullison@pbrhawaii.com](mailto:ccullison@pbrhawaii.com)

State of Hawai'i, Department of Land and Natural Resources  
Division of State Parks  
Attention: Lauren Tanaka  
1151 Punchbowl St. #310  
Honolulu, HI 96804

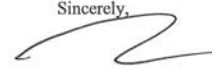
via email: [lauren.a.tanaka@hawaii.com](mailto:lauren.a.tanaka@hawaii.com)

Dear Ms. Cullison and Ms. Tanaka,

**SUBJECT: Environmental Impact Statement Preparation Notice for the Ha'ena State Park Master Plan**

Thank you for the opportunity to review and comment on the subject matter. In addition to the comments sent to you dated March 24, 25, and 31, 2015, enclosed are additional comments from the Division of Forestry & Wildlife on the subject matter. Should you have any questions, please feel free to call Supervising Land Agent Steve Molmen at (808) 587-0439. Thank you.

Sincerely,



Russell Y. Tsuji  
Land Administrator

Enclosure(s)

CARTY S. CHANG  
INTERIM CHAIRPERSON  
BOARD OF LAND AND NATURAL RESOURCES  
COMMISSION ON WATER RESOURCE MANAGEMENT  
  
DANIEL S. QUINN  
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DAVID Y. IGE  
GOVERNOR OF HAWAII



STATE OF HAWAII  
DEPARTMENT OF LAND AND NATURAL RESOURCES

POST OFFICE BOX 621  
HONOLULU, HAWAII 96809

February 25, 2015

MEMORANDUM

TO:

DLNR Agencies:

- ☒ Div. of Aquatic Resources
- ☒ Div. of Boating & Ocean Recreation
- ☒ Engineering Division
- ☒ Div. of Forestry & Wildlife
- ☒ Div. of State Parks
- ☒ Commission on Water Resource Management
- ☒ Office of Conservation & Coastal Lands
- ☒ Land Division – Kauai District
- ☒ Historic Preservation

FROM:

Russell Y. Tsuji, Land Administrator

SUBJECT:

Environmental Impact Statement Preparation Notice for the Ha'ena State Park Master Plan  
Ha'ena State Park; Island: Kaua'i; District: Hanalei; Tax Map Keys: (4) 5-6-008:001, (4) 5-9-001:025, (4) 5-9-001:022 (portion)

LOCATION:

State of Hawai'i Department of Land and Natural Resources, Division of State Parks by its consultant, PBR HAWAII & Associates, Inc.

Transmitted for your review and comment on the above-referenced document. We would appreciate your comments on this document which can be found here:

1. Go to: <https://sp01.ld.dlnr.hawaii.gov/LD>
2. Login: Username: LDVisitor Password: Opa\$\$word0 (first and last characters are zeros)
3. Click on: Requests for Comments. Click on the subject file "Environmental Impact Statement Preparation Notice for the Ha'ena State Park Master Plan", then click on "Files" and "Download a copy". (Any issues accessing the document should be directed to Jonathan Real, Applications/Systems Analyst at 587-0427 or [Jonathan.C.Real@hawaii.gov](mailto:Jonathan.C.Real@hawaii.gov))

Please submit any comments by **March 23, 2015**. If no response is received by this date, we will assume your agency has no comments. If you have any questions about this request, please contact Supervising Land Agent Steve Molmen at (808) 587-0439. Thank you.

Attachments

- ☐ We have no objections.
- ☐ We have no comments.
- ☒ Comments are attached.

Signed:

Print Name:

Date:

*Randy Kennedy*  
Randy Kennedy  
4/6/15

CARTY S. CHANG  
INTERIM CHAIRPERSON  
BOARD OF LAND AND NATURAL RESOURCES  
COMMISSIONER ON WATER RESOURCE MANAGEMENT

DANIEL S. QUINN  
INTERIM FIRST DEPUTY

W. ROY HADRY  
ACTING DEPUTY DIRECTOR - WATER

AQUATIC RESOURCES  
BOATING AND OCEAN RECREATION  
BUREAU OF CONVEYANCES  
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KAOLOAWE ISLAND RESERVE COMMISSION  
LAND  
STATE PARKS

DAVID Y. IGE  
GOVERNOR OF HAWAII



STATE OF HAWAII  
DEPARTMENT OF LAND AND NATURAL RESOURCES

POST OFFICE BOX 621  
HONOLULU, HAWAII 96809

April 6, 2015

TO:

Russell Y. Tsuji, Administrator  
Land Division

FROM:

*Randy Kennedy*  
Lisa J. Hadway, Administrator  
Division of Forestry and Wildlife

SUBJECT:

Comments on Environmental Impact Statement Preparation Notice for the Ha'ena State Park Master Plan, Kaua'i

The Division of Forestry and Wildlife (DOFAW) has received your February 25, 2015 memo and appreciates the opportunity to comment on the Environmental Impact Statement Preparation Notice for the Ha'ena State Park Master Plan (EISP) on the island of Kaua'i. It is our understanding that the proposed project encompasses a 63.7-acre area and includes potential plans for changes to the parking lot, dune restoration, an agricultural complex, loko and wetland restoration, stream restoration, and pedestrian trails among other improvements and infrastructure.

The project components and activities may have the potential to adversely impact several endangered species including but not limited to the Hawaiian hoary bat or 'Ōpe'ape'a (*Lasiurus cinereus semotus*), Hawaiian petrel or 'Ua'u (*Pterodroma sandwichensis*), Newell's shearwater or 'A'o (*Puffinus auricularis newelli*), Band-rumped storm petrel or 'Akē'akē (*Oceanodroma castro*, state-listed endangered), Hawaiian duck or Koloa (*Anas wyvilliana*), Hawaiian stilt or Ae'o (*Himantopus mexicanus knudseni*), Hawaiian moorhen or 'Alae'ula (*Gallinula galeata sandvicensis*), Hawaiian coot or 'Alae'ke'oke'o (*Fulica alai*) and the Hawaiian goose or Nēnē (*Branta sandvicensis*). Additional native species that may be impacted by the project include the White-tailed tropic bird or Koa'e kea (*Phaethon lepturus*) and the Wedge-tailed shearwater or 'Ua'u kani (*Puffinus pacificus*).

The EISP indicates that native bird habitat restoration including wetland restoration and an agricultural complex consisting of lo'i restoration may be initiated. The document further mentions that a safe harbor agreement is being considered with the U.S. Fish and Wildlife Service for the benefit of endangered species that may become attracted to such restoration efforts. Pursuant to Hawai'i Revised Statutes Chapter 195D-22, landowners may also enter into a safe harbor agreement with the state to create, restore, or improve habitats or to maintain currently unoccupied habitats that threatened or endangered species can be reasonably expected to use if the cumulative activities contemplated to be undertaken within the areas covered by the agreement are environmentally



beneficial. DOFAW is concerned that the other activities surrounding the potential areas of restoration may negatively impact the Hawaiian coot, Hawaiian moorhen, Hawaiian stilt, Hawaiian duck and Nēnē, and request that the Division of State Parks (DSP) consult with DOFAW to determine if a safe harbor agreement is appropriate.

DOFAW believes that water features planned for in the EISPN are likely to attract endangered species to the property during the project construction and maintenance period. DOFAW supports increased waterbird habitat especially on state managed lands but is concerned that endangered species may be adversely affected by the potential human wildlife interaction and construction activities. DOFAW recommends surveys by a qualified biologist be conducted to determine if nesting and/or foraging endangered species are present in the areas of planned activities. Furthermore, DOFAW requests DSP consult with us on measures to reduce impacts associated with automobiles and increased pedestrian trails that may result in increased dog use as well as larger populations of cats and rats on the project site due to trash. DOFAW recommends a trapping program be initiated throughout the park to remove non-native mammals that pose a threat to native birds and plants present on the project site. In addition, a visitor orientation with instructions on removing invasive plant seed and animals would reduce the threats to our native plants and animals.

Artificial lighting can adversely impact seabirds causing disorientation which may result in collision with manmade artifacts. In addition, during the fledging period (September – December), young seabirds attracted to artificial lighting may become grounded due to exhaustion from circling these light sources. Unable to take-off these birds become vulnerable to predation from predators such as mongoose, cats, pigs, and dogs. According to the EISPN the use of security lighting is 'likely' to be downcast to avoid negative impacts to seabirds. DOFAW recommends consultation on the use of seabird friendly lighting to ensure it is properly utilized and sufficiently seabird friendly. Furthermore, if the project lighting is determined to be unable to avoid impacts to listed seabirds due to light attraction including lighting used during the construction period, DOFAW recommends a meeting be arranged to determine if and how this project may fit into the Habitat Conservation Program currently in development for the island of Kaua'i.

White-tailed tropic birds and Wedge-tailed shearwaters may nest in habitat close to the shoreline and may utilize the cliff along the road of the project. DOFAW recommends biological surveys be conducted by a qualified biologist prior to each phase of construction to ascertain if these species are nesting in the area. If these species are detected, notification to DOFAW is requested.

Clearing of trees have the potential to negatively impact the Hawaiian hoary bat particularly during the bat pupping season when young bats are unable to flee roosting sites. It is our understanding that trees and shrubs greater than 15 feet in height will not be cut during the bat pupping season of June 1 through September 15. If clearing of vegetation above 15 feet in height is proposed to occur during this time period, DOFAW requests DPS consult with our office.

The project described includes restoration and protection of the dune ecosystem in the area. DOFAW strongly supports these measures and recommends limiting pedestrian use of the dunes and that restoration plans account for increased coastal erosion rates and sea-level rise associated with climate change.

Hawai'i Revised Statute (HRS) Chapter 195D provides for protections of threatened and endangered species under Hawai'i State law. Compliance under HRS Chapter 195D was not addressed in the EISPN document. DOFAW recommends that the DSP consult with DOFAW on potential impacts to the above mentioned species to ensure compliance under HRS 195D.

DOFAW appreciates the opportunity to provide comments on this project and request that Land Division continue to seek input from DOFAW on impacts to wildlife.

If you have any questions, please contact Ms. Afsheen Siddiqi, Conservation Initiatives Coordinator, at 808-587-0010.



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PLANNING • LANDSCAPE ARCHITECTURE • ENVIRONMENTAL STUDIES • ENTITLEMENTS / PERMITTING • GRAPHIC DESIGN

May 8, 2015

Mr. Russell Y. Tsuji  
Land Administrator  
State of Hawai'i  
Department of Land and Natural Resources  
P.O. Box 621  
Honolulu, HI 96809

**SUBJECT: PROPOSED HĀ'ENA STATE PARK MASTER PLAN AND ENVIRONMENTAL IMPACT STATEMENT PREPARATION NOTICE, HĀ'ENA, KAUA'I, HAWAII**

Dear Mr. Tsuji,

Thank you for your Department's letter dated April 7, 2015 regarding the above referenced Environmental Impact Statement (EIS) Preparation Notice (EISPN). As the planning consultant for the State of Hawai'i, Department of Land and Natural Resources, Division of State Parks (DSP), we have reviewed the memorandum from the Division of Forestry and Wildlife (DOFAW), and provide the following responses.

Comment: "DOFAW is concerned that the other activities surrounding the potential areas of restoration may negatively impact the Hawaiian coot, Hawaiian moorhen, Hawaiian stilt, Hawaiian duck and Nene, and request that the Division of State Parks (DSP) consult with DOFAW to determine if a safe harbor agreement is appropriate."

Response: As recommended, DSP will consult with DOFAW to determine if a safe harbor agreement is appropriate.

Comment: "DOFAW recommends surveys by a qualified biologist be conducted to determine if nesting and/or foraging endangered species are present in the areas of planned activities."

Response: The findings of Ron Terry and Patrick Hart of Geometric Associates, LLC survey of Hā'ena State Park will be included in the Draft EIS.

Comment: "Furthermore, DOFAW requests DSP consult with us on measures to reduce impacts associated with automobiles and increased pedestrian trails that may result in increased dog use as well as larger populations of cats and rats on the project site due to trash."

Response: As requested, DSP will consult with DOFAW. In addition, one of the Master Plan management recommendations for areas that might attract native waterbirds states:

"Household pets and feral animals such as cats and dogs prey on waterbird eggs and young hatchlings. These animals should not be allowed in taro patches. Dogs especially, should be banned because they chase and harass birds to the point at which the birds will not return to the taro lo'i. Therefore, dogs should be prevented from entering the lo'i at any time through the use of fences and other restraints."

Comment: "DOFAW recommends a trapping program be initiated throughout the park to remove non-native mammals that pose a threat to native birds and plants present on the project site."

Response: We concur with DOFAW's recommendation for a trapping program. As stated on page 4-25 of the EISPN:

"In order to minimize predation of these birds by feral animals, measures to reduce the feral cat and rat population are proposed in the Park. These measures include

Mr. Russell Y. Tsuji  
May 8, 2015  
Page 2

installation of animal-proof garbage receptacles and maintaining cooperation with the Humane Society, which at times had placed traps in the Park for removal of feral cats. Additionally, the Master Plan recommends that, before any wetland restoration activities proceed, that an analysis of the costs, benefits and liabilities associated with intentionally creating habitat for endangered waterbirds be conducted."

Comment: "In addition, a visitor orientation with instructions on removing invasive plant seed and animals would reduce the threats to our native plants and animals."

Response: It is proposed that all visitors attend an educational session upon entering the Park similar to the Hanauma Bay Nature Preserve on O'ahu. The sessions would be held at the Welcome Pavilion in the near term and at the proposed Education and Cultural Center once built. These sessions would provide a brief overview of the Park's extensive and sensitive natural and cultural resources and instruct visitors of the appropriate activities and behaviors allowed at the Park. To reduce the threats to native plants and animals, the sessions would include instructions on removing invasive plant seed and animals. General safety concerns such as ocean safety and rockfall hazards can also be included as well as up-to-the-minute ocean and weather conditions and instructions on what to do in the case of an emergency. Once visitors attend the orientation session, they will be able to enter the Park directly via the Interpretive Path.

Comment: "DOFAW recommends consultation on the use of seabird friendly lighting to ensure it is properly utilized and sufficiently seabird friendly. Furthermore, if the project lighting is determined to be unable to avoid impacts to listed seabirds due to light attraction including lighting used during the construction period, DOFAW recommends a meeting be arranged to determine if and how this project may fit into the Habitat Conservation Program currently in development for the island of Kaua'i."

Response: To address this concern, one of the Master Plan recommendations regarding flora and fauna on page 4-24 reads, "To reduce the potential for interactions between nocturnally flying threatened or endangered seabirds, any external lighting used during construction or installed at the park must be fully-shielded and downward-facing." In addition, the US Fish and Wildlife Service requested the additional requirement that the light shields be completely opaque which will be added to the Draft EIS and Hā'ena State Park Master Plan report. As recommended, DSP will consult with DOFAW before the design and selection of the proposed security lighting.

Comment: "White-tailed tropic birds and Wedge-tailed shearwaters may nest in habitat close to the shoreline and may utilize the cliff along the road of the project. DOFAW recommends biological surveys be conducted by a qualified biologist prior to each phase of construction to ascertain if these species are nesting in the area. If these species are detected, notification to DOFAW is requested."

Response: As recommended, biological surveys will be conducted by a qualified biologist prior to each phase of construction to ascertain if these species are nesting in the area.

Comment: "Clearing of trees have the potential to negatively impact the Hawaiian hoary bat particularly during the bat pupping season when young bats are unable to flee roosting sites. It is our understanding that trees and shrubs greater than 15 feet in height will not be cut during the bat pupping season of June 1 through September 15. If clearing of vegetation above 15 feet in height is proposed to occur during this time period, DOFAW requests DSP consult with our office."

Response: In order to address this concern, one of the Master Plan management recommendations regarding flora and fauna on page 4-24 reads, "In order to prevent impacts to the 'ōpe'ape'a or Hawaiian hoary bat, State Parks should restrict any cutting of large shrubs or trees to periods outside the June 1 through September 15 breeding season." As requested, DSP will consult with DOFAW if clearing of vegetation above 15 feet in height is proposed to occur during the bat



Mr. Russell Y. Tsuji  
May 8, 2015  
Page 3

pupping season of June 1 through September 15.

Comment: "The project described includes restoration and protection of the dune ecosystem in the area. DOFAW strongly supports these measures and recommends limiting pedestrian use of the dunes and that restoration plans account for increased coastal erosion rates and sea-level rise associated with climate change."

Response: We appreciate DOFAW's support for the proposed restoration and protection of the dune ecosystem in Hā'ena State Park. We will also add the recommendation to account for increased coastal erosion rates and sea-level rise associated climate change in the Draft EIS.

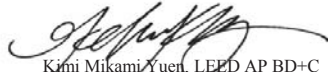
Comment: "Hawai'i Revised Statute (HRS) Chapter 195D provides for protections of threatened and endangered species under Hawai'i State law. Compliance under HRS Chapter 195D was not addressed in the EISPN document. DOFAW recommends that the DSP consult with DOFAW on potential impacts to the above mentioned species to ensure compliance under HRS 195D."

Response: As recommended, DSP will consult with DOFAW on potential impacts to the above mentioned species to ensure compliance under HRS 195D.

Thank you for contributing to the development of this document. Your comments will be included in the Environmental Impact Statement documents.

Sincerely,

PBR HAWAII

  
Kimi Mikami Yuen, LEED AP BD+C  
Senior Associate

cc: Lauren Tanaka, Division of State Parks  
Lisa Hadway, Administrator, DLNR DOFAW  
Randall Kennedy, DLNR DOFAW

O:\Job26\2627.01 DLNR-Haena State Park Master Plan\EIS\EISPN\Responses\DLNR DOFAW 4-7-15.doc

DAVID Y. IGE  
GOVERNOR OF HAWAII



STATE OF HAWAII  
DEPARTMENT OF LAND AND NATURAL RESOURCES

POST OFFICE BOX 621  
HONOLULU, HAWAII 96809

March 25, 2015

PBR HAWAII & Associates, Inc.  
Attention: Catie Cullison, AICP, Project Manager/Associate  
1001 Bishop Street, Suite 650  
Honolulu, HI 96813-3484

via email: [ccullison@pbrhawaii.com](mailto:ccullison@pbrhawaii.com)

State of Hawai'i, Department of Land and Natural Resources  
Division of State Parks  
Attention: Lauren Tanaka  
1151 Punchbowl St. #310  
Honolulu, HI 96804


via email: [lauren.a.tanaka@hawaii.com](mailto:lauren.a.tanaka@hawaii.com)

Dear Ms. Cullison and Ms. Tanaka,

SUBJECT: Environmental Impact Statement Preparation Notice for the Ha'ena State Park Master Plan

Thank you for the opportunity to review and comment on the subject matter. In addition to the comments sent to you dated March 24, 2015, enclosed are additional comments from the Office on Conservation and Coastal Lands on the subject matter. Should you have any questions, please feel free to call Supervising Land Agent Steve Molmen at (808) 587-0439. Thank you.

Sincerely,

  
Russell Y. Tsuji  
Land Administrator

Enclosure(s)

DAVID Y. IGE  
GOVERNOR OF HAWAII



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

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INTERIM CHAIRPERSON  
BOARD OF LAND AND NATURAL RESOURCES  
COMMISSION ON WATER RESOURCE MANAGEMENT

DANIEL S. QUINN  
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W. ROY HARDY  
ACTING DEPUTY DIRECTOR - WATER

AQUATIC RESOURCES  
BOATING AND OCEAN RECREATION  
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CONSERVATION AND COASTAL LANDS  
CONSERVATION AND RESOURCES ENFORCEMENT  
(ENGINEERING)  
FORESTRY AND WILDLIFE  
HISTORIC PRESERVATION  
KAIHOLELAWE ISLAND RESERVE COMMISSION  
LAND  
STATE PARKS

COR: KA-15-135

MAR 23 2015

REF: OCCL: AJR

RUSSELL Y. TSUJI, ADMINISTRATOR  
LAND DIVISION  
DEPARTMENT OF LAND AND NATURAL RESOURCES  
P.O. Box 621  
HONOLULU, HI 96809

SUBJECT: COMMENTS ON THE HĀ'ENA STATE PARK MASTER PLAN ENVIRONMENTAL  
IMPACT STATEMENT PREPARATION NOTICE (EISPN)  
Ka'ilio Point, Hanalei District, Island of Kaua'i  
TMKs: (4) 5-6-008:001, (4) 5-9-001:025 and (4) 5-9-001:022

The Office of Conservation and Coastal Lands (OCCL) is in receipt of your letter and corresponding documents, dated *February 27, 2015*, which outlines the Division of State Parks Environmental Impact Statement Preparation Notice (EISPN) for the Hā'ena State Park Master Plan. The park is located on the northern coast of the Island of Kaua'i and includes Kē'ē Beach and Bay, and Ka'ilio Point. For reference the subject parcels are located within the State Land Use Conservation District *Resource* and *Limited* Subzones.

The OCCL recognizes that a previous Conservation District Use Application (CDUP) **KA-1373** was provided to the Division of State Parks (SP) to develop Hā'ena State Park in 1983. Based on the supplied EISPN, the SP is proposing to conduct a number of improvements such as, but not limited to: education and cultural center, interpretive corridor and associated interpretive devices, caretaker's cottage, baseyard, picnic area, Hālau Wa'a, reconfigured parking and access, relocated lifeguard tower, and ecosystem and agricultural restoration activities.

Hā'ena State Park is culturally and ecologically significant and its beaches and scenic resources make it a popular visitor attraction. This mix of recreational, cultural and environmental resources gives rise to the need to develop a conscientious and comprehensive master plan in order to balance conservation, recreation, cultural interpretation, and preservation.

At this time the OCCL is requesting that once the draft plan has been established, and all proposed land use elements have been determined, that the management authority (e.g., State Parks) contact this office to determine the appropriate permitting requirements for all master plan elements. Once the proposed land uses have been more thoroughly specified in the Draft EIS, we will provide the appropriate regulatory framework in which to apply through this office to conduct the proposed activities.

Hā'ena State Park - EISPN

COR: KA-15-135

Should you have any questions concerning this correspondence letter, please feel free to contact Alex J. Roy, M.Sc. of our Office of Conservation and Coastal Lands staff at 808-587-0316.

Sincerely,

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

CC: Chairperson  
County of Kaua'i - Planning Department  
State Parks



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May 8, 2015

Mr. Russell Y. Tsuji  
Land Administrator  
State of Hawai'i  
Department of Land and Natural Resources  
P.O. Box 621  
Honolulu, HI 96809

**SUBJECT: PROPOSED HĀ'ENA STATE PARK MASTER PLAN AND ENVIRONMENTAL IMPACT STATEMENT PREPARATION NOTICE, HĀ'ENA, KAUA'I, HAWAII**

Dear Mr. Tsuji,

Thank you for your Department's letter dated March 25, 2015 regarding the above referenced Environmental Impact Statement Preparation Notice. As the planning consultant for the State of Hawai'i, Department of Land and Natural Resources, Division of State Parks, we acknowledge receipt of the letter from the Office of Conservation and Coastal Lands (OCCL), and provide the following responses.

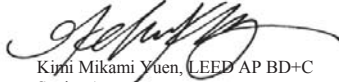
Comment: "At this time the OCCL is requesting that once the draft plan has been established, and all proposed land use elements have been determined, that the management authority (e.g., State Parks) contact this office to determine the appropriate permitting requirements for all master plan elements. Once the proposed land uses have been more thoroughly specified in the Draft EIS, we will provide the appropriate regulatory framework in which to apply through this office to conduct the proposed activities."

Response: By your letter and this response the Division of State Parks has been notified to contact OCCL to determine the appropriate permitting requirements for all master plan elements. We appreciate your comments and willingness to help State Parks navigate the required permits.

Thank you for contributing to the development of this document. Your comments will be included in the Environmental Impact Statement documents.

Sincerely,

PBR HAWAII

  
Kimi Mikami Yuen, LEED AP BD+C  
Senior Associate

cc: Lauren Tanaka, Division of State Parks  
Samuel J. Lemmo, Administrator, DLNR OCCL

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DAVID Y. IGE  
GOVERNOR



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

April 1, 2015

FORD N. FUCHIGAMI  
DIRECTOR

Deputy Directors  
JADE T. BUTAY  
ROSS M. HIGASHI  
EDWIN H. SNIFFEN  
DARRELL T. YOUNG

IN REPLY REFER TO:  
STP 8.1782

Ms. Catie Cullison, AICP  
Project Manager/Associate  
PBR HAWAII & Associates, Inc.  
1001 Bishop Street, Suite 650  
Honolulu, Hawaii 96813-3484

Dear Ms. Cullison:

Subject: Haena State Park Master Plan  
Environmental Impact Statement Preparation Notice (EISPN)  
Haena, Kauai, Hawaii  
TMK: (4) 5-6-008:001

Our Department of Transportation's (DOT) comments on the subject project are as follows:

#### Airports Division

The Department of Land and Natural Resources (DLNR) should file a Federal Aviation Administration (FAA) Form 7480-1 Notice of Landing Area Proposal, for the proposed DLNR Baseyard/Helicopter Landing Area. The form can be accessed at the following website:  
<http://www.faa.gov/forms/>

#### Highways Division

The DOT Highways Division is still conducting its review and has not yet provided comments. The Statewide Transportation Planning Office will inform you of any further DOT comments once received.

Ms. Catie Cullison, AICP  
April 1, 2015  
Page 2

STP 8.1782

If there are any questions, please contact Mr. Norren Kato of the DOT Statewide Transportation Planning Office at telephone number (808) 831-7976.

Sincerely,



FORD N. FUCHIGAMI  
Director of Transportation

c: Gordon Wong, Federal Aviation Administration



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Tel./Cell: (808) 315-6878

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May 8, 2015

Mr. Ford N. Fuchigami, Director  
State of Hawai'i  
Department of Transportation  
869 Punchbowl Street  
Honolulu, HI 96813-5097

**SUBJECT: PROPOSED HÄ'ENA STATE PARK MASTER PLAN AND ENVIRONMENTAL IMPACT STATEMENT PREPARATION NOTICE, HÄ'ENA, KAUA'I, HAWAII**

Dear Mr. Fuchigami,

Thank you for your agency's letter dated April 1, 2015 (your Reference No. STP 8.1782) regarding the above referenced Environmental Impact Statement (EIS) Preparation Notice (EISPN). As the planning consultant for the State of Hawai'i, Department of Land and Natural Resources (DLNR), Division of State Parks, we appreciate the comments from the Airports and Highways Divisions and provide the following responses.

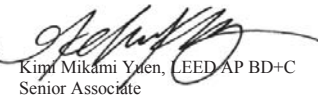
Airports Division Comment: We appreciate the link to FAA Form 7480-1 and by way of this letter, the DLNR Division of State Parks has been notified that it should file the form for the proposed DLNR Helipad.

Highways Division Comment: It is acknowledged that the DOT Highways Division is still conducting its review and that the Statewide Transportation Planning Office may be providing comments in the future.

Thank you for contributing to the development of this document. Your comments will be included in the Environmental Impact Statement documents.

Sincerely,

PBR HAWAII



Kimi Mikami Yuen, LEED AP BD+C  
Senior Associate

cc: Lauren Tanaka, Division of State Parks

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PHONE (808) 594-1888



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OFFICE OF HAWAIIAN AFFAIRS  
580 N. NIMITZ HWY., SUITE 200  
HONOLULU, HAWAII 96817

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STATE PARKS DIV FAX (808) 594-1938

15 APR 10 12:55

DEPT OF LAND &  
NATURAL RESOURCES

HRD15-3774E

April 1, 2015

Lauren Tanaka  
Department of Land and Natural Resources, Division of State Parks  
1151 Punchbowl Street #310  
Honolulu, HI 96804

Re: Environmental Impact Statement Preparation Notice for Hā'ena State Park Master Plan  
Hā'ena Ahupua'a, Halele'a Moku, Kaua'i Moku  
TMK: (4) 5-6-008:001, (4) 5-9-001:025, (4) 5-9-001:022

Aloha e Lauren Tanaka:

The Office of Hawaiian Affairs (OHA) is in receipt of your February 22, 2015 letter seeking preliminary comments on the above environmental impact statement preparation notice (EISPN) for the goals and vision of the 63.7 acres of the Hā'ena State Park Master Plan (project). The project area is composed of three parcels, two owned by the State of Hawai'i and a small parcel owned by the County of Kaua'i. The county's parcel includes Ka Ulu a Paoa heiau and Ka Ahu a Laka hula platform. The project is entirely within the "Hā'ena Archaeological Complex," which is listed in the Hawai'i and National Register of Historic Places.

In 2008, Department of Land and Natural Resources, Division of State Parks, contracted PBR Hawai'i to complete the project, which began in 2001. Many community meetings were held in Hanalei and Hā'ena, with nā kūpuna and other stakeholders. In 2010, the State Parks staff and the thirty-two member Master Plan Advisory Committee developed the goals and vision of the project and in October of 2010, the community preferred plan was presented to the Board of Land and Natural Resources, requesting that the board accept recommendations proposed in the draft master plan and endorse preparation of an EIS.

Lauren Tanaka  
April 1, 2015  
Page 2

The current master plan, which emphasizes the cultural and historic significance of Hā'ena, utilizes existing and previously prepared data, including updated historic, cultural, and ecological information with continued community input. The five main goals of the project are:

- Recognize that the entire park is culturally significant;
- Restore Hā'ena as a living place – cleanse, restore, and revive cultural practices;
- Reconnect the original families and the community to their wahi pana, celebrated or legendary place;
- Uphold the State Parks' responsibility for the public's safety, access, and welfare; and
- Balance the provision of recreational opportunities with the preservation of the significant natural and cultural resources.

Based on our review of the EISPN and the master planning process that has already occurred, OHA has no comments for the preparation of the EIS. As the project moves forward, we look forward to reviewing the draft EIS. OHA does request assurances that should iwi kupuna or Native Hawaiian cultural deposits be identified during any ground altering activities, all work will immediately cease and the appropriate agencies, including OHA, will be contacted pursuant to applicable law.

Thank you for the opportunity to submit comments on this EISPN. Should you have any questions, please call Kathryn Keala at (808) 594-1848 or [kathyk@oha.org](mailto: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: Dan Ahuna, OHA Kaua'i & Ni'ihau Trustee  
Kaliko Santos, OHA Kaua'i Community Outreach Coordinator (via email)



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PLANNING • LANDSCAPE ARCHITECTURE • ENVIRONMENTAL STUDIES • ENTITLEMENTS / PERMITTING • GRAPHIC DESIGN

May 8, 2015

Mr. Kamana'opono M. Crabbe, Ph.D.  
Ka Poughana, Chief Executive Officer  
State of Hawai'i  
Office of Hawaiian Affairs  
560 N. Nimitz Highway, Suite 200  
Honolulu, HI 96817

**SUBJECT: PROPOSED HĀ'ENA STATE PARK MASTER PLAN AND  
ENVIRONMENTAL IMPACT STATEMENT PREPARATION  
NOTICE, HĀ'ENA, KAUA'I, HAWAII**

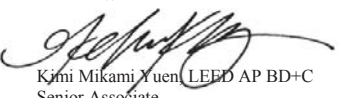
Dear Mr. Crabbe,

Thank you for your letter dated April 1, 2015 (your Reference No. HRD15-3774E) regarding the above referenced Environmental Impact Statement (EIS) Preparation Notice (EISPN). As the planning consultant for the State of Hawai'i, Department of Land and Natural Resources, Division of State Parks, we are acknowledging that the Office of Hawaiian Affairs (OHA) has no comments for the preparation of the EIS, and that you will need a copy of the Draft EIS to review. Please be assured that should iwi kupuna or Native Hawaiian cultural deposits be identified during any ground altering activities, all work will immediately cease and appropriate agencies, including OHA, will be contacted pursuant to applicable law.

Thank you for contributing to the development of this document. Your comments will be included in the Environmental Impact Statement documents.

Sincerely,

PBR HAWAII

  
Kimi Mikami Yuen, LEED AP BD+C  
Senior Associate

cc: Lauren Tanaka, Division of State Parks

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-----Original Message-----

From: Paahana, Jessie K POH [<mailto:Jessie.K.Paahana@usace.army.mil>]

Sent: Friday, March 13, 2015 10:43 AM

To: sysadmin

Subject: EISPN Comments for the Haena State Park Master Plan, Haena, Island of Kauai, Hawaii (UNCLASSIFIED)

Classification: UNCLASSIFIED

Caveats: NONE

Attention: Catie Cullison

The Honolulu District U.S. Army Corps of Engineers Regulatory Office has received your Environmental Impact Statement Preparation Notice for the Haena State Park Master Plan dated February 22, 2015.

You are encouraged to consult directly with the Corps for all future plans that may impact waters of the U.S. at the project site. Waters of the U.S. may include, but are not limited to both natural and manmade streams, anchialine ponds, wetlands, lo'i and the Pacific Ocean. Certain activities such as stream restoration, construction of retaining walls and rock revetments, bank and shoreline stabilization, grading and vegetation removal may result in the placement of fill material into a water of the U.S. In accordance with Section 404 of the Clean Water Act, prior authorization is required from the Corps for any such activities that result in the placement of fill into a water of the U.S. In addition, in accordance with Section 10 of the Rivers & Harbors Act of 1899, prior authorization from the Corps is required for construction activities or structures in, over, under or affecting navigable waters (e.g. Pacific Ocean).

Should your project involve work as described above, please contact this office at 808-835-4303 or via email at [CEPOH-RO@usace.army.mil](mailto:CEPOH-RO@usace.army.mil).

Thank you,  
Jessie

Jessie K Paahana, Regulatory Biologist  
Honolulu District, US Army Corps of Engineers Regulatory Office Ft. Shafter, Bldg. 214  
ph: 808.835.4107

For more information regarding the Regulatory Program at the Honolulu District, please visit our website at <http://www.poh.usace.army.mil/Missions/Regulatory.aspx>.

You are encouraged to provide comments on your experience with the Honolulu District Regulatory Branch by accessing our web-based customer survey form at [http://corpsmapu.usace.army.mil/cm\\_apex/f?p=136:4:0](http://corpsmapu.usace.army.mil/cm_apex/f?p=136:4:0).

Classification: UNCLASSIFIED

Caveats: NONE



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PLANNING • LANDSCAPE ARCHITECTURE • ENVIRONMENTAL STUDIES • ENTITLEMENTS / PERMITTING • GRAPHIC DESIGN

May 8, 2015

Ms. Jessie K. Pa'ahana, Regulatory Biologist  
Honolulu District  
US Army Corps of Engineers Regulatory Office  
Building 214  
Fort Shafter, HI 96858

**SUBJECT: PROPOSED HĀ'ENA STATE PARK MASTER PLAN AND  
ENVIRONMENTAL IMPACT STATEMENT PREPARATION  
NOTICE, HĀ'ENA, KAUA'I, HAWAII**

Dear Ms. Pa'ahana,

Thank you for your email dated March 13, 2015 regarding the above referenced Environmental Impact Statement (EIS) Preparation Notice (EISPN). As the planning consultant for the State of Hawai'i, Department of Land and Natural Resources, Division of State Parks, we acknowledge the following comments from the U.S. Army Corps of Engineers (USACOE) and provide the following responses.

#### Comment:

*You are encouraged to consult directly with the Corps for all future plans that may impact waters of the U.S. at the project site. Waters of the U.S. may include, but are not limited to both natural and manmade streams, anchialine ponds, wetlands, lo'i and the Pacific Ocean. Certain activities such as stream restoration, construction of retaining walls and rock revetments, bank and shoreline stabilization, grading and vegetation removal may result in the placement of fill material into a water of the U.S. In accordance with Section 404 of the Clean Water Act, prior authorization is required from the Corps for any such activities that result in the placement of fill into a water of the U.S. In addition, in accordance with Section 10 of the Rivers & Harbors Act of 1899, prior authorization from the Corps is required for construction activities or structures in, over, under or affecting navigable waters (e.g. Pacific Ocean).*

*Should your project involve work as described above, please contact this office at 808-835-4303 or via email at [CEPOH-RO@usace.army.mil](mailto:CEPOH-RO@usace.army.mil).*

**Response:** We greatly appreciate the offer to consult with the USACOE for all future plans that may impact the "Waters of the U.S." State Parks will seek coordination with USACOE on any future activities or improvements that may impact any "Waters of the U.S."

Thank you for contributing to the development of this document. Your comments will be included in the Environmental Impact Statement documents.

Ms. Jessie K. Pa'ahana  
May 8, 2015  
Page 2

Sincerely,

PBR HAWAII

Kimi Mikami Yuen, LEED AP BD+C  
Senior Associate

cc: Lauren Tanaka, Division of State Parks

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## United States Department of the Interior

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



MAR 31 2015

In Reply Refer To:  
2015-TA-0180

Catie Cullison  
PBR Hawaii & Associates, Inc.  
1001 Bishop Street, Suite 650  
Honolulu, Hawaii 96813

Subject: Technical Assistance for Haena State Park Master Plan, Kauai

Dear Ms. Cullison:

The U.S. Fish and Wildlife Service (Service) received your letter, dated February 22, 2015, requesting our comments on the Environmental Impact Statement Preparation Notice (EISPN) for the Haena State Park Master Plan on the island of Kauai. The Master Plan includes management and development strategies that balance historic, cultural, and ecological resources with recreational and community uses of the Haena State Park (hereafter referred to as the Park), encompassing approximately 64 acres on the coast.

We provided comments during early development of the Master Plan and draft EIS in August 2008 (Service File 2008-TA-0305). In our letter, we recommended the following to assist you in your project planning: 1) to involve community members involved in the development of the Community Based Marine Management Area (CMMA) in the planning of Master Plan and ensure compatibility with CMMA goals, 2) to conduct surveys for presence of listed flora and fauna species in project area, and 3) shielding of exterior lighting to avoid impacts to the federally threatened Newell's shearwater (*Puffinus auricularis newelli*), the endangered Hawaiian petrel (*Pterodroma sandwichensis*), and a candidate for listing the band-rumped storm-petrel (*Oceanodroma castro*). The Service appreciates the opportunity to continue to provide technical assistance throughout the planning process so that impacts to trust resources can be avoided.

Based on a search of our databases, we confirm that several other federally listed species identified in the EISPN occur in the Park area including: the threatened green sea turtle (*Chelonia mydas*); the endangered Hawaiian monk seal (*Monachus schauinslandi*); Hawaiian hoary bat (*Lasiurus cinereus semotus*); Hawaiian black-necked stilt (*Himantopus mexicanus knudseni*), Hawaiian moohen (*Gallinula chloropus sandvicensis*), Hawaiian coot (*Fulica alai*), and Hawaiian duck (*Anas wyvilliana*) (hereafter collectively referred to as Hawaiian waterbirds); and the Hawaiian goose (*Branta sandvicensis*). Critical habitat for *Peucedanum sandwicense* is located near Haena State Park in the Napali Coast State Wilderness Park. We offer the following

Ms. Catie Cullison

2

comments to assist you in the preparation of the Master Plan and draft EIS under the authorities of the Endangered Species Act of 1973 (ESA), as amended (16 U.S.C 1531 *et seq.*).

According to your letter, the updated draft Master Plan was developed based on input from a 32-member Master Plan Advisory Committee (MPAC) including individuals involved in the CMMA. Draft EIS documents will include MPAC and community meeting notes. We acknowledge your efforts to engage the local community in marine conservation practices.

You state that no *Peucedanum sandwicense* was found in or near the Park during surveys conducted in 2009. To reduce potential human disturbance to botanical resources in the Park, the EISPN states that the number of visitors per day will be limited to 900 (half of the current visitation during summer months), and visitors will be educated on resources and appropriate activities allowed at the Park.

To avoid impacts to seabirds, the EISPN states that the Master Plan will not include parking lot lighting, and that any security lighting deemed necessary for safety will be shielded downward. We recommend that the light shields be completely opaque, sufficiently large, and positioned so that the bulb is only visible from below using the lowest wattage bulb possible.

In addition to potential affects to seabirds, artificial lighting can deter adult sea turtles from nesting on beaches and disorient hatchlings by affecting their ability to find the ocean. We acknowledge the EISPN includes practices to minimize human disturbance to the natural resources such as reduced Park visitation, signage, and education programs. We recommend that the design of lighting plans and management practices address ambient lighting of beach habitats, and recommend that no light from the Park be visible from the beach.

The National Marine Fisheries Service (NMFS) consults on potential impacts to monk seals, both in their on-shore and ocean habitats. Therefore, we did not review the proposed project for potential project impacts to monk seals. We recommend that you contact NMFS regarding the presence of monk seals in the area and potential impacts to the species from the project.

The Hawaiian hoary bat roosts in both exotic and native woody vegetation and, while foraging, will leave young unattended in "nursery" trees and shrubs when they forage. The EISPN states that in order to avoid impacts to bats, clearing of woody vegetation taller than 15 feet will not be conducted during the bat birthing and pup rearing season, between June 1 and September 15.

Hawaiian waterbirds and Hawaiian geese are likely to use the taro fields and wetlands located at the Park. If attracted to sub-optimal habitat, these species may suffer adverse impacts, such as predation and reduced reproductive success. We acknowledge that the Master Plan proposes measures to reduce potential predation of Hawaiian waterbirds and Hawaiian geese by feral cats and rats, including feral cat removal. Additionally, the EISPN states that MPAC is interested in restoring the wetlands areas at the Park to improve habitat for Hawaiian waterbirds. The Master Plan recommends an analysis of the costs, benefits, and liabilities associated with intentionally creating habitat for endangered waterbirds be conducted prior to any wetland restoration activities. We recommend MPAC and State Parks work with our office prior to any wetland restoration activities so that we may assist them in developing measures to avoid impacts to Hawaiian waterbirds and Hawaiian geese.



According to the EISPN, State Parks will evaluate if wetland resources are present in the vicinity of proposed construction and grading activities. Should water, hydric soils, or wetland plant be present, a wetlands delineation study will be conducted to locate boundaries of resource with verification from the U.S. Army Corp of Engineers. We recommend you incorporate the attached best management practices into your project description to avoid and minimize impacts to water resources that have the potential to occur during construction and grading activities.

The draft EIS should address all potential impacts to federally listed species and candidate species, and should outline conservation measures to avoid and minimize these impacts. If it is determined that the proposed project may affect federally listed species, we recommend you contact our office for further technical assistance.

We appreciate your efforts to conserve endangered species. If you have questions regarding our comments, please contact Adam Griesemer, Endangered Species Biologist (phone: 808-285-8261, email: adam\_griesemer@fws.gov).

Sincerely,

3/31/2015

X Vickie Caraway

Vickie Caraway (for)

Signed by: U.S. Fish and Wildlife Service

Aaron Nadig  
Island Team Manager  
Oahu, Kauai, Northwestern Hawaiian  
Islands, and American Samoa

cc:

Lauren Tanaka, Division of State Parks

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

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

1. Authorized dredging and filling-related activities that may result in the temporary or permanent loss of aquatic habitats should be designed to avoid indirect, negative impacts to aquatic habitats beyond the planned project area.
2. Dredging/filling in the marine environment should be scheduled to avoid coral spawning and recruitment periods, and sea turtle nesting and hatching periods. Because these periods are variable throughout the Pacific islands, we recommend contacting the relevant local, state, or federal fish and wildlife resource agency for site specific guidance.
3. Turbidity and siltation from project-related work should be minimized and contained within the project area by silt containment devices and curtailing work during flooding or adverse tidal and weather conditions. BMPs should be maintained for the life of the construction period until turbidity and siltation within the project area is stabilized. All project construction-related debris and sediment containment devices should be removed and disposed of at an approved site.
4. All project construction-related materials and equipment (dredges, vessels, backhoes, silt curtains, etc.) to be placed in an aquatic environment should be inspected for pollutants including, but not limited to; marine fouling organisms, grease, oil, etc., and cleaned to remove pollutants prior to use. Project related activities should not result in any debris disposal, non-native species introductions, or attraction of non-native pests to the affected or adjacent aquatic or terrestrial habitats. Implementing both a litter-control plan and a Hazard Analysis and Critical Control Point plan (HACCP – see <http://www.haccp-nrm.org/Wizard/default.asp>) can help to prevent attraction and introduction of non-native species.
5. Project construction-related materials (fill, revetment rock, pipe, etc.) should not be stockpiled in, or in close proximity to aquatic habitats and should be protected from erosion (e.g., with filter fabric, etc.), to prevent materials from being carried into waters by wind, rain, or high surf.
6. Fueling of project-related vehicles and equipment should take place away from the aquatic environment and a contingency plan to control petroleum products accidentally spilled during the project should be developed. The plan should be retained on site with the person responsible for compliance with the plan. Absorbent pads and containment booms should be stored on-site to facilitate the clean-up of accidental petroleum releases.
7. All deliberately exposed soil or under-layer materials used in the project near water should be protected from erosion and stabilized as soon as possible with geotextile, filter fabric or native or non-invasive vegetation matting, hydro-seeding, etc.



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PLANNING • LANDSCAPE ARCHITECTURE • ENVIRONMENTAL STUDIES • ENTITLEMENTS / PERMITTING • GRAPHIC DESIGN

May 8, 2015

Ms. Vickie Caraway  
Mr. Aaron Nadig  
United States Department of the Interior  
Fish and Wildlife Service  
Pacific Island Fish and Wildlife Office  
300 Ala Moana Boulevard, Room 3-122  
Honolulu, HI 96850

**SUBJECT: PROPOSED HĀ'ENA STATE PARK MASTER PLAN AND ENVIRONMENTAL IMPACT STATEMENT PREPARATION NOTICE, HĀ'ENA, KAUA'I, HAWAII**

Dear Ms. Caraway and Mr. Nadig,

Thank you for your letter dated March 31, 2015 (your Reference No. 2015-TA-0180) regarding the above referenced Environmental Impact Statement (EIS) Preparation Notice (EISPN). As the planning consultant for the State of Hawai'i, Department of Land and Natural Resources, Division of State Parks, we have reviewed your letter and provide the following responses to your comments.

#### Comment:

*"To avoid impacts to seabirds, the EISPN states that the Master Plan will not include parking lot lighting, and that any security lighting deemed necessary for safety will be shielded downward. We recommend that the light shields be completely opaque, sufficiently large, and positioned so that the bulb is only visible from below using the lowest wattage bulb possible."*

**Response:** We greatly appreciate the recommendations in the selection and design of any exterior lighting fixtures and will include your recommendations in the Draft EIS. We will also update the recommendations in the Hā'ena State Park Master Plan report.

#### Comment:

*"We recommend that the design of lighting plans and management practices address ambient lighting of beach habitats, and recommend that no light from the Park be visible from the beach."*

**Response:** To address the potential impact that any proposed security lighting may have on deterring adult sea turtles from nesting on beaches and disorienting hatchlings, the Draft EIS will state that no permanent lighting from the Park be visible from the beach. We will also add this to the recommendations in the Hā'ena State Park Master Plan report.

#### Comment:

*"We recommend that you contact NMFS regarding the presence of monk seals in the area and potential impacts to the species from the project."*

Ms. Caraway and Mr. Nadig  
May 8, 2015  
Page 2

**Response:** As recommended, NMFS will be contacted.

#### Comment:

*"We recommend MPAC and State Parks work with our office prior to any wetland restoration activities so that we may assist them in developing measures to avoid impacts to Hawaiian waterbirds and Hawaiian geese."*

**Response:** As recommended, State Parks will coordinate with both the MPAC and the USFWS prior to any wetland restoration activities.

#### Comment:

*"Should water, hydric soils, or wetland plant be present, a wetlands delineation study will be conducted to locate boundaries of resource with verification from the U.S. Army Corp of Engineers. We recommend you incorporate the attached best management practices into your project description to avoid and minimize impacts to water resources that have the potential to occur during construction and grading activities."*

**Response:** The Draft EIS will note that if any wetland resources are suspected in the vicinity of proposed construction and grading activities, a wetlands delineation study will be conducted to locate boundaries of the wetland(s) with verification from the U.S. Army Corps of Engineers. We appreciate the attachment on best management practices and will cite it in the appropriate section of the Draft EIS and Hā'ena State Park Master Plan report.

#### Comment:

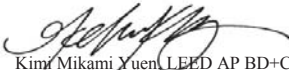
*"The draft EIS should address all potential impacts to federally listed species and candidate species, and should outline conservation measures to avoid and minimize these impacts. If it is determined that the proposed project may affect federally listed species, we recommend you contact our office for further technical assistance."*

**Response:** We appreciate your suggestion and will attempt to address all potential impacts to federally listed species and candidate species, and outline conservation measures to avoid and minimize these impacts in the Draft EIS. Furthermore, the Draft EIS will state that if it is determined that the proposed project may affect federally listed species, the NMFS will be contacted for further technical assistance.

Thank you for contributing to the development of this document. Your comments will be included in the Environmental Impact Statement documents.

Sincerely,

PBR HAWAII

  
Kimi Mikami Yuen, LEED AP BD+C  
Senior Associate

cc: Lauren Tanaka, Division of State Parks

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Bernard P. Carvalho, Jr.  
Mayor

Nadine K. Nakamura  
Managing Director



DEPARTMENT OF PUBLIC WORKS  
County of Kaua'i, State of Hawai'i  
4444 Rice Street, Suite 275, Lihue, Hawai'i 96766  
TEL (808) 241-4992 FAX (808) 241-6604

March 25, 2015

Ms. Catie Cullison, AICP  
PBR HAWAII & Associates, Inc.  
1001 Bishop Street, Suite 650  
Honolulu, Hawai'i 96813

SUBJECT: Haena State Park Master Plan  
Environmental Impact Statement Preparation Notice (EISPN)  
Division of State Parks – Applicant  
TMK: (4) 5-6-008: 001, (4) 5-9-001: 025, (4) 5-9-001: 022  
Hanalei, Kaua'i, Hawai'i **PW 2.15.129**

Dear Ms. Cullison:

The Engineering Division of the Department of Public Works (DPW) received the subject EISPN by transmittal dated February 22, 2015. We appreciate the opportunity to review the EISPN. DPW previously provided comments to PBR Hawaii in a letter dated August 27, 2008. The PBR Hawaii response to these comments is dated February 22, 2015 and a copy of this response is included in the EISPN.

We have no additional comments.

We look forward to receipt of the Draft Environmental Impact Statement. If you have any questions or need additional information, please contact Stanford Iwamoto, Engineering Division at (808) 241-4896 or siwamoto@kauai.gov.

Very truly yours,

  
MICHAEL MOULE, P.E.  
Chief, Engineering Division

SI/MM

Copies to: DPW-Design & Permitting

*An Equal Opportunity Employer*

Larry Dill, P.E.  
County Engineer

Lyle Tabata  
Deputy County Engineer



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May 8, 2015

Mr. Michael Moule, P.E.  
Chief, Engineering Division  
Department of Public Works  
County of Kaua'i  
4444 Rice Street, Suite 275  
Lihue, HI 96766

SUBJECT: PROPOSED HĀ'ENA STATE PARK MASTER PLAN AND  
ENVIRONMENTAL IMPACT STATEMENT PREPARATION  
NOTICE, HĀ'ENA, KAUA'I, HAWAII

Dear Mr. Moule,

Thank you for your letter dated March 25, 2015 (your Reference No. PW 2.15.129) regarding the above referenced Environmental Impact Statement (EIS) Preparation Notice (EISPN). As the planning consultant for the State of Hawai'i, Department of Land and Natural Resources, Division of State Parks, we are acknowledging that your Division has no additional comments, and appreciate that you will be reviewing the Draft EIS.

Thank you for contributing to the development of this document. Your comments will be included in the Environmental Impact Statement documents.

Sincerely,

PBR HAWAII



Kimi Mikami Yuen, LEED AP BD+C  
Senior Associate

cc: Lauren Tanaka, Division of State Parks

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April 2, 2015

Ms. Catie Cullison, AICP  
PBR Hawaii & Associates, Inc.  
1001 Bishop Street, Suite 650  
Honolulu, HI 96813-3484

Dear Ms. Cullison:

Subject: Environmental Impact Statement Preparation Notice for the Haena State Park Master Plan, TMK: 5-9-01:025, TMK: 5-9-01:022, and TMK: 5-9-08:001, Kuhio Highway, Haena, Kauai

This is in regard to your letter dated February 22, 2015. The Department of Water (DOW) has no objections to the proposed Environmental Impact Statement. The following are our comments to the Environmental Impact Statement for the Haena State Park Master Plan.

Any actual subdivision or development of this area will be dependent on the adequacy of the source, storage, and transmission facilities existing at that time. At the present time, the existing storage facilities are operating at capacity and the DOW is limiting water service to three 5/8-inch water meters or three single family dwellings per existing lot of record. The existing source facilities are nearing capacity. The Department's water system ends near the Limahuli Stream along Kuhio Highway. Adequacy of the existing transmission facilities will be dependent on the required domestic and fireflow demands of the proposed project (i.e. fire flow requirements may depend on the actual land use or zoning designation of the proposed development).

Prior to the DOW recommending water service or building permit approval, the applicant will be required to:

1. Be made aware that water service to TMK: 5-9-08:001 will be limited to the existing water meter serving the parcel until adequate water system facilities are available.
2. Submit a formal request for water service for our review and approval. Include detailed water demand (both domestic and irrigation) calculations along with the proposed water meter size. Water demand calculations submitted by your engineer or architect should also include fixture count and water meter sizing worksheets. The Department's comments will be dependent on the approved water demand calculations.

All conditions stated above are subject to the Rules and Regulations of the DOW as amended or as will be amended.

If you have any questions, please contact Mr. Joel Bautista at (808) 245-5441.

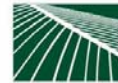
Sincerely,

*Edward Doi*

Edward Doi  
Water Resources and Planning Division

5-9-08-001, 5-9-01-025, 5-9-01-022, T-16888, Cullison/JB:loo

*Water has no substitute.....Conserve it*



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& ASSOCIATES, INC.

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May 8, 2015

Mr. Edward Doi  
Water Resources and Planning Division  
Department of Water  
County of Kauai  
P.O. Box 1706  
Lihue, HI 96766

**SUBJECT: PROPOSED HĀ'ENA STATE PARK MASTER PLAN AND ENVIRONMENTAL IMPACT STATEMENT PREPARATION NOTICE, HĀ'ENA, KAUAI, HAWAII**

Dear Mr. Doi,

Thank you for your letter dated April 2, 2015 (your file reference: 5-9-08-001, 5-9-01-025, 5-9-01-022, T-16888, Cullison/JB:loo) regarding the above referenced Environmental Impact Statement Preparation Notice. As the planning consultant for the State of Hawaii, Department of Land and Natural Resources, Division of State Parks, we appreciate your Department's comments and State Parks will work with the County Department of Water during the detailed design phase of the proposed facilities to ensure adequate water supply. The engineers also propose using seawater as is currently done for fire suppression. The last fire hydrant/standpipe is located outside of the park, roughly 75 feet away, and is connected to the County's potable water system.

We also note that your Department provided similar comments in response to our pre-consultation request for the above project on November 10, 2011 (your Department's Reference No. UID#5629) signed by Greg Fujikawa.

Thank you for contributing to the development of this document. Your comments will be included in the Environmental Impact Statement documents.

Sincerely,

*Kimi Mikami Yuen*  
Kimi Mikami Yuen, LEED AP BD+C  
Senior Associate

cc: Lauren Tanaka, Division of State Parks

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---

**Bethany Wylie**

**From:** Makaala Kaaumoana <kaaumoana@gmail.com>  
**Sent:** Wednesday, March 18, 2015 7:54 AM  
**To:** Catie Cullison  
**Subject:** Ha'ena State Park EIS  
**Attachments:** Tsunami Evac Zone - Haena MP Map 2015.pdf

**Follow Up Flag:** Follow up  
**Flag Status:** Flagged

Aloha Catie, we are concerned about the tsunami evacuation item in the EIS.  
How will park visitors know where to go?  
Makaala

---

**Bethany Wylie**

**From:** Maka'ala Kaaumoana <makaala@hawaiian.net>  
**Sent:** Thursday, March 19, 2015 10:42 AM  
**To:** Catie Cullison; Kimi Yuen  
**Cc:** 'Carl Imparato'; 'Barbara Robeson'; Alan.B.Carpenter@hawaii.gov; victoria.l.wichman@hawaii.gov  
**Subject:** RE: Ha'ena State Park Master Plan

Aloha Catie, In addition to my previous comments on the draft EIS for the Ha'ena State Park master plan, I would also like to tell you that I have been contacted by State Parks folks asking for my participation on a committee to consider the construction of a bridge over Hanakapiai Stream.

This request has come from emergency responders who have had several recent incidents involving people stranded on the western banks of this stream when flooding occurs. Rescuing these folks is costly and has put many in harm's way and responders are asking for a bridge to aide folks leaving the valley on their own.

I am not in support of building this bridge but completely understand the concerns that brought the proposal forward.

I think it is imperative that the EIS and Plan include these concerns and address them with the intended:

- reduction of the number of people hiking into Hanakapiai and beyond
- the park entrance process providing comprehensive safety information
- registration and entrance fees providing accurate number of people on the trail

Mahalo, Makaala

Maka'ala Ka'aumoana  
Vice Chair  
Hui Ho'omalulu i ka 'Aina  
POB 1045  
Hanalei, HI  
96714  
[808-346-5458](tel:808-346-5458)

*Hui Ho'omalulu i ka 'Aina is a taro root organization founded in the early 1980's by traditional practitioners of moku Halele'a to address threats and impacts to the natural and cultural resources of Kaua'i. Founded by farmers and fishermen, weavers and hunters, we seek to provide context for issues related to the ecology of our ahupua'a. The organization is an active advocate for those native things and ways that are disappearing. We are not a nonprofit, we are an activist organization. We do not whine and wait, we act.*

---

**From:** Catie Cullison [mailto:ccullison@pbrhawaii.com]  
**Sent:** Wednesday, March 18, 2015 1:36 PM  
**To:** Kimi Yuen; Maka'ala Kaaumoana  
**Cc:** Carl Imparato; Barbara Robeson  
**Subject:** RE: Ha'ena State Park Master Plan

Aloha Makaala & Friends,

The public comment period on the EIS Prep Notice closes on the 25<sup>th</sup> of March.

Confirming that Kimi has asked me to prepare a revised schedule and that it is on my to do list. Apologies for the delay. I will plan to send it out to the MPAC when it is done.

The hope is to update the EISPN into the Draft EIS as soon as possible after the close of the public comment period. How long that takes will be somewhat dependent on what comments we get to the EISPN.

State Parks would like to have a public meeting when the Draft EIS is published as a way to collect comments to that document. I will work with Lauren Tanaka to get that scheduled once we have a better idea of when the Draft EIS will be published.

In the absence of a schedule to share, I hope this is informative to you.

Mahalo,  
Catie

---

**From:** Kimi Yuen

**Sent:** Tuesday, March 17, 2015 5:34 PM

**To:** Maka'ala Kaaumoana

**Cc:** Carl Imperato; Barbara Robeson; Catie Cullison

**Subject:** RE: Ha'ena State Park Master Plan

Aloha, Maka'ala!

Good to hear from you! Hope you are all doing well! I could be a tad less busy but the new year is definitely off to a great start. Hope the same for you too!

I'm including Catie on this email as she is shepherding the EIS through the process. I do know the EIS Prep Notice went out and was published, but I'm not sure of the end date for public comments. Should be soon though. I know Catie was also working out an updated schedule and there is a public meeting to be held for the Draft EIS so Catie, could you help fill in those pukas for me...?

The master plan will get one more revision after the EIS is accepted and will go before the BLNR for final approval.

Catie: maybe after you update the schedule, we can send it out to the MPAC to keep everyone up-to-date as well.

Mahalo!  
Kimi

---

**From:** Maka'ala Kaaumoana [<mailto:makaala@hawaiian.net>]

**Sent:** Tuesday, March 17, 2015 9:40 AM

**To:** Kimi Yuen

**Cc:** Carl Imperato; Barbara Robeson

**Subject:** Ha'ena State Park Master Plan

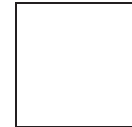
Aloha Kimi, hope this new year is finding you well and as busy as you would like to be.

Please give me a very brief update on the status of the EIS and Master Plan for Ha'ena State Park.

Mahalo, Makaala

Maka'ala Ka'aumoana  
Vice Chair  
Hui Ho'omaluku i ka 'Aina  
POB 1045  
Hanalei, HI  
96714  
[808-346-5458](tel:808-346-5458)

*Hui Ho'omaluku i ka 'Aina is a taro root organization founded in the early 1980's by traditional practitioners of moku Halele'a to address threats and impacts to the natural and cultural resources of Kaua'i. Founded by farmers and fishermen, weavers and hunters, we seek to provide context for issues related to the ecology of our ahupua'a. The organization is an active advocate for those native things and ways that are disappearing. We are not a nonprofit, we are an activist organization. We do not whine and wait, we act.*



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PLANNING • LANDSCAPE ARCHITECTURE • ENVIRONMENTAL STUDIES • ENTITLEMENTS / PERMITTING • GRAPHIC DESIGN

May 8, 2015

Ms. Maka'ala Ka'aumoana  
Vice Chair  
Hui Ho'omalua i ka Aina  
PO Box 1045  
Hanalei, HI 96714

**SUBJECT: PROPOSED HĀ'ENA STATE PARK MASTER PLAN AND ENVIRONMENTAL IMPACT STATEMENT PREPARATION NOTICE, HĀ'ENA, KAUA'I, HAWAII**

Dear Ms. Ka'aumoana,

Thank you for your emails dated March 18, 2015 and March 19, 2015 regarding the above referenced Environmental Impact Statement (EIS) Preparation Notice (EISPN). As the planning consultant for the State of Hawai'i, Department of Land and Natural Resources, Division of State Parks, we appreciate your comments and provide the following responses.

#### March 18, 2015 Email Comment:

*"...we are concerned about the tsunami evacuation item in the EIS. How will park visitors know where to go?"*

**Response:** Currently, there are no State Civil Defense sirens in the Park and no tsunami evacuation signs on Kūhiō Highway within the Park. The closest siren is located at Hā'ena County Park roughly 3,500 feet to the east. Pre-consultation comments from State Civil Defense suggest that 25 square feet of land area be set aside for "possible future siren installation." The land area required for a siren can be accommodated within the park, most likely in the main parking area, should State Civil Defense deem that it is an appropriate location for a warning siren.

To facilitate evacuations in the event they are necessary, instructions on what to do in such emergencies can be incorporated into the visitor orientation that will be required of all visitors upon entry to the Park. Emergency evacuation scenarios and routes should be planned for both locally generated tsunami and those originating from remote locations. Locally generated tsunami require immediate action while those originating from remote locations allow more time to evacuate. Evacuation instructions and routes should be indicated on all visitor brochures and materials. Where appropriate, signs can be installed along evacuation routes directing visitors to higher ground. Also, with the reduced number of daily visitors, Park staff will be able to assist visitors in the event of an emergency.

In addition, the helicopter landing pad is proposed to be retained with the Master Plan improvements. An emergency phone as well as the existing pay phone are expected to be retained. Additionally, the presence of an on-site caretaker is expected to improve emergency warning communications and evacuation coordination within the Park after hours when necessary. If a shuttle system is implemented, an emergency evacuation plan will need to be developed specifically for the shuttle passengers.

Ms. Maka'ala Ka'aumoana  
May 8, 2015  
Page 2

#### March 18, 2015 Email Comment:

*"In addition to my previous comments on the draft EIS for the Hā'ena State Park master plan, I would also like to tell you that I have been contacted by State Parks folks asking for my participation on a committee to consider the construction of a bridge over Hanakāpī'ai Stream.*

*This request has come from emergency responders who have had several recent incidents involving people stranded on the western banks of this stream when flooding occurs. Rescuing these folks is costly and has put many in harm's way and responders are asking for a bridge to aide folks leaving the valley on their own.*

*I am not in support of building this bridge but completely understand the concerns that brought the proposal forward.*

*I think it is imperative that the EIS and Plan include these concerns and address them with the intended:*

- *reduction of the number of people hiking into Hanakāpī'ai and beyond*
- *the park entrance process providing comprehensive safety information*
- *registration and entrance fees providing accurate number of people on the trail"*

**Response:** We appreciate the information provided regarding a proposed bridge over Hanakāpī'ai Stream. As you know, the Master Plan proposes a daily limit on visitors of 900 to Hā'ena State Park that is approximately half of the current number of visitors per day during the summer. Additionally, the Master Plan includes a recommendation that all visitors attend an educational session that would provide a brief overview of the Park's extensive but sensitive natural and cultural resources and instruct visitors of the appropriate activities and behaviors allowed at the Park, as well as you suggest, the potential of hazards hiking the Kalalau Trail.

Since there will be no distinction between park users and Kalalau Trail hikers in paying the entrance fees, your suggestion that Kalalau Trail hikers register at the time they pay the entrance fee is appreciated and will be forwarded to the Division of State Parks.

State Parks is also working closely with the Kaua'i Fire Department on all issues of public safety including public education, which includes improved coordination and communication through new information technology tools such as web and email alerts and smartphone applications, as well as issues that are raised regarding the ongoing management of State Park areas.

Thank you for your continued contributions to the development of this document and to the master plan as a diligent member of our Master Plan Advisory Committee. Your comments will be included in the Environmental Impact Statement documents and incorporated into the final master plan report.

Sincerely,

PBR HAWAII

Kimi Mikami Yuen, LEED AP BD+C  
Senior Associate

cc: Lauren Tanaka, Division of State Parks

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PO Box 369  
Hanalei, HI 96714

March 18, 2015

Ms. Catie Cullison, AICP  
PBR Hawaii'i  
1001 Bishop Street, Suite 650  
Honolulu, HI 96713

RE: Hā'ena State Park Master Plan Environmental Impact Statement Preparation Notice.

Aloha Ms. Cullison,

As a member of the MP Advisory Committee, I am very appreciative of PBRs community outreach, meetings, information provided, and response to the various concerns and comments by our Committee. The Draft Plan is very descriptive and explanatory of the various recommendations that are outlined in the document. The additional reports and studies add to the Plan and provide baseline information for current and future reference.

Preservation of the Hā'ena park area should be a high priority for our community, the County of Kaua'i, and the State of Hawai'i. Preservation of the Hā'ena State Park is significant as the entire park area has a historic and cultural history that is significant to preserve for future generations.

I support:

- Reduction in the number of persons that can access the Park area each day.
- Management of the area and education of those visiting the Park
- Restoration of various areas and recognition for those individuals, families, and local community members with historic and cultural ties to the Park area, and revive cultural practices.
- Identification of the areas where the public's safety should be established<sup>1</sup>.
- Decrease and limit of the number of vehicles permitted in the proposed parking area.
- Description and benefits of a shuttle system which would decrease the number of vehicles travelling along Route 560, Kūhiō Highway<sup>2</sup> in the Tsunami Evacuation Zone and encourage the use of a shuttle to the Park.

Mahalo for the opportunity to provide the above comments.

  
Barbara Robeson

<sup>1</sup> Rockfall hazard area, for example.

<sup>2</sup> Route 560 is on the State and National Register of Historic Places. The area from Hanalei to Kē'ē is in the Tsunami Evacuation Zone. During an evacuation, vehicles would travel from Kē'ē, through Hanalei, and up to Princeville, and crossing one-lane bridges and culverts. See Appendix G of the Plan.



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May 8, 2015

Ms. Barbara Robeson  
PO Box 369  
Hanalei, HI 96714

**SUBJECT: PROPOSED HĀ'ENA STATE PARK MASTER PLAN AND ENVIRONMENTAL IMPACT STATEMENT PREPARATION NOTICE, HĀ'ENA, KAUA'I, HAWAII**

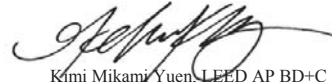
Dear Ms. Robeson,

Thank you for your letter dated March 18, 2015 regarding the above referenced Environmental Impact Statement (EIS) Preparation Notice (EISPN). As the planning consultant for the State of Hawai'i, Department of Land and Natural Resources, Division of State Parks, we want to express our sincere appreciation for your continued participation as a member of the Master Plan Advisory Committee and for your supportive comments.

Thank you for contributing to the development of this document. Your comments will be included in the Environmental Impact Statement documents.

Sincerely,

PBR HAWAII

  
Kimi Mikami Yuen, LEED AP BD+C  
Senior Associate

cc: Lauren Tanaka, Division of State Parks

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## **13.0 DEIS COMMENTS AND RESPONSES**

The DEIS was sent to the following agencies, organizations, stakeholders, interested individuals, and elected officials. The final distribution list for the DEIS was verified by OEQC and approved for distribution on July 16, 2015. The DEIS was also sent to various media outlets and libraries including all regional public libraries to provide availability to the public. Comment letters received for the DEIS during the public comment period and corresponding responses are attached. Comment letters received for the DEIS are incorporated and included in the Final EIS as required by Section 343-5, HRS. Please note that the attachments referenced in the response letters are compiled alphabetically by title at the end of this section rather than repeated respectively with each response letter since multiple response letters required the same attachment.

The 45-day public comment period started on July 23, 2015 and closed on September 8, 2016. However, State Parks held a public meeting on August 19, 2015 to gather more input on the DEIS and extended the DEIS public comment period until October 8, 2015. If comments were received on the DEIS, the date of the comment is indicated in the table next to the respective agency, organization, or individual's name. Three letters were received after the close of the extended public comment period. The last one was received on November 4, 2015. All comments received up until that date have been responded to and are included in the EIS. These late comments are indicated in the table below with an asterisk on the date the comment was received. Copies of the comments and the respective response letters are attached. Comment cards received which do not have a return address are included at the end of the comment and response letters but before the attachments.

<b><u>AGENCY/INDIVIDUAL</u></b>	<b><u>DEIS SENT</u></b>	<b><u>COMMENT DATED</u></b>
<b><u>FEDERAL</u></b>		
<u>U.S. Army Corps of Engineers, Honolulu District</u>	√	<u>10/28/15*</u>
<u>U.S. Fish and Wildlife Service</u>	√	<u>9/10/15</u>
<u>National Marine Fisheries Service</u>	√	
<u>Federal Highways Administration</u>	√	
<u>U.S. Department of the Interior, U.S. Geological Survey, Pacific Islands Water Science Center</u>	√	<u>8/20/15</u>
<u>U.S. Department of the Interior, National Park Service</u>	√	
<u>U.S. Department of Agriculture, Natural Resource Conservation Service</u>	√	
<u>U.S. Department of the Navy</u>	√	
<u>Federal Aviation Administration</u>	√	
<u>Federal Transit Administration</u>	√	
<u>U.S. Coast Guard</u>	√	
<u>Environmental Protection Agency, Pacific Islands Contact Office</u>	√	

<b><u>AGENCY/INDIVIDUAL</u></b>	<b><u>DEIS SENT</u></b>	<b><u>COMMENT DATED</u></b>
<b><u>STATE AGENCIES</u></b>		
<u>Department of Agriculture</u>	<u>√</u>	
<u>Department of Accounting and General Services</u>	<u>√</u>	<u>8/7/15</u>
<u>Department of Accounting and General Services, Kauaʻi</u>	<u>√</u>	
<u>Department of Business, Economic Development and Tourism (DBEDT)</u>	<u>√</u>	
<u>DBEDT, Research Division Library</u>	<u>√</u>	
<u>DBEDT, Office of Planning</u>	<u>√</u>	<u>8/31/15</u>
<u>DBEDT, Energy Division</u>	<u>√</u>	
<u>Department of Defense</u>	<u>√</u>	<u>8/14/15</u>
<u>Department of Education</u>	<u>√</u>	
<u>Department of Hawaiian Home Lands</u>	<u>√</u>	
<u>Department of Health (DOH)</u>	<u>√</u>	
<u>DOH, Environmental Planning Office</u>	<u>√</u>	<u>8/11/15</u>
<u>DOH, Kauaʻi District Health Office</u>	<u>(via DOH EPO)</u>	
<u>DOH, Environmental Management Clean Water Branch</u>	<u>(via DOH EPO)</u>	
<u>DOH, Wastewater Branch</u>	<u>(via DOH EPO)</u>	<u>8/25/15</u>
<u>DOH, Safe Drinking Water Branch</u>	<u>(via DOH EPO)</u>	
<u>Department of Land and Natural Resources (DLNR)</u>	<u>√</u>	
<u>DLNR, Land Division</u>	<u>√</u>	
<u>DLNR, Land Division – Kauaʻi District</u>	<u>(via DLNR Land)</u>	<u>9/10/15</u> <u>(c/o DLNR Land Division)</u>
<u>DLNR, State Historic Preservation Division (SHPD)</u>	<u>√</u>	
<u>DLNR, SHPD, Kauaʻi</u>	<u>√</u>	
<u>DLNR, Division of Forestry and Wildlife (DOFAW)</u>	<u>(via DLNR Land)</u>	
<u>DLNR, DOFAW, Kauaʻi</u>	<u>√</u>	
<u>DLNR, DOFAW, Na Ala Hele</u>	<u>√</u>	
<u>DLNR, Division of Aquatic Resources</u>	<u>√</u>	<u>8/4/15</u>
<u>DLNR, Division of Boating and Ocean Recreation</u>	<u>√</u>	<u>9/3/15</u> <u>(c/o DLNR Land Division)</u>
<u>DLNR, Engineering Division</u>	<u>√</u>	<u>9/3/15</u> <u>(c/o DLNR Land Division)</u>
<u>DLNR, Commission on Water Resource Management</u>	<u>√</u>	
<u>DLNR, Office of Conservation and Coastal Lands</u>	<u>√</u>	<u>9/3/15</u>
<u>Department of Transportation</u>	<u>√</u>	<u>10/5/15</u>
<u>Department of Transportation, Highways Division, Kauaʻi District</u>	<u>√</u>	
<u>Office of Hawaiian Affairs</u>	<u>√</u>	<u>10/12/15</u>

<b><u>AGENCY/INDIVIDUAL</u></b>	<b><u>DEIS SENT</u></b>	<b><u>COMMENT DATED</u></b>
<u>Legislative Reference Bureau Library</u>	<u>√</u>	
<u>Hawai‘i Tourism Authority</u>	<u>√</u>	
<u>Disability and Communication Access Board</u>		<u>9/4/15</u>
<b><u>UNIVERSITY OF HAWAI‘I (UH)</u></b>		
<u>UH Water Resources Research Center</u>	<u>√</u>	
<u>UH Environmental Center</u>	<u>√</u>	
<u>UH Marine Option Program</u>	<u>√</u>	
<u>UH Thomas H. Hamilton Library</u>	<u>√</u>	
<u>UH Edwin H. Mo‘okini Library</u>	<u>√</u>	
<u>UH Maui College Library</u>	<u>√</u>	
<u>UH Kaua‘i Community College Library</u>	<u>√</u>	
<b><u>COUNTY OF KAUAI</u></b>		
<u>Fire Department</u>	<u>√</u>	<u>9/15/15</u>
<u>Department of Planning</u>	<u>√</u>	
<u>Department of Planning,</u> <u>Kaua‘i Historic Preservation Review Commission</u>	<u>√</u>	<u>8/25/15,</u> <u>9/24/15 (c/o</u> <u>Kaua‘i</u> <u>Planning Dept.)</u>
<u>Police Department</u>	<u>√</u>	
<u>Department of Public Works</u>	<u>√</u>	<u>8/14/15</u>
<u>Department of Public Works, Engineering Division</u>	<u>√</u>	
<u>Transportation Agency</u>	<u>√</u>	
<u>Department of Water</u>	<u>√</u>	<u>9/3/15</u>
<u>Office of Economic Development</u>	<u>√</u>	
<u>Department of Parks and Recreation</u>	<u>√</u>	
<b><u>LIBRARIES</u></b>		
<u>Hawai‘i State Library, Hawai‘i Documents Center</u>	<u>√</u>	
<u>Kaimukī Regional Library</u>	<u>√</u>	
<u>Kāne‘ohe Regional Library</u>	<u>√</u>	
<u>Pearl City Regional Library</u>	<u>√</u>	
<u>Hawai‘i Kai Regional Library</u>	<u>√</u>	
<u>Hilo Regional Library</u>	<u>√</u>	
<u>Kahului Regional Library</u>	<u>√</u>	
<u>Līhu‘e Regional Library</u>	<u>√</u>	
<u>Princeville Library</u>	<u>√</u>	
<b><u>NEWS MEDIA</u></b>		
<u>Honolulu Star Advertiser</u>	<u>√</u>	
<u>Hawai‘i Tribune Herald</u>	<u>√</u>	
<u>West Hawai‘i Today</u>	<u>√</u>	
<u>The Garden Island</u>	<u>√</u>	

<b><u>AGENCY/INDIVIDUAL</u></b>	<b><u>DEIS SENT</u></b>	<b><u>COMMENT DATED</u></b>
<u>Maui News</u>	<u>√</u>	
<u>Moloka'i Dispatch</u>	<u>√</u>	
<u>Honolulu Civil Beat</u>	<u>√</u>	
<b><i><u>ELECTED OFFICIALS</u></i></b>		
<u>U.S. Senator Brian Schatz</u>	<u>√</u>	
<u>U.S. Senator Mazie Hirono</u>	<u>√</u>	
<u>U.S. Representative Tulsi Gabbard</u>	<u>√</u>	<u>8/21/15</u>
<u>State Senator Ronald Kouchi</u>	<u>√</u>	
<u>State Representative Derek Kawakami</u>	<u>√</u>	
<u>Kaua'i County Mayor Bernard Carvalho</u>	<u>√</u>	
<u>Kaua'i County Council Chair Mel Rapozo</u>	<u>√</u>	
<u>Kaua'i County Council Vice Chair Ross Kagawa</u>	<u>√</u>	
<u>Kaua'i County Councilmember Mason Chock</u>	<u>√</u>	
<u>Kaua'i County Councilmember Gary Hooser</u>	<u>√</u>	
<u>Kaua'i County Councilmember Arryl Kaneshiro</u>	<u>√</u>	
<u>Kaua'i County Councilmember KipuKai Kuali'i</u>	<u>√</u>	
<u>Kaua'i County Councilmember JoAnn Yukimura</u>	<u>√</u>	
<b><i><u>UTILITIES</u></i></b>		
<u>Hawaiian Telcom</u>	<u>√</u>	<u>8/7/15</u>
<u>Kaua'i Island Utility Cooperative</u>	<u>√</u>	
<b><i><u>OTHER ORGANIZATIONS AND INDIVIDUALS</u></i></b>		
<u>Kua'aina Ulu 'Auamo</u> <u>(formerly Hawai'i Community Stewardship Network)</u>	<u>√</u>	
<u>Kaua'i Planning and Action Alliance</u>	<u>√</u>	
<u>B. Frederick Wichman</u>	<u>√</u>	
<u>Hawai'i Ecotourism Association</u>	<u>√</u>	
<u>Hanapepe Hotel</u>		<u>9/12/15</u>
<u>Thomas and Annie Hashimoto, MPAC</u>	<u>√</u>	
<u>Henrietta Phillips, MPAC</u>	<u>√</u>	
<u>Lono Brede, MPAC</u>	<u>√</u>	
<u>Presley Wann, MPAC</u>	<u>√</u>	
<u>Kehaulani Kekua, MPAC</u>	<u>√</u>	
<u>'Aikane Alapa'i, MPAC</u>	<u>√</u>	
<u>Sabra Kauka, MPAC</u>	<u>√</u>	
<u>Victoria Wichman, MPAC</u>	<u>√</u>	
<u>Chipper Wichman, MPAC</u>	<u>√</u>	
<u>Hau'oli Wichman, MPAC</u>	<u>√</u>	
<u>Jeff Chandler, MPAC</u>	<u>√</u>	
<u>Ka'imi Hermosura, MPAC</u>	<u>√</u>	<u>9/8/15</u>
<u>Keli'i Alapa'i, MPAC</u>	<u>√</u>	
<u>Naomi Yokotake, MPAC</u>	<u>√</u>	



<u>AGENCY/INDIVIDUAL</u>	<u>DEIS SENT</u>	<u>COMMENT DATED</u>
<u>Carlos Andrade, MPAC</u>	<u>√</u>	
<u>Maka‘ala Ka‘aumoana, MPAC</u>	<u>√</u>	<u>8/19/15 (joint letter w/Carl Imparato), 8/21/15</u>
<u>Hui Ho‘omalua i ka ‘Aina</u>		<u>8/19/15</u>
<u>Kawika Winter, MPAC</u>	<u>√</u>	
<u>Barbara Robeson, MPAC</u>	<u>√</u>	<u>8/6/15</u>
<u>Caren Diamond, MPAC</u>	<u>√</u>	
<u>Carl Berg, MPAC</u>	<u>√</u>	
<u>Carl Imparato, MPAC</u>	<u>√</u>	<u>8/19/15 (joint letter w/Maka‘ala Ka‘aumoana)</u>
<u>Sue Kanoho, MPAC</u>	<u>√</u>	
<u>Julie Schuller, MPAC</u>	<u>√</u>	
<u>Joel Guy, MPAC</u>	<u>√</u>	
<u>Mehana Vaughn, MPAC</u>	<u>√</u>	<u>10/9/15*</u>
<u>Micco Godinez, MPAC</u>	<u>√</u>	
<u>Chino Godinez, MPAC</u>	<u>√</u>	
<u>Kathryn Keala, MPAC</u>	<u>√</u>	
<u>D. Kaliko Santos, MPAC</u>	<u>√</u>	
<u>Atta Forrest, MPAC</u>	<u>√</u>	
<u>Michael Dahilig/County of Kaua‘i, Planning Department, MPAC</u>	<u>√</u>	
<u>Nani Sadora/County of Kaua‘i, Planning Department, Open Space Commission, MPAC</u>	<u>√</u>	
<u>Frank Hay</u>		<u>7/25/15</u>
<u>J. Kimo Harpstrite, M.D.</u>		<u>7/25/15</u>
<u>Rodger Elble</u>		<u>7/25/15</u>
<u>Lynn Sari</u>		<u>7/26/15</u>
<u>Valerie Weiss</u>		<u>7/28/15</u>
<u>Christopher Rivera</u>		<u>8/1/15</u>
<u>Sharon Turnbull</u>		<u>8/1/15</u>
<u>Jimmy Sone</u>		<u>8/7/15</u>
<u>Heather Huitt</u>		<u>8/14/15</u>
<u>Larry Jolly</u>		<u>8/15/15</u>
<u>Robert and Lila Dolan</u>		<u>8/18/15, 9/14/15</u>
<u>Roberta Griffith</u>		<u>8/15/15</u>
<u>Andrew (surname not provided)</u>		<u>8/17/15</u>
<u>Ed Dato</u>		<u>8/17/15, 9/3/15</u>

<b><u>AGENCY/INDIVIDUAL</u></b>	<b><u>DEIS SENT</u></b>	<b><u>COMMENT DATED</u></b>
<u>Kauailady1@aol.com</u>		<u>8/1/15</u>
<u>Love Bernheim</u>		<u>9/8/15, 9/8/15, 10/8/15</u>
<u>Brittany Beers</u>		<u>9/8/15</u>
<u>James Mehling</u>		<u>8/17/15</u>
<u>Matt Morelock</u>		<u>8/17/15</u>
<u>Scott Weeks</u>		<u>8/17/15</u>
<u>Terry &amp; Terri DeVries</u>		<u>8/17/15</u>
<u>Tom Tonks</u>		<u>8/17/15</u>
<u>Mike Fallis</u>		<u>8/18/15</u>
<u>Anne Ponohu</u>		<u>8/19/15</u>
<u>Colleen Wann</u>		<u>8/19/15</u>
<u>Denise Ham Young</u>		<u>8/19/15</u>
<u>Elijah Frank</u>		<u>8/19/15</u>
<u>Eurielle Blair</u>		<u>8/19/15</u>
<u>Felicia Cowden</u>		<u>8/19/15, 9/6/15</u>
<u>H. Anakalia</u>		<u>8/19/15</u>
<u>Hawaiki Oliver</u>		<u>8/19/15</u>
<u>J. Souza</u>		<u>8/19/15</u>
<u>Jacob Keli'i Ho'omalua Aiona</u>		<u>8/19/15</u>
<u>Judith Ellent</u>		<u>8/19/15</u>
<u>Jim Quinn</u>		<u>8/19/15</u>
<u>Josephine Bonaparte</u>		<u>8/19/15</u>
<u>Kaisen Carrillo</u>		<u>8/19/15</u>
<u>Karen Sherwood &amp; Michael Olanolan</u>		<u>8/19/15</u>
<u>Koral McCarthy</u>		<u>8/19/15</u>
<u>Mary Jo Austin</u>		<u>8/19/15</u>
<u>Melani Aiona</u>		<u>8/19/15</u>
<u>Mohala Bond</u>		<u>8/19/15, 8/19/15</u>
<u>Nicolai Barca</u>		<u>8/19/15</u>
<u>Polly Phillips</u>		<u>8/19/15</u>
<u>Roselle Bailey (via Nalani Brun, County of Kaua'i)</u>		<u>8/13/15 (received on 11/4/15)*</u>
<u>Satya Dina Gardner</u>		<u>8/19/15</u>
<u>Stephanie Krieger</u>		<u>8/19/15</u>
<u>Tina Ferrato</u>		<u>8/19/15</u>
<u>W. Mesgeso Denis</u>		<u>8/19/15</u>
<u>Steve McMenamin</u>		<u>8/20/15</u>
<u>Carol and David Kuraoka</u>		<u>8/21/15</u>
<u>Michael Taylor</u>		<u>8/21/15</u>
<u>Terry Lilley</u>		<u>8/21/15</u>

<b><u>AGENCY/INDIVIDUAL</u></b>	<b><u>DEIS SENT</u></b>	<b><u>COMMENT DATED</u></b>
<u>Brad Lanotte</u>		<u>8/24/15</u>
<u>Joe Shannon, Heather Joll, &amp; Family</u>		<u>8/24/15</u>
<u>Mike Dennis</u>		<u>8/24/15</u>
<u>Suzy Conklin</u>		<u>8/24/15</u>
<u>T. Mahuiki</u>		<u>8/24/15</u>
<u>Taylor Lowe</u>		<u>8/24/15</u>
<u>David LaCock</u>		<u>8/26/15</u>
<u>Dr. Amithea Love</u>		<u>8/26/15</u>
<u>Stephanie Blakemore</u>		<u>8/26/15</u>
<u>Gardner</u>		<u>8/19/15</u>
<u>Marjorie Gifford</u>		<u>8/27/15</u>
<u>A. Whitfield</u>		<u>8/28/15</u>
<u>Hob Osterlund &amp; Joanne Little</u>		<u>8/28/15</u>
<u>C.B. Martin</u>		<u>8/31/15</u>
<u>Bonnie Bator and 'Ohana</u>		<u>9/2/15, 9/11/15</u>
<u>Jenn Tyler</u>		<u>8/17/15, 9/2/15</u>
<u>Lana Shea</u>		<u>9/2/15</u>
<u>Rory Enright</u>		<u>9/2/15</u>
<u>Steve Drapkin</u>		<u>9/2/15, 9/3/15, 9/9/15</u>
<u>Francine Wai</u>		<u>9/4/15</u>
<u>Laura Richards</u>		<u>9/6/15</u>
<u>Allan Parchini &amp; Gina Lobaco</u>		<u>9/7/15</u>
<u>Joshua Comstock</u>		<u>9/7/15</u>
<u>Richard and Robyn Stevenson</u>		<u>9/7/15, 9/8/15</u>
<u>Susie Ayers</u>		<u>9/7/15, 9/11/15</u>
<u>Alison Chuang</u>		<u>9/8/15</u>
<u>Audrey Venneman</u>		<u>9/8/15</u>
<u>Catherine Van De Veer</u>		<u>9/8/15</u>
<u>Hoku Cabebe (and the signees of the petition from the 'ohana of Halele'a)</u>		<u>9/8/15, 10/8/15</u>
<u>Talia Abubo (petition from the 'ohana of Halele'a)</u>		<u>9/8/15, 10/8/15</u>
<u>Beau Barthel-Blair (petition from the 'ohana of Halele'a)</u>		<u>9/8/15, 10/8/15</u>
<u>Mohala Bond (petition from the 'ohana of Halele'a)</u>		<u>9/8/15, 10/8/15</u>
<u>Jade Candelaria (petition from the 'ohana of Halele'a)</u>		<u>9/8/15, 10/8/15</u>
<u>Aloysius Chandler (petition from the 'ohana of Halele'a)</u>		<u>9/8/15, 10/8/15</u>
<u>Deannise Dennis (petition from the 'ohana of Halele'a)</u>		<u>9/8/15, 10/8/15</u>
<u>Elijah Frank (petition from the 'ohana of Halele'a)</u>		<u>9/8/15, 10/8/15</u>
<u>Kaleo Frank (petition from the 'ohana of Halele'a)</u>		<u>9/8/15, 10/8/15</u>

<b><u>AGENCY/INDIVIDUAL</u></b>	<b><u>DEIS SENT</u></b>	<b><u>COMMENT DATED</u></b>
<u>Chantz Kaaumoana (petition from the ‘ohana of Halele‘a)</u>		<u>9/8/15, 10/8/15</u>
<u>Jasmine Kleimein (petition from the ‘ohana of Halele‘a)</u>		<u>9/8/15, 10/8/15</u>
<u>Sophia Levesque (petition from the ‘ohana of Halele‘a)</u>		<u>9/8/15, 10/8/15</u>
<u>Ezera Mahuiki (petition from the ‘ohana of Halele‘a)</u>		<u>9/8/15, 10/8/15</u>
<u>Jacob Maka (petition from the ‘ohana of Halele‘a)</u>		<u>9/8/15, 10/8/15</u>
<u>Nancy Martin (petition from the ‘ohana of Halele‘a)</u>		<u>9/8/15, 10/8/15</u>
<u>Koral McCarthy (petition from the ‘ohana of Halele‘a)</u>		<u>9/8/15, 10/8/15</u>
<u>Aloysius Puulei-Chandler (petition from the ‘ohana of Halele‘a)</u>		<u>9/8/15, 10/8/15</u>
<u>Kalalau Puulei-Chandler (petition from the ‘ohana of Halele‘a)</u>		<u>9/8/15, 10/8/15</u>
<u>Eric Rafter (petition from the ‘ohana of Halele‘a)</u>		<u>9/8/15, 10/8/15</u>
<u>Sena Scramur (petition from the ‘ohana of Halele‘a)</u>		<u>9/8/15, 10/8/15</u>
<u>Jesse Steele (petition from the ‘ohana of Halele‘a)</u>		<u>9/8/15, 10/8/15</u>
<u>Misha Taylor (petition from the ‘ohana of Halele‘a)</u>		<u>9/8/15, 10/8/15</u>
<u>Brandon Ziegler (petition from the ‘ohana of Halele‘a)</u>		<u>9/8/15, 10/8/15</u>
<u>Jaybird Franey</u>		<u>9/8/15</u>
<u>Jeff Ayeroff</u>		<u>9/8/15</u>
<u>Jenna Haynie</u>		<u>9/8/15</u>
<u>Keely and Pierce Brosnan</u>		<u>9/8/15</u>
<u>Lukasz Gottwald</u>		<u>9/8/15</u>
<u>Mahana Mari</u>		<u>9/8/15</u>
<u>Melissa Norman</u>		<u>9/8/15</u>
<u>Mitch Haynie</u>		<u>9/8/15</u>
<u>Neal Norman</u>		<u>9/8/15</u>
<u>Patsy Nickam</u>		<u>9/8/15</u>
<u>Robin Cottle</u>		<u>9/8/15</u>
<u>Ryan Siebring</u>		<u>9/8/15</u>
<u>Ryan Skvarla</u>		<u>9/8/15</u>
<u>William O. Wright</u>		<u>9/8/15</u>
<u>Yogi Lacock</u>		<u>9/8/15</u>
<u>Acacia Morrison</u>		<u>9/9/15</u>
<u>Andrea Smith</u>		<u>9/9/15</u>
<u>Barb Douglass</u>		<u>9/9/15</u>
<u>E. Maile Bendor</u>		<u>9/9/15</u>
<u>Michaelle Edwards</u>		<u>9/9/15</u>
<u>Shyla Moon</u>		<u>9/8/15</u>
<u>Teresa Tico</u>		<u>9/9/15</u>
<u>Beau Blair</u>		<u>9/9/15</u>
<u>Jake and Jennifer Kilgrow</u>		<u>9/9/15</u>



<b><u>AGENCY/INDIVIDUAL</u></b>	<b><u>DEIS SENT</u></b>	<b><u>COMMENT DATED</u></b>
<u>Casey Riemer</u>		<u>9/9/15</u>
<u>Christine Lynch</u>		<u>9/8/15</u>
<u>Boreas Van Nouhuys</u>		<u>9/12/15</u>
<u>Christie Bagley</u>		<u>9/12/15</u>
<u>A.J. Sutton</u>		<u>9/14/15</u>
<u>Matt Hunter</u>		<u>9/15/15</u>
<u>Sarah Rogers</u>		<u>9/18/15</u>
<u>James R. Christiansen</u>		<u>9/20/15</u>
<u>Kathy Valier</u>		<u>9/23/15</u>
<u>Sailor DeCamp</u>		<u>9/24/15</u>
<u>Gary Bart</u>		<u>10/2/15</u>
<u>Anonymous</u>		<u>8/24/15</u>
<u>Anonymous</u>		<u>8/26/15</u>
<u>*Comment received after the close of the extended public comment period, which ended on October 8, 2015.</u>		





DEPARTMENT OF THE ARMY  
HONOLULU DISTRICT, U.S. ARMY CORPS OF ENGINEERS  
FORT SHAFTER, HAWAII 96858-5440

October 28, 2015

SUBJECT: Comments on the Draft Environmental Impact Statement for the Hā'ena State Park Master Plan located on Kaua'i, Hawai'i; DA File No. POH-2009-0067

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

Dear Ms. Tanaka:

The Honolulu District, U.S. Army Corps of Engineers (Corps), has received your letter dated September 10, 2015 for the Draft Environmental Impact Statement for the Hā'ena State Park Master Plan located on Kaua'i, Hawai'i. Your project has been assigned Department of the Army (DA) file number POH-2009-0067. Please reference this number in all future correspondence.

Please be advised, if the proposed project involves work in waters of the U.S., a DA authorization may be required. Under Section 10 of the Rivers and Harbors Act, structures and/or work in or affecting the course, location, condition, or capacity of navigable waters of the U.S. require DA authorization. Navigable waters of the U.S. are waters subject to the ebb and flow of the tide.

Under Section 404 of the Clean Water Act, DA authorization is required for discharges of dredged or fill material into waters of the U.S., including wetlands. Generally, discharges of fill material include materials that change the bottom elevation of a water of the U.S. and includes rock, sand, soil, debris, overburden, etc. Waters of the U.S. include navigable waters of the U.S. and other waters including wetlands, rivers, streams, lakes, and ponds.

Based on our initial review of the information provided, it appears there may be waters of the U.S. on the project site. Depending on the circumstances of your project, a permit may be required from this office prior to commencing proposed work. Accordingly, we recommend the landowner or the authorized agent continue coordination of the development of this project with our office. A pre-application meeting can be scheduled to aid in this process.

- 2 -

Thank you for your cooperation with the Honolulu District Regulatory Program. Please contact this office if you have any questions. You may contact me at 808-835-4306 or via email at [kate.m.bliss@usace.army.mil](mailto:kate.m.bliss@usace.army.mil)

Sincerely,

Kate Bliss  
Project Manager  
Regulatory Office

cc:

Kimi Yuen, PBR HAWAII, 1001 Bishop Street, Suite 650, Honolulu, Hawai'i, 96813



Month XX, 2018

Ms. Kate Bliss, Regulatory Office Project Manager  
Department of the Army  
Honolulu District, U.S. Army Corps of Engineers  
Fort Shafter, HI 96858-5440

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KIMI MIKAMI YUEN, LEED® AP BD+C  
Senior Associate

W. FRANK BRANTZ, ASLA  
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Project Director

RAMON E. M. TAMM  
Cultural Sustainability Planner

RAYMOND T. HIGA, ASLA  
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GATE COLLISON, AICP  
Senior Associate

MARC SHIMAZU, ASLA  
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DACHUNG HONG, LEED® AP  
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SCOTT MURAKAMI, ASLA, LEED® AP  
Associate

MICHAEL MCHILLEN, ASLA, LEED® AP  
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NATHALIE BAGO  
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## United States Department of the Interior

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



RECEIVED  
SEP 15 2015  
PBR HAWAII

SEP 10 2015

In Reply Refer To:  
2015-TA-0428

Ms. Kimi Yuen  
PBR Hawaii & Associates, Inc.  
1001 Bishop Street, Suite 650  
Honolulu, Hawaii 96813

Subject: Technical Assistance for Haena State Park Master Plan Draft Environmental Impact Statement, Kauai

Dear Ms. Yuen:

The U.S. Fish and Wildlife Service (Service) received your letter, dated July 20, 2015, requesting our comments on the Draft Environmental Impact Statement (EIS) for the Haena State Park Master Plan on the island of Kauai. The Master Plan includes management and development strategies that balance historic, cultural, and ecological resources with recreational and community uses of the Haena State Park (hereafter referred to as the Park), encompassing approximately 64 acres on the coast.

We provided comments during early development of the Master Plan and draft EIS in August 2008 (Service File 2008-TA-0305). In our letter, we recommended the following to assist you in your project planning: 1) to involve community members involved in the development of the Community Based Marine Management Area (CMMMA) in the planning of Master Plan and ensure compatibility with CMMMA goals; 2) to conduct surveys for presence of listed flora and fauna species in project area; and 3) shielding of exterior lighting to avoid impacts to the federally threatened Newell's shearwater (*Puffinus auricularis newelli*), the endangered Hawaiian petrel (*Pterodroma sandwicensis*), and a candidate for listing the band-rumped storm-petrel (*Oceanodroma castro*) (hereafter collectively referred to as seabirds). PBR Hawaii & Associates, Inc., as the planning consultant for the State of Hawaii, Department of Land and Natural Resources, Division of State Parks (State Parks), responded to our comments in a letter in February 2015 and requested our comments on the EIS Preparation Notice (EISPN).

The Service provided comments on the EISPN in March 2015 (Service File 2015-TA-0180). In our letter, we provided the following: 1) further recommendations regarding shielding of exterior lighting for seabirds; 2) recommendations regarding management practices for the federally threatened green sea turtle (*Chelonia mydas*), Hawaiian goose (*Branta sandwicensis*), and Hawaiian waterbirds; and 3) Best Management Practices (BMPs) to avoid and minimize impacts to water resources. PBR Hawaii & Associates, Inc. responded to our comments in a letter in May 2015. The Service appreciates the opportunity to continue to provide technical assistance

**SUBJECT: COMMENTS ON THE HĀ'ENA STATE PARK MASTER PLAN DRAFT ENVIRONMENTAL IMPACT STATEMENT (EIS), HĀ'ENA, KAUAI, HAWAII**

Aloha Ms. Bliss,

Mahalo nui for your letter dated October 28, 2015 (DA File No. POH-2009-0067) regarding the Hā'ena State Park Master Plan Draft Environmental Impact Statement (EIS). We sincerely apologize for the delay in responding. Due to the feedback received on the Draft EIS, the State of Hawaii's Department of Land and Natural Resources, Division of State Parks (State Parks) has worked on revising the master plan with a reorganized Hā'ena State Park Community Advisory Committee (HSPCAC) to address the concerns voiced by the larger community. As a result, the master plan presented in the Final EIS has been updated based on the feedback received from the public meetings, comments received, and subsequent extensive collaboration with the HSPCAC. As the planning consultant for State Parks, we offer the following responses to your comments.

Mahalo for your comment stating that if the project involves work in the waters of the United States, a Department of the Army authorization may be required including a permit prior to commencing proposed work. As the proposed Pedestrian Path may cross over potential wetlands, State Parks will continue to coordinate with your office and appreciate your offer for a pre-application meeting. State Parks will contact you should it look like any other improvement may impact wetlands as they develop more detailed designs for construction and implementation. We have added the following text under the list of required permits and approvals with reference to wetlands in Sections 1.1, 1.9.4, and 5.5, "Other Department of the Army permits may be required based on determination."

Mahalo nui for your input and participation in the environmental review process. Your letter will be included in the Final EIS. If you would like a copy of the Final EIS or portions thereof, please let us know. Otherwise, the electronic copy of the Final EIS will be available on the Office of Environmental Quality Control website at: [http://ceq2.doh.hawaii.gov/EA\\_EIS\\_Library/2018-06-23-KA-FEIS-Haena-State-Park-Master-Plan.pdf](http://ceq2.doh.hawaii.gov/EA_EIS_Library/2018-06-23-KA-FEIS-Haena-State-Park-Master-Plan.pdf) on June 23, 2018

Aloha,

Kimi Mikami Yuen, LEED AP BD+C  
Principal

cc: The Honorable David Y. Ige, Governor  
Office of Environmental Quality Control  
Board of Land and Natural Resources  
Division of State Parks

O:\Job\262627\01 DLNR-Haena State Park Master Plan\EIS\Responses\0FED-01\_2015-10-28 Army Corps - JSK.docx



Ms. Kimi Yuen

2

throughout the planning process so that impacts to trust resources can be avoided. We offer the following comments to assist you in the preparation of the Master Plan and final EIS under the authorities of the Endangered Species Act of 1973 (ESA), as amended (16 U.S.C 1531 *et seq.*).

We acknowledge that our recommendations for design of lighting plans and management practices at the Park to avoid impacts to fledgling seabirds as well as nesting adult sea turtles and hatchlings are incorporated in the draft EIS and the draft Master Plan.

According to the draft EIS, some members of the Master Plan Advisory Committee (MPAC) are interested in restoring the wetland areas of the Park which may attract Hawaiian waterbirds and Hawaiian geese. The draft EIS incorporates several measures to reduce potential predation of these species by feral cats, rats, and dogs. The draft EIS also includes measures to address traffic at the Park which may reduce the potential for vehicular collisions with Hawaiian waterbirds and Hawaiian geese, including the construction of a new entry turnaround and a limited access corridor which will be closed to general vehicular traffic and used for special access. According to the draft EIS, State Parks will consult with the Service prior to any wetland restoration activities. The Service has a long history of partnership with State Parks and we look forward to assisting them in developing further measures to avoid impacts to Hawaiian waterbirds and Hawaiian geese and determining the suitability of the wetland area for restoration.

Additionally, we acknowledge the draft EIS states that BMPs to control sediment, erosion, dust, and runoff will be employed during construction and grading activities.

We hope this information assists you in developing a comprehensive and thorough final EIS. We appreciate your efforts to conserve endangered species. If you have questions regarding our comments, please contact Adam Griesemer, Endangered Species Biologist (phone: 808-285-8261, email: adam\_griesemer@fws.gov).

Sincerely,



Aaron Nadig  
Island Team Manager  
Oahu, Kauai, Northwestern Hawaiian  
Islands, and American Samoa

cc:  
Lauren Tanaka, Division of State Parks



PBR HAWAII  
& ASSOCIATES, INC.

Month XX, 2018

Mr. Aaron Nadig, Island Team Manager  
U.S. Fish and Wildlife Service  
Pacific Islands Fish and Wildlife Office  
300 Ala Moana Blvd, Room 3-122  
Honolulu, HI 96850

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**SUBJECT: COMMENTS ON THE HĀ'ENA STATE PARK MASTER PLAN  
DRAFT ENVIRONMENTAL IMPACT STATEMENT (EIS),  
HĀ'ENA, KAUAI, HAWAII**

Aloha Mr. Nadig,

Mahalo nui for your letter dated September 10, 2015 (your Reference No. 2015-TA-0428) regarding the Hā'ena State Park Master Plan Draft Environmental Impact Statement (EIS). We sincerely apologize for the delay in responding. Due to the feedback received on the Draft EIS, the State of Hawai'i, Department of Land and Natural Resources, Division of State Parks (State Parks) has worked on revising the master plan with a reorganized Hā'ena State Park Community Advisory Committee (HSPCAC) to address the concerns voiced by the larger community. As a result, the master plan presented in the Final EIS has been updated based on the feedback received from the public meetings, comments received, and subsequent extensive collaboration with the HSPCAC. As the planning consultant for State Parks, we offer the following responses to your comments.

Mahalo for your statement that the master plan includes management and developmental strategies that balance historic, cultural, and ecological resources with recreational and community uses at the park.

With regards to your comments from the August 2008 letter (Service File 2008-TA-0305), we have included community members involved in the Community Based Marine Management Area (CMMA) in the HSPCAC and they continue to be involved in the refinement and completion of the master plan. The ongoing maintenance of the HSPCAC is a key management recommendation in the master plan and is described in Section 2.4.5.2 of the Final EIS. Their input will help ensure compatibility with CMMA goals as you recommended.

A biological survey for terrestrial flora and fauna was completed for the project and the findings are summarized in Sections 3.8 and 3.9 of the EIS. A copy of the biological survey is attached as Appendix C of the EIS. The marine environment and biological resources are discussed in Sections 3.6 and 3.7 of the EIS and a copy of the Marine Natural Resources and Recreation Assessment is attached as Appendix D to the EIS. A full discussion on listed flora and fauna species is provided in Section 5.1.2 of the EIS and is attached to this letter. All of the listed species in the U.S. Fish and Wildlife Service's (Service) letters have been included in the EIS and master plan report.

With regards to your comments on shielding of exterior lighting for federally threatened and endangered seabirds and reducing impacts of artificial lighting to nesting turtles, the following text was included and edited as noted by the underlined text in Section 3.9 of the EIS:

*...all exterior lights will be fully-shielded (completely opaque) and downward facing full-cut off fixtures with the lowest light level (lumens) possible, sufficiently large, and positioned so that the bulb is only visible from below to minimize distraction and disorientation of wildlife flying over the park. The use of artificial lights should be minimized or reduced as much as possible during the fledging season of September to December. Night time construction also should be avoided. The Master Plan does not include any parking lot lighting. However, if lighting is needed for safety, they can be installed lower to the ground with motion sensors and/or timers to minimize the amount of time they would be lit. The lighting design plan will also ensure that no lights are visible from the beach to minimize impacts to nesting honu and their hatchlings seeking the ocean.*

The underlined text was added in Sections 1.9.2, and 2.5.3.4 of the EIS as well.

The Service mitigation recommendations regarding the Hawaiian goose and Hawaiian waterbirds were also incorporated in the EIS in Sections 1.9.2 and 3.9 with the addition of the "Hawaiian Nēnē" in the text in the Final EIS.

Best Management Practices (BMPs) with regards to minimizing and avoiding impacts to water resources were included in the Draft EIS in Sections 3.3.3 Agricultural Lands of Importance to the State of Hawai'i, 3.4.2 Surface Water, 4.7.3 Drainage, 5.3.3 Coastal Zone Management, 5.3.4 Hawai'i State Plan, and the respective summaries in Section 1.9.2. We appreciate your acknowledgement of their inclusion in the EIS.

Mahalo nui for your technical assistance throughout the planning process and comments offered to assist in the preparation of the master plan and Final EIS. Mahalo for your acknowledgement that the Service's recommendations for design of lighting plans and management practices at the park to avoid impacts to fledgling seabirds as well as nesting adult sea turtles and hatchlings are incorporated in the Draft EIS and draft master plan.

We recognize your comment that the State will consult with the USFWS prior to any wetland restoration activities. The State appreciates and also looks forward to future coordination with the USFWS that continues the long history of partnership between the two agencies in order to develop further measures to avoid impacts to Hawaiian waterbirds, geese, and suitability of wetland areas for restoration.

Mahalo nui for your input and participation in the environmental review process. Your letter will be included in the Final EIS. If you would like a copy of the Final EIS or portions thereof, please let us know. Otherwise, the electronic copy of the Final EIS will be available on the Office of Environmental Quality Control website at [http://oeqc2.doh.hawaii.gov/EA\\_EIS\\_Library/2018-06-23-KA-FEIS-Haena-State-Park-Master-Plan.pdf](http://oeqc2.doh.hawaii.gov/EA_EIS_Library/2018-06-23-KA-FEIS-Haena-State-Park-Master-Plan.pdf) on June 23, 2018.

Aloha,

Kimi Mikami Yuen, LEED AP BD+C  
Principal

Attachment: EIS Section 5.1.2 on Endangered Species Act  
cc: The Honorable David Y. Ige, Governor  
Office of Environmental Quality Control  
Board of Land and Natural Resources  
Division of State Parks

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## United States Department of the Interior

U.S. GEOLOGICAL SURVEY  
Pacific Islands Water Science Center  
1845 Wasp Boulevard, Building 176  
Honolulu, Hawaii 96818

Phone: (808) 690-9600/Fax: (808) 690-9599

August 20, 2015

RECEIVED  
AUG 24 2015

PBR HAWAII

Ms. Kimi Yuen, Senior Associate  
PBR Hawaii & Associates, Inc.  
1001 Bishop Street, Suite 650  
Honolulu, Hawaii 96813

Dear Ms. Yuen:

Subject: Draft Environmental Impact Statement (DEIS) for the Hā'ena State Park Master Plan,  
Tax Map Keys: (4) 5-9-008: 001, 5-9-001: 025, 5-9-001: 022 (portion)

Thank you for forwarding the subject DEIS for review and comment by the staff of the U.S.  
Geological Survey Pacific Islands Water Science Center. We regret however, that due to prior  
commitments and lack of available staff, we are unable to review this document.

Please make note of our new address listed here on our letterhead and forward all future  
correspondence to this address.

We appreciate the opportunity to participate in the review process.

Sincerely,

Ronald L. Rickman  
Acting Center Director

cc: Ms. Lauren Tanaka  
State of Hawaii  
Department of Land and Natural Resources  
Division of State Parks  
1151 Punchbowl Street, #310  
Honolulu, Hawaii 96813



PBR HAWAII  
& ASSOCIATES, INC.

Month XX, 2018

Mr. Steven Anthony, Center Director  
U.S.G.S. Pacific Islands Water Science Center  
1845 Wasp Boulevard, Building 176  
Honolulu, HI 96818

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Cultural Sustainability Planner

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Associate

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SUBJECT: COMMENTS ON THE HĀ'ENA STATE PARK MASTER PLAN  
DRAFT ENVIRONMENTAL IMPACT STATEMENT (EIS),  
HĀ'ENA, KAUA'I, HAWAII

Aloha Mr. Anthony,

Mahalo nui for your letter dated August 20, 2015 regarding the Hā'ena State Park Master  
Plan Draft Environmental Impact Statement (EIS). We sincerely apologize for the delay in  
responding. Due to the feedback received on the Draft EIS, the State of Hawai'i,  
Department of Land and Natural Resources, Division of State Parks (State Parks) has  
worked on revising the master plan with a reorganized Hā'ena State Park Community  
Advisory Committee (HSPCAC) to address the concerns voiced by the larger community.  
As a result, the master plan presented in the Final EIS has been updated based on the  
feedback received from the public meetings, comments received, and subsequent extensive  
collaboration with the HSPCAC. As the planning consultant for State Parks, we offer the  
following responses to your comments.

Mahalo for your comment stating that you are unable to review the EIS due to prior  
commitments and lack of available staff.

Mahalo nui for your input and participation in the environmental review process. Your  
letter will be included in the Final EIS. If you would like a copy of the Final EIS or portions  
thereof, please let us know. Otherwise, the electronic copy of the Final EIS will be available  
on the Office of Environmental Quality Control website at  
[http://oeqc2.doh.hawaii.gov/EA\\_EIS\\_Library/2018-06-23-KA-FEIS-Haena-State-Park-Master-Plan.pdf](http://oeqc2.doh.hawaii.gov/EA_EIS_Library/2018-06-23-KA-FEIS-Haena-State-Park-Master-Plan.pdf) on June 23, 2018.

Aloha,

Kimi Mikami Yuen, LEED AP BD+C  
Principal

cc: The Honorable David Y. Ige, Governor  
Office of Environmental Quality Control  
Board of Land and Natural Resources  
Division of State Parks

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JSH.docx

RECEIVED  
AUG 11 2015  
PBR HAWAII  
GOVERNOR



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

DOUGLAS MURDOCK  
Comptroller  
AUDREY HIDANO  
Deputy Comptroller

(P)1208.5

AUG 7 2015

Ms. Kimi Yuen, Senior Associate  
PBR Hawaii & Associates, Inc.  
1001 Bishop Street, Suite 650  
Honolulu, Hawaii 96813-3484

Dear Ms. Yuen:


Subject: Draft Environmental Impact Statement for  
Haena State Park Master Plan  
Hanalei, Kauai, Hawaii

TMK: (4) 5-9-008: 001; 5-9-001: 025, 5-9-001: por 022

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

If you have any questions, your staff may call Ms. Gayle Takasaki of the Planning Branch at 586-0584.

Sincerely,

  
JAMES K. KURATA  
Public Works Administrator

GT:mo

c: Mr. Eric Agena, District Engineer, KDO  
Ms. Lauren Tanaka, DLNR, Division of State Parks



Month XX, 2018

Mr. James Kurata, Public Works Administrator  
Department of Accounting and General Services  
State of Hawai'i  
P.O. Box 119  
Honolulu, HI 96810-0119

SUBJECT: COMMENTS ON THE HÄ'ENA STATE PARK MASTER PLAN  
DRAFT ENVIRONMENTAL IMPACT STATEMENT (EIS),  
HÄ'ENA, KAUAI, HAWAII

Aloha Mr. Kurata,

Mahalo nui for your letter dated August 7, 2015 (your Reference No. (P)1208.5) regarding the Hä'ena State Park Master Plan Draft Environmental Impact Statement (EIS). We sincerely apologize for the delay in responding. Due to the feedback received on the Draft EIS, the State of Hawai'i, Department of Land and Natural Resources, Division of State Parks (State Parks) has worked on revising the master plan with a reorganized Hä'ena State Park Community Advisory Committee (HSPCAC) to address the concerns voiced by the larger community. As a result, the master plan presented in the Final EIS has been updated based on the feedback received from the public meetings, comments received, and subsequent extensive collaboration with the HSPCAC. As the planning consultant for State Parks, we offer the following responses to your comments.

Mahalo for your statement that the State of Hawai'i Department of Accounting and General Services (DAGS) have no comments at this time because the proposed project does not impact any DAGS-related facilities or projects.

Mahalo nui for your input and participation in the environmental review process. Your letter will be included in the Final EIS. If you would like a copy of the Final EIS or portions thereof, please let us know. Otherwise, the electronic copy of the Final EIS will be available on the Office of Environmental Quality Control website at [http://oeq2.doh.hawaii.gov/EA\\_EIS\\_Library/2018-06-23-KA-EIS-Haena-State-Park-Master-Plan.pdf](http://oeq2.doh.hawaii.gov/EA_EIS_Library/2018-06-23-KA-EIS-Haena-State-Park-Master-Plan.pdf) on June 23, 2018.

Aloha,

Kimi Mikami Yuen, LEED AP BD+C  
Principal

cc: The Honorable David Y. Ige, Governor  
Office of Environmental Quality Control  
Board of Land and Natural Resources  
Division of State Parks

O:\Job262627\01 DLNR-Haena State Park Master Plan\EIS\Responses\STATE-01\_2015-08-07 DAGS - DSK.docx

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ACTING DIRECTOR  
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Ref. No. P-14888

August 31, 2015

**RECEIVED**

SEP 03 2015

PBR HAWAII

To: Suzanne Case, Chairperson  
Department of Land and Natural Resources

From: Leo R. Asuncion, Acting Director *[Signature]*

Attention: Lauren Tanaka, State Parks

Subject: Draft Environmental Impact Statement for the Haena State Park Master Plan,  
Haena, Hanalei, Island of Kauai;  
Tax Map Key (4) 5-9-008: 001, 5-9-001:025, and 5-9-001:022 (por)

Thank you for the opportunity to provide comments on the Draft Environmental Impact Statement (Draft EIS) for the Haena State Park Master Plan, transmitted to our office by letter dated July 20, 2015.

It is our understanding that the proposed master plan for Haena State Park refines the master plan originally drafted in 2001, but takes a renewed emphasis on the cultural and historic significance of Haena. The Department of Land and Natural Resources (DLNR), State Parks Division acknowledges there are funding limitations for improvements for this State park. The proposed master plan provides a near-term plan for an Entry Complex which includes a controlled entry for the park at a new Welcome Pavilion, an Interpretive Path which will provide access to Kee Beach along an elevated boardwalk, and realignment of the main visitor pathway outside of a potentially dangerous rock fall hazard zone.

The master plan includes key management strategies such as the establishment of a cultural advisory group, a community advisory group, and requires mandatory visitor orientation and education before allowing entry into the park. It recommends that the existing historic State highway that runs through the park be transferred from the State Department of Transportation to DLNR State Parks so that the roadway may be closed to traffic and allow the DLNR to shift the bulk of visitor traffic within the park outside of a potential rock fall hazard zone.

The Office of Planning has reviewed the transmitted material and has the following comments to offer:

1. The Draft EIS addresses all of the concerns listed in our previous pre-consultation letter (Ref No. P-14681), dated March 18, 2015. The Draft EIS has an extensive analysis of

Ms. Suzanne Case, Chairperson  
August 31, 2015  
Page 2

HRS 226 (the Hawaii State Plan) objectives, priorities, and priority guidelines (including both HRS 226-108, the priority guidelines on Sustainability; and HRS 226-109 Climate Change Adaptation). It provides a satisfactory analysis of the Master Plan's consistency with HRS 205A-2 (the enforceable policies of the Hawaii Coastal Zone Management program); site specific mitigation measures regarding the risk of coastal hazards; and it acknowledges that this project will need to obtain both a Special Management Area permit and a shoreline determination from the County of Kauai's Department of Planning.

2. Additionally, the Draft EIS examines hydrological surface water issues such as erosion and sediment control, preservation of the marine environment adjacent to the park; preserving the wetland area and not encroaching on its boundaries; preventing stormwater runoff from damaging the coastal resources using Low-Impact Development mitigation strategies such as bioswales and filtration methods to keep runoff on land and away from nearshore waters; and it proposes collecting runoff for non-potable water use to preserve fresh-water resources.

We appreciate the opportunity to review the Draft EIS. If you have any questions, please contact Josh Hekeka of our office at (808) 587-2845.

/s/ Ms. Kimi Yuen, Senior Associate



Mr. Leo R. Asuncion  
SUBJECT: COMMENTS ON THE HÄ'ENA STATE PARK MASTER PLAN DRAFT ENVIRONMENTAL  
IMPACT STATEMENT (EIS), HÄ'ENA, KAUA'I, HAWAII  
Month XX, 2018  
Page 2

Month XX, 2018

Mr. Leo R. Asuncion, Director  
Office of Planning  
State of Hawai'i  
P.O. Box 2359  
Honolulu, HI 96814

SUBJECT: COMMENTS ON THE HÄ'ENA STATE PARK MASTER PLAN  
DRAFT ENVIRONMENTAL IMPACT STATEMENT (EIS),  
HÄ'ENA, KAUA'I, HAWAII

Aloha Mr. Asuncion,

Mahalo nui for your letter dated August 31, 2015 (your Reference No. P-14888) regarding the Hä'ena State Park Master Plan Draft Environmental Impact Statement (EIS). We sincerely apologize for the delay in responding. Due to the feedback received on the Draft EIS, the State of Hawai'i, Department of Land and Natural Resources, Division of State Parks (State Parks) has worked on revising the master plan with a reorganized Hä'ena State Park Community Advisory Committee (HSPCAC) to address the concerns voiced by the larger community. As a result, the master plan presented in the Final EIS has been updated and simplified based on the feedback received from the public meetings, comments received, and subsequent extensive collaboration with the HSPCAC. As the planning consultant for State Parks, we offer the following responses to your comments.

As noted above, the master plan has been revised and simplified based on public input and therefore there will no longer be a "Near-Term Plan" for the park. The revised master plan summary from Section 1.9.1 of the EIS and Figure 1 showing the master plan is attached for your reference. State Parks still intends to implement the plan in phases, however, as noted in Section 2.6 of the EIS.

Mahalo for your feedback that the Draft EIS addresses all of the concerns listed in your pre-consultation letter (Reference No. P-14681) and contains an extensive analysis of HRS 226 Hawai'i State Plan objectives, priorities, and priority guidelines including both HRS 226-108, the priority guidelines on Sustainability; and HRS 226-109 Climate Change Adaptation. Mahalo for also noting that the EIS also provides a satisfactory analysis of the master plan's consistency with HRS 206A-2 (the enforceable policies of the Hawai'i Coastal Zone Management program); site specific mitigation regarding the risk of coastal hazards; and acknowledgement of the project's need to obtain both a Special Management Area permit and a shoreline determination from the County of Kaua'i's Department of Planning.

Mahalo for your comments regarding the EIS' examination of hydrological surface water issues such as erosion and sediment control, preservation of the marine environment adjacent to the park, preservation of the wetland area and not encroaching on its boundaries, prevention of stormwater runoff from damaging the coastal resources using Low-Impact Development mitigation strategies such as bioswales and filtration methods to keep runoff on land and away from nearshore waters, and the collection of runoff from non-potable water use to preserve fresh-water resources. Although the master plan has been updated, none of these elements have been revised and will remain as part of the plan.

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Kimi Mikami Yuen, LEED AP BD+C  
Principal

Attachments: Master Plan Summary  
Figure 1: Master Plan

cc: The Honorable David Y. Ige, Governor  
Office of Environmental Quality Control  
Board of Land and Natural Resources  
Division of State Parks

DAVID Y. IGE  
GOVERNOR

MAJOR GENERAL ARTHUR J. LOGAN  
DIRECTOR OF EMERGENCY MANAGEMENT



STATE OF HAWAII  
DEPARTMENT OF DEFENSE  
OFFICE OF THE DIRECTOR OF EMERGENCY MANAGEMENT/CIVIL DEFENSE  
3949 DIAMOND HEAD ROAD  
HONOLULU, HAWAII 96816-4495

August 14, 2015

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DOUG MAYNE  
ADMINISTRATOR OF EMERGENCY MANAGEMENT  
PHONE (808) 733-4300  
FAX (808) 733-4387

Ms. Kimi Yuen  
PBR Hawaii & Associates, Inc.  
1001 Bishop Street, Suite 650  
Honolulu, Hawaii 96813

Dear Ms. Yuen:

Draft Environmental Impact Statement  
Ha'ena State Park Master Plan

Thank you for the opportunity to comment on this proposed project.

After reading the documents provided for the project, we have determined that there is siren coverage for the project area. However, we request that the existing siren be upgraded to a 121 db(c) omni-directional siren.

If you have any questions please call Ms. Havinne Okamura, Hazard Mitigation Planner, at (808) 733-4300, extension 556.

Sincerely,

DOUG MAYNE  
Administrator of Hawaii Emergency Management

c: Lauren Tanaka, Department of Land and Natural Resources



PBR HAWAII  
& ASSOCIATES, INC.

Month XX, 2018

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Captain Thomas Travis, Administrator  
Hawaii Emergency Management  
Department of Defense  
State of Hawai'i  
3949 Diamond Head Road  
Honolulu, HI 96816-4495

SUBJECT: COMMENTS ON THE HA'ENA STATE PARK MASTER PLAN  
DRAFT ENVIRONMENTAL IMPACT STATEMENT (EIS),  
HA'ENA, KAUAI, HAWAII

Aloha Captain Travis,

Mahalo nui for the letter dated August 14, 2015 from Mr. Doug Mayne, then Administrator of Hawai'i Emergency Management, regarding the Ha'ena State Park Master Plan Draft Environmental Impact Statement (EIS). We sincerely apologize for the delay in responding. Due to the feedback received on the Draft EIS, the State of Hawai'i, Department of Land and Natural Resources, Division of State Parks (State Parks) has worked on revising the master plan with a reorganized Ha'ena State Park Community Advisory Committee (HSPCAC) to address the concerns voiced by the larger community. As a result, the master plan presented in the Final EIS has been updated based on the feedback received from the public meetings, comments received, and subsequent extensive collaboration with the HSPCAC. As the planning consultant for State Parks, we offer the following responses to your comments.

Mahalo for your comments confirming there is adequate siren coverage for the project area. The comment letter we received from State Civil Defense on the EIS Preparation Notice indicated that a new siren is needed in the park. We have added the following text to Sections 1.9.2, 3.10.3, 5.3.3, and 5.3.4 to update this information: "A subsequent letter from the Office of State Emergency Management/Civil Defense noted that siren coverage exists for the project site, but requested the existing siren to be upgraded to a 121db(c) omni-directional siren. State Parks will work with the Hawai'i Emergency Management Agency to ensure adequate siren coverage at the park."

Mahalo nui for your input and participation in the environmental review process. Your letter will be included in the Final EIS. If you would like a copy of the Final EIS or portions thereof, please let us know. Otherwise, the electronic copy of the Final EIS will be available on the Office of Environmental Quality Control website at [http://oeq2.doh.hawaii.gov/EA\\_EIS\\_Library/2018-06-23-KA-FEIS-Haena-State-Park-Master-Plan.pdf](http://oeq2.doh.hawaii.gov/EA_EIS_Library/2018-06-23-KA-FEIS-Haena-State-Park-Master-Plan.pdf) on June 23, 2018.

Aloha,

Kimi Mikami Yuen, LEED AP BD+C  
Principal



cc: The Honorable David Y. Ige, Governor  
Office of Environmental Quality Control  
Board of Land and Natural Resources  
Division of State Parks

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DAVID Y. IGE  
GOVERNOR OF HAWAII

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AUG 17 2015  
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STATE OF HAWAII  
DEPARTMENT OF HEALTH  
P. O. BOX 3378  
HONOLULU, HI 96801-3378

August 11, 2015

Ms. Kimi Yuen, Senior Associate  
PBR Hawaii & Associates, Inc.  
1001 Bishop Street, Suite 650  
Honolulu, Hawaii 96813

Dear Ms. Yuen:

**SUBJECT: Draft Environmental Impact Statement (DEIS) for Haena State Park Master Plan, Kauai**  
**TMK: (4) 5-9-008: 001, 5-9-001: 025, 5-9-001: 022 (portion)**

The Department of Health (DOH), Environmental Planning Office (EPO), acknowledges receipt of your DEIS to our office on July 22, 2015. Thank you for allowing us to review and comment on the proposed project. We appreciate the development of this Master Plan to increase the safety and environment in the park.

Several of the more innovative and progressive ideas expressed in the Master Plan merit comments. If instituted, some of the restoration components discussed could be beneficial for water and air quality. Possible restoration and expansion of the loi already present at the site could improve collection of surface water and limit undesirable water quality impacts to the coastal environment due to heavy rains, flooding, and storm runoff.

Relocating parking to Princeville would be commendable. This could dramatically reduce greenhouse gas emissions from visitors, and be a substantial contribution from State Parks & Recreation in furthering the state's greenhouse gas reduction goals as we recognize that climate change is of urgent consideration in environmental planning. Less drivers on the road would also likely improve: 1) Road safety; 2) Noise pollution in the area surrounding Hanalei; and 3) Reduce runoff polluted by vehicles that affects surface waters, including within Haena State Park.

EPO routed the DEIS electronically to the District Health Office on Kauai, and the Clean Water, Wastewater and Safe Drinking Water Branches via the OEQC website link:  
[http://oeqc.doh.hawaii.gov/Shared%20Documents/EA\\_and\\_EIS\\_Online\\_Library/Kauai/2015-07-23-KA-5B-DEIS-Haena-State-Park\\_Master-Plan.pdf](http://oeqc.doh.hawaii.gov/Shared%20Documents/EA_and_EIS_Online_Library/Kauai/2015-07-23-KA-5B-DEIS-Haena-State-Park_Master-Plan.pdf)

Other branches will provide specific comments to you if necessary. EPO recommends that you review the standard comments and available strategies to support sustainable and healthy design provided at:  
<http://health.hawaii.gov/epo/home/land-use-planning-review-program>. Projects are required to adhere to all applicable standard comments.

EPO offers the following comments:

1. We suggest you review the requirements for the National Pollutant Discharge Elimination System (NPDES) permit. We recommend contacting the Clean Water Branch at (808) 586-4309 or [cleanwaterbranch@doh.hawaii.gov](mailto:cleanwaterbranch@doh.hawaii.gov) after relevant information is reviewed at:
  - a. <http://health.hawaii.gov/cwb>
  - b. <http://health.hawaii.gov/cwb/site-map/clean-water-branch-home-page/standard-npdes-permit-conditions>
  - c. <http://health.hawaii.gov/cwb/site-map/clean-water-branch-home-page/forms>

VIRGINIA PRESSLER, M.D.  
DIRECTOR OF HEALTH

In reply, please refer to:  
File:  
EPO 15-179





Ms. Kimi Yuen  
Page 2  
August 11, 2015

Month XX, 2018

Ms. Laura Leialoha Phillips McIntyre, Program Manager  
Environmental Planning Office  
Department of Health  
State of Hawai'i  
2827 Waimano Home Road (Hale Ola) Rm #109  
Pearl City, HI 96782

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2. EPO recommends you review the need and/or requirements for a Clean Air Branch permit. The Clean Air Branch can be consulted via e-mail at: [Cab.General@doh.hawaii.gov](mailto:Cab.General@doh.hawaii.gov) or via phone: (808) 586-4200.

3. If noise created during the construction phase of the project may exceed the maximum allowable levels as set forth in Hawaii Administrative Rules, Chapter 11-46, "Community Noise Control". A noise permit may be required and should be obtained before the commencement of work. Please call the Indoor and Radiological Health Branch at (808) 586-4700 and review relevant information online at: <http://health.hawaii.gov/inh/noise>

Please note that all wastewater plans must conform to applicable provisions of the Department of Health's Administrative Rules, Chapter 11-62, "Wastewater Systems". We do reserve the right to review the detailed wastewater plans for conformance to applicable rules. Should you have any questions, please review online guidance at: <http://health.hawaii.gov/wastewater/> and contact the Planning and Design Section of the Wastewater Branch at 586-4294.

We encourage you to examine and utilize the Hawaii Environmental Health Portal. The portal 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. The Portal is continually updated. Please visit it regularly at: <https://leha-cloud.doh.hawaii.gov/>

You may also wish to review the revised Water Quality Standards Maps that have been updated for all islands. The Water Quality Standards Maps can be found at: <http://health.hawaii.gov/cwb/site-map/clean-water-branch-home-page/water-quality-standards>

We are pleased to see the improved protection of State resources and request that you utilize all of this information on your proposed project to increase sustainable, innovative, inspirational, transparent and healthy design.

Mahalo nui loa

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

c: Lauren Tanaka, DLNR, Division of State Parks  
DOH: DHO Kauai, CWR, WWB, SDWB (via email only)

**SUBJECT: COMMENTS ON THE HÄ'ENA STATE PARK MASTER PLAN DRAFT ENVIRONMENTAL IMPACT STATEMENT (EIS), HÄ'ENA, KAUAI, HAWAII**

Aloha Ms. McIntyre,

Mahalo nui for your comment letter dated August 11, 2015 (your Reference No. EPO 15-179) regarding the Hä'ena State Park Master Plan Draft Environmental Impact Statement (EIS). We sincerely apologize for the delay in responding. Due to the feedback received on the Draft EIS, the State of Hawai'i, Department of Land and Natural Resources, Division of State Parks (State Parks) has worked on revising the master plan with a reorganized Hä'ena State Park Community Advisory Committee (HSPCAC) to address the concerns voiced by the larger community. As a result, the master plan presented in the Final EIS has been updated based on the feedback received from the public meetings, comments received, and subsequent extensive collaboration with the HSPCAC. As the planning consultant for State Parks, we offer the following responses to your comments.

Mahalo for your support of the innovative and progressive ideas expressed in the park master plan, including restoration and expansion of the lō'i already present on the site for surface water quality benefits and the reduction of water quality impacts to the coastal environment.

We appreciate your comments regarding the potential parking relocation and the potential beneficial environmental impacts.

We also appreciate you forwarding the Draft EIS to the District Health Office on Kauai, and the Clean Water, Wastewater, and Safe Drinking Water Branches via the OEQC website.

Mahalo for providing the link to standard comments and available strategies to support sustainable and healthy design. We reviewed the Environmental Planning Office's (EPO) standard comments relating to Environmental Health programs. We understand that all standard comments specifically applicable to the Hä'ena State Park Master Plan must be adhered to. The organization of this letter follows the list of standard comments on your website and responses to all applicable standard comments are provided below.

#### Clean Air Branch

**Control of Fugitive Dust:** None of the proposed improvements are near existing residences, businesses, or thoroughfares. However, as noted in Section 4.5 of the EIS, there may be a temporary adverse impact on air quality attributable to dust generated during project construction, maintenance, and removal of invasive plant species particularly during

earthmoving activity. Best management practices that meet DOH's standards are anticipated to be employed as needed to mitigate dust during these activities.

The following text has also been added. "Construction activities will comply with the provisions of Section 11-60.1-33, Hawai'i Administrative Rules (HAR) related to Fugitive Dust. Adequate measures to control dust during various phases of construction will be required to be implemented by any contractor employed by the DLNR to effect the project's development. Example measures to control fugitive dust include: providing adequate water sources at the site prior to start-up of construction activities; minimizing dust from shoulders and access roads; providing adequate dust control measures during non-work hours and prior to daily start-up of construction activities; and controlling dust from debris being hauled to and from the project site." This text has also been inserted into the air quality summary in Section 1.9.2 of the EIS.

#### **Clean Water Branch**

We reviewed the standard comments provided by the Clean Water Branch (CWB) and offer the following responses:

1. **Potential Impacts to State Waters.** The EIS identifies the type and class of State waters off the coast of Hā'ena as "AA." In addition to the reduction in the average daily number of visitors at the park, the EIS states, "A variety of potential management measures are recommended to maintain Class AA coastal water standards and prevent shoreline erosion. They include reduction, detainment, and filtration of stormwater runoff, increased treatment and reuse of wastewater effluent, prevention of soil erosion, and instruction on ocean-friendly visitor behavior. Shoreline erosion can be slowed or even halted by allowing natural tidal, current and wind processes to shape Hā'ena's shoreline. Measures under consideration to accomplish this goal include studying Hā'ena's specific natural dune building processes, restoring or removing vegetation as appropriate, compliance with the County of Kauai's shoreline setback regulations, and prohibition of shoreline hardening structures. These mitigation measures may also help protect the park against the impacts of climate change, particularly sea level rise, in accordance with the climate change adaptation priority guidelines (§226-109, HRS)." The proposed uses also comply with the designated uses as determined by the classification of Class AA State waters, and the proposed improvements are anticipated to improve water quality. The full discussion is provided in Section 3.6 of the EIS.
2. **National Pollutant Discharge Elimination System permit coverage.** It is acknowledged that if soil disturbance of any single project exceeds one acre in area or any of the other activities listed, a National Pollutant Discharge Elimination System (NPDES) permit for Storm Water Associated with Construction Activity will be necessary. NPDES permits are anticipated to be needed for the project and are listed as such in Sections 1.1, 1.9.4, 4.7.3, and 5.5 of the EIS. All applicable requirements will be followed as part of those NPDES applications.
3. **State Water Quality Standards (Chapter 11-54 and 11-55, HAR).** All discharges related to the construction and operation of the proposed project will comply with the State's Water Quality requirements contained in Chapters 11-54 and 11-55, HAR. This statement has been added to Sections 1.9.2, 4.7.3, 5.3.3, 5.3.4, and 5.3.5 of the EIS.

#### **Hazard Evaluation and Emergency Response Office**

We understand that the Hazard Evaluation and Emergency Response (HEER) Office provides leadership, support, and partnership in preventing, planning for, responding to, and enforcing environmental laws relating to releases or threats of releases of hazardous substances.

There may be hazardous substances, pollutants, or contaminants to be present in the soils in the areas where there were abandoned vehicles. However, no work is anticipated in these areas at this time. State Parks will work with the State HEER Office to determine the appropriate actions to comply with the relevant environmental laws if applicable should any work occur in those areas. The above text has been added to Sections 1.9.2 and 4.7.5 of the EIS.

#### **Indoor and Radiological Health (IRRH) Branch**

The proposed project activities will comply with State Department of Health regulations on Community Noise Control and seek a noise permit as required. The EIS has been edited in Sections 1.9.2 and 4.4 of the EIS as noted: "State Parks ~~is anticipated to~~ will work with contractors to ensure adherence to DOH regulations as required under Chapter 11-46, HAR, including obtaining noise permits as required."

#### **Safe Drinking Water Branch**

We note that the Safe Drinking Water Branch administers programs to protect drinking water sources from contamination.

1. **Public Water System.** A public water system will not be developed as part of the proposed project. Potable water will continue to be supplied by the County of Kauai Department of Water.
2. **Dual Water System.** The proposed integrated water system will involve dual water systems, which will be carefully designed and operated to prevent the cross-connection of the two systems including backflow prevention. Both systems including any non-potable spigots and irrigated areas will be clearly labeled. The two systems must be physically separated by air gaps or reduced-pressure backflow prevention devices to avoid contaminating the potable water supply. Backflow devices must be tested periodically and will comply with Chapter 11-21, HAR, Cross-Connection and Backflow Control. This text has been added to Sections 1.9.2 and 4.7.1 of the EIS.
3. **Underground Injection Control.** No underground injection wells are proposed.

#### **Solid and Hazardous Waste Branch**

Section 4.7.5 of the EIS discusses solid waste disposal for the proposed project. The full text of this section is provided in the Solid Waste Attachment.

#### **Wastewater Branch**

No new cesspools will be constructed as part of the proposed project. Section 4.7.2 of the EIS discusses wastewater for the project and the full text and noted edits are provided in the Wastewater Attachment.

#### **EPO Comments**

1. As noted above, NPDES permits are anticipated to be needed for the proposed project. All requirements for obtaining the permits will be adhered to. Mahalo for the web links with the relevant information.
2. A Clean Air Branch (CAB) permit is not anticipated to be needed for the proposed project based on the projected impacts. The full discussion of the potential impacts and mitigation measures related to air quality for the project are provided in Section 4.5 of the EIS and summarized in Section 1.9.2, including the edits made to the EIS noted above. We also spoke with Mr. David Wong from CAB who kindly confirmed no CAB permit is required for fugitive dust during construction and that construction activities need only to comply with HAR 11-60.1-33 with regards to fugitive dust.

3. As noted above, the EIS has been revised in Sections 1.9.2 and 4.4 as shown in the following text, "~~State Parks is anticipated to~~ will work with contractors to ensure adherence to DOH regulations as required under Chapter 11-46, HAR, including obtaining noise permits as required..."

We also acknowledge your comment stating all wastewater plans must conform to applicable provisions of the DOH Administrative Rules Chapter 11-62, "Wastewater Systems" and that the DOH reserves the right to review the detailed wastewater plans for conformance to applicable rules. This statement has been added to Sections 1.9.2 and 4.7.2 of the EIS.

Mahalo for providing the link to the Hawai'i Environmental Health Portal. The site contains easy to use and access environmental information in map-based formats. We have reviewed the information in the Hawai'i Environmental Health Portal and note the following:

- There are no regulated facilities or locations having environmental health impacts identified in the vicinity of the park in the Environmental Health Warehouse.
- The Groundwater Contamination Viewer was not working when checked on May 4, 2018 so the information could not be viewed
- The OEQC viewer shows two published Chapter 343, HRS documents related to the Environmental Assessment completed for the constructed wetlands at Hä'ena State Park, which is referenced in the EIS.
- The Water Pollution Control Viewer does not show any NPDES permits, inspections and enforcement actions in the vicinity of the park.
- The Water Quality Data site could not be accessed when checked on May 4, 2018.
- The Water Quality Warnings, Advisories, and Postings site provides current water quality warnings, advisories and postings provided by Clean Water Branch and listed a brown water advisory for Hanalei Bay when checked. This site could be linked to the State Parks website to provide up-to-the-minute updates on water quality advisories

Mahalo also for providing the link to the revised Water Quality Standards Maps that have been updated for all islands. The Water Quality Standards Map for Kaua'i was included in the EIS as Figure 18 and discussed in Section 3.6.

Mahalo nui for your input and participation in the environmental review process. Your letter will be included in the Final EIS. If you would like a copy of the Final EIS or portions thereof, please let us know. Otherwise, the electronic copy of the Final EIS will be available on the Office of Environmental Quality Control website at: [http://oeqc2.doh.hawaii.gov/EA\\_EIS\\_Library/2018-06-23-K-A-FEIS-Haena-State-Park-Master-Plan.pdf](http://oeqc2.doh.hawaii.gov/EA_EIS_Library/2018-06-23-K-A-FEIS-Haena-State-Park-Master-Plan.pdf) on June 23, 2018.

Aloha,

Kimi Mikami Yuen, LEED AP BD+C  
Principal

Attachments: Wastewater  
Solid Waste

cc: The Honorable David Y. Ige, Governor  
Office of Environmental Quality Control

Board of Land and Natural Resources  
Division of State Parks

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DAVID Y. ICE  
GOVERNOR OF HAWAII

RECEIVED  
AUG 27 2015  
PBR HAWAII



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

August 25, 2015

Ms. Kimi Yuen, Senior Associate  
PBR Hawaii & Associates, Inc.  
1001 Bishop Street Suite 650  
Honolulu, Hawaii 96813

Dear Ms. Yuen:

Subject: Draft Environmental Impact Statement (DEIS) for  
Haena State Park Master Plan  
Kuhio Highway, Haena, Kauai, 96722  
TMK (4) 5-9-008: 001, 5-9-001: 025, 5-9-001: 022 (portion)

Thank you for allowing us the opportunity to provide comments on the above subject project. We have the following information to offer. The subject project is located in the critical wastewater disposal area as determined by the Kauai County Wastewater Advisory Committee. All proposed wastewater systems shall comply with our Hawaii Administrative Rules, Chapter 11-62, "Wastewater Systems" for projects proposed in the Haena State Park Master Plan. It should be noted the setback requirements to State surface waters, e.g., wetlands, should be considered in the design of the individual wastewater systems. Also, portable toilets may not be used for the permanent or long term disposal of wastewater.

Please be informed that the proposed wastewater systems for the development may have to include design considerations to address any effects associated with the construction of and/or discharges from the wastewater systems to any public trust, Native Hawaiian resources or the exercise of traditional cultural practices. We encourage the developer to work with the County and continue to utilize recycled water for irrigation and other non-potable water purposes such as dust control, open spaces or landscaping areas.

Should you have any questions please contact Mr. Mark Tomomitsu of our office at (808) 586-4294.

Sincerely,

SINA PRUDER, P.E., CHIEF  
Wastewater Branch

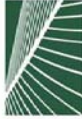
LMMST:jmj

c: Ms. Laura McIntyre, DOH-Environmental Planning Office (15-179), via email  
Ms. Lori Vetter, DOH-WWB's Kauai Staff, via email

VIRGINIA PRESSLER, M.D.  
DIRECTOR OF HEALTH

In reply, please refer to:  
File

LUD - 4 5 9 008 001  
DEIS Haena St Park-ID2399



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SUBJECT: COMMENTS ON THE HA'ENA STATE PARK MASTER PLAN  
DRAFT ENVIRONMENTAL IMPACT STATEMENT (EIS),  
HA'ENA, KAUAI, HAWAII

Aloha Ms. Pruder,

Mahalo nui for your comment letter dated August 25, 2015 (your Reference No. LUD 4 5 9 008 001 DEIS Haena St Park-ID2399) regarding the Ha'ena State Park Master Plan Draft Environmental Impact Statement (EIS). We sincerely apologize for the delay in responding. Due to the feedback received on the Draft EIS, the State of Hawai'i, Department of Land and Natural Resources, Division of State Parks (State Parks) has worked on revising the master plan with a reorganized Ha'ena State Park Community Advisory Committee (HSPCAC) to address the concerns voiced by the larger community. As a result, the master plan presented in the Final EIS has been updated based on the feedback received from the public meetings, comments received, and subsequent extensive collaboration with the HSPCAC. As the planning consultant for State Parks, we offer the following responses to your comments.

We recognize your comments stating the project is located in a critical wastewater disposal area as determined by the Kauai County Wastewater Advisory Committee and that all wastewater systems must conform to applicable provisions of Chapter 11-62, Hawai'i Administrative Rules "Wastewater Systems." We also appreciate the note that all individual wastewater systems should be set back as required for State surface waters such as wetlands and that portable toilets may not be used for the permanent or long-term disposal of wastewater. This text has been added to Sections 1.9.2 and 4.7.2 of the EIS as shown in the Wastewater Attachment to this letter.

The text which references "temporary/portable facilities as needed" has been replaced with "innovative wastewater technologies" in Sections 2.5.3.1 and 4.7.2 of the EIS.

Mahalo nui for the guidance that the proposed wastewater systems may have to include design considerations to address any effects associated with the construction of and/or discharges from the wastewater systems to any public trust, Native Hawaiian resources or the exercise of traditional cultural practices. One of the key management recommendations is to establish a cultural advisory group to advise State Parks early and throughout the implementation process so those considerations can be integrated into the design solutions.

Mahalo for the encouragement of utilizing recycled water for irrigation and other non-potable water purposes such as dust control, open spaces or landscaped areas. Dust control has been added throughout the EIS as an additional use for recycled or non-potable water.

Mahalo nui for your input and participation in the environmental review process. Your



Ms. Sina Pruder  
SUBJECT: COMMENTS ON THE HÄ'ENA STATE PARK MASTER PLAN DRAFT ENVIRONMENTAL  
IMPACT STATEMENT (EIS), HÄ'ENA, KAUAI, HAWAII

Month XX, 2018  
Page 2

letter will be included in the Final EIS. If you would like a copy of the Final EIS or portions thereof, please let us know. Otherwise, the electronic copy of the Final EIS will be available on the Office of Environmental Quality Control website at [http://oeqc2.doh.hawaii.gov/EA\\_EIS\\_Library/2018-06-23-KA-FEIS-Haena-State-Park-Master-Plan.pdf](http://oeqc2.doh.hawaii.gov/EA_EIS_Library/2018-06-23-KA-FEIS-Haena-State-Park-Master-Plan.pdf) on June 23, 2018.

Aloha,

Kimi Mikami Yuen, LEED AP BD+C  
Principal

Attachments: Wastewater

cc: The Honorable David Y. Ige, Governor  
Office of Environmental Quality Control  
Board of Land and Natural Resources  
Division of State Parks

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DAVID Y. IGE  
GOVERNOR OF HAWAII



STATE OF HAWAII  
DEPARTMENT OF LAND AND NATURAL RESOURCES  
LAND DIVISION

POST OFFICE BOX 621  
HONOLULU, HAWAII 96809

September 10, 2015

PBR HAWAII & Associates, Inc.  
Attention: Ms. Kimi Yuen  
1001 Bishop Street, Suite 650  
Honolulu, Hawaii 96813-3484

via email: [vsbigekuni@pbrhawaii.com](mailto:vsbigekuni@pbrhawaii.com)

State of Hawaii  
Department of Land and Natural Resources  
Division of State Parks, Attn: Lauren Tanaka  
1151 Punchbowl Street, #310  
Honolulu, Hawaii 96813

via email: [lauren.a.tanaka@hawaii.gov](mailto:lauren.a.tanaka@hawaii.gov)

Dear Ms. Yuen and Ms. Tanaka,

SUBJECT: Draft Environmental Impact Statement for the Hā'ena State Park Master Plan

Thank you for the opportunity to review and comment on the subject matter. In addition to the comments sent to you dated September 3, 2015, enclosed are additional comments from Land Division – Kauai District. Should you have any questions, please feel free to call Supervising Land Agent Steve Molmen at (808) 587-0439. Thank you.

Sincerely,

Russell Y. Tsuji  
Land Administrator

Enclosure(s)



Month XX, 2018

Mr. Russell Y. Tsuji, Land Administrator  
Department of Land and Natural Resources - Land Division  
State of Hawai'i  
1151 Punchbowl Street, Rm. 220  
Honolulu, HI 96813

**SUBJECT: COMMENTS ON THE HA'ENA STATE PARK MASTER PLAN  
DRAFT ENVIRONMENTAL IMPACT STATEMENT (EIS),  
HA'ENA, KAUAI, HAWAII**

Aloha Mr. Tsuji,

Mahalo nui for your comment letter dated September 10, 2015 regarding the Ha'ena State Park Master Plan Draft Environmental Impact Statement (EIS). We sincerely apologize for the delay in responding. Due to the feedback received on the Draft EIS, the State of Hawai'i, Department of Land and Natural Resources (DLNR), Division of State Parks (State Parks) has worked on revising the master plan with a reorganized Ha'ena State Park Community Advisory Committee (HSPCAC) to address the concerns voiced by the larger community. As a result, the master plan presented in the Final EIS has been updated based on the feedback received from the public meetings, comments received, and subsequent extensive collaboration with the HSPCAC. As the planning consultant for State Parks, we offer the following responses to your comments.

We recognize the Land Division - Kauai District has no comments on the Draft EIS.

Mahalo nui for your input and participation in the environmental review process. Your letter will be included in the Final EIS. If you would like a copy of the Final EIS or portions thereof, please let us know. Otherwise, the electronic copy of the Final EIS will be available on the Office of Environmental Quality Control website at [http://oeqc2.doh.hawaii.gov/EA\\_EIS\\_Library/2018-06-23-KA-FEIS-Haena-State-Park-Master-Plan.pdf](http://oeqc2.doh.hawaii.gov/EA_EIS_Library/2018-06-23-KA-FEIS-Haena-State-Park-Master-Plan.pdf) on June 23, 2018.

Aloha,

Kimi Mikami Yuen, LEED AP BD+C  
Principal

cc: The Honorable David Y. Ige, Governor  
Office of Environmental Quality Control  
Board of Land and Natural Resources  
Division of State Parks  
**DLNR Land Division - Kauai District**

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SUZANNE D. CURE  
CHAIRPERSON  
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MANAGEMENT



STATE OF HAWAII  
DEPARTMENT OF LAND AND NATURAL RESOURCES  
LAND DIVISION

POST OFFICE BOX 621  
HONOLULU, HAWAII 96809

July 23, 2015

**MEMORANDUM**

TO:

DLNR Agencies:

- X Div. of Aquatic Resources
- X Div. of Boating & Ocean Recreation
- X Engineering Division
- X Div. of Forestry & Wildlife
- X Div. of State Parks
- X Commission on Water Resource Management
- X Office of Conservation & Coastal Lands
- X Land Division - Kauai District
- X Historic Preservation

FROM:

SUBJECT:

LOCATION:

APPLICANT:

Russell Y. Tsuji, Land Administrator  
Draft Environmental Impact Statement for the Ha'ena State Park Master Plan  
Ha'ena State Park, Kauai, Hanalei; Tax Map Keys (4) 5-9-008: 001, 5-9-001: 025, 5-9-001: 022  
(portion)  
State of Hawai'i, Department of Land and Natural Resources, Division of State Parks, by its  
consultant PBR HAWAII & Associates, Inc.

Transmitted for your review and comment on the above-referenced document. We would appreciate your comments on this document which can be found here:

1. Go to: <https://sp01.ld.dlnr.hawaii.gov/LD>
2. Login: Username: LDVisitor Password: 0pa\$\$word0 (first and last characters are zeros)
3. Click on: Requests for Comments
4. Click on the subject file "Draft Environmental Impact Statement for the Ha'ena State Park Master Plan", then click on "Files" and "Download a copy". (Any issues accessing the document should be directed to Linda Kawakami at (808) 587-0371 or [Linda.Kawakami@hawaii.gov](mailto:Linda.Kawakami@hawaii.gov))

Please submit any comments by **September 2, 2015**. If no response is received by this date, we will assume your agency has no comments. If you have any questions about this request, please contact Supervising Land Agent Steve Molmen at (808) 587-0439. Thank you.

Attachments

( ) We have no objections.  
(x) We have no comments.  
( ) Comments are attached.

Signed: Mimi D. Cure  
Print Name: Mimi D. Cure  
Date: Aug. 27, 2015

Hawaii Division of Aquatic Resources  
Dept. of Land & Natural Resources  
3060 Eiiwa Street, Room 306  
Lihue, Kauai, Hawaii 96766  
Cell: (808) 645-0532

MEMORANDUM {DEIS Haena State Park Master Plan} August 4, 2015  
To: JoAnn Kushima  
cc: Anastasia Lytle  
Fm: Don Heacock, Kauai District Aquatic Biologist

**Subject: DEIS for the Haena State Park Master Plan: my review comments/recommendations**

**General Comments:**

The Plan is well written, documented and referenced. The DAR should fully support the Community-Based Management (CBM) approach, and their goals, objectives and recommendations within the Plan. Increased CBM of natural and cultural resources within the Park, and the proposed significant (50%) decrease in visitor daily traffic, and use of facilities and natural resources, will be an essential step in the restoration of the Park's ecological and cultural integrity. The proposed addition of Educational and Cultural Center (ECC) facilities and uses will enhance community stewardship, build community capacity, and will therefore help towards the long-term conservation and sustainable use of natural and cultural resources within the Park.

Generally, all proposed facilities, and where possible existing facilities, should be designed or modified to minimize impervious surfaces, and maximize storm water infiltration. Ideally, the existing hydrological and hydraulic conditions within the Park should be kept in as natural condition as is possible to protect quality of receiving waters, to prevent soil erosion and to promote infiltration to groundwater.

Based upon direct observations, and discussion with Surfrider Foundation, the existing wastewater facility, composed of septic system, constructed wetland and leach field is under designed (too small) and the constructed wetland is inadequately planted with high nutrient removing plants to meet the huge public demands on the system.

Although reducing the total vehicular traffic to 900 cars per day will certainly help the IWS function better. Without enhancement of the existing IWS (e.g., increase numbers and species of wetland plants, increasing size of constructed wetland, etc.) the system will not function properly and nutrient enrichment of the groundwater and nearshore marine environment (Class AA waters) will continue.

**Specific Comments:**

Page 2-3, first goal should read, "Recognize that the entire Park is *ecologically* and culturally significant."

P.2-28, in order to minimize the impacts of microhydropower systems on native Hawaii amphidromous biota, the diversion intakes must be designed to have low-velocity intakes placed subsurface in relatively deep pool in the center of the stream in order to minimize entrainment of larval or post-larval stream animals.

Section 2.5.4.4, under "Artificial light", add to the last bullet: " ...during the seabird fledgling season September to December, and during the sea turtle hatching period July to September, and yellow lighting invisible to honu should be used near the shoreline.

P. 3-34, Potential Impacts to Soils and Mitigation: amend this section to include perhaps the most important Best Management Practice (BMP) with is to "allow all large-scale grading, grubbing and stockpiling of soil only during the summer months (i.e., May 1 thru October 31).

P. 3-46, Table 7: Registered Diversions from Limahuli River:

A water budget study needs to be done to provide baseline data on:

- 1) the total amount of water diverted from each of the six water users:
- 2) document what purpose is the water being diverted (e.g., irrigation of taro, domestic uses, etc.).

Additionally, microhydropower should only be integrated with, and ancillary to, taro lo'i production, since taro lo'i are recognized as a "Public Trust Beneficial Use", therefore they have appurtenant water rights, but hydropower is only recognized as a "beneficial use" without having appurtenant water rights.

P. 3-47, Mitigation measures under consideration should also include the parking lot being surfaced with gravel or other pervious pavements to minimize impacts to the existing hydrological and hydraulic conditions, thereby minimizing stormwater runoff and soil erosion.

Section 3.5, Wetlands. Wetlands have great potential for integration with existing Individual Wastewater Systems (IWSs), particularly with integrated “ecological wastewater aquaculture systems”, using aquatic plants as biofilters that remove nutrients and dissolved solids. Such a system, appropriately designed could significantly increase the effectiveness and efficiency of wastewater treatment, removal and recovery of nutrients, protection of groundwater and nearshore marine quality, and the recovery of high quality R-1 water for reuse.

P. 3-48, The existing comfort station/IWS is currently not functioning properly and nutrients and bacteria are being discharges from the leach field and entering both the groundwater and nearshore marine waters (pers. Observation; pers. comm. with Dr. Carl Berg, Surfrider Foundation). In particular, the constructed wetland is missing most of its plants and cannot adequately remove nutrients.

P. 3-57, The Plan states that, “one management strategy is “to protect the long-term sustainability of the Park’s nearshore marine resources”; this is a goal statement, not a strategy; the strategic plan would sit objectives, timelines, identify person responsible and give details about how and when the goal would be reached.

Additionally, long-term resources monitoring should include: fish catch and effort data, species composition of catch, size (length) of fish caught, number caught, and gear and methods used.

P. 3-59, second to last para., Kido’s estimated 48, 00 m tonnes of plant liter being processed with Limahuli River ecosystem and being exported as organic nutrients into the ocean during floods.” This phenomenon strongly supports the need to restore traditional lo’i kalo within the watershed to help function, as “constructed wetlands” and as the “kidneys of the watershed”, where the lo’i trap and recycle organic

matter and nutrients, improving the productivity of the taro, and also keeping these nutrients out of the oligotrophic reef ecosystem.

P. 4-29, Water. Again, a detailed water budget should be done to quantify total water being diverted from each of the 6 water users, and the diversion structures documented as to type, placement within stream, and intake velocities to assure minimal impacts on migratory native larvae and post-larvae.

P. 4-30, Under Potential Impacts and Mitigation and additional method of water conservation within the Park not mentioned is to design and implement a “grey water system” that directs all potable water used for showers and sinks in facilities, both existing and proposed, to drain through subsurface perforated irrigation pipes to irrigate gardens, taro lo’i and or dryland taro patches, and finally to recharge groundwater; ideally environmentally safe soaps, which contain excellent plant nutrients like Oasis soaps, should be used within the Park. Greywater systems integrated into the Park’s facilities would reduce the amount of water diverted from Limahuli River that is now used for these purposes.

P. 4-31, third para., Wastewater. Again, the existing IWS, with its septic tank, constructed wetland and leach field appears to be malfunctioning because excess nitrogen, nutrients and bacteria are being discharged into the ground water and into nearshore marine waters (pers. comm. Dr. Carl Berg, Surfrider Found.). The cause of this malfunction appears to be lack of adequate wetland plants in the constructed wetland (about 80% are missing, pers. observ.).

P. 4-34, last para., Best Management Practices (BMPs) listed should include that all major grading, grubbing and stockpiling of soil can be done only during summer (May 1 through October 31) months to reduce severe soil erosion that can occur during large winter storms.

P. 7-4, Because the construction of the proposed new facilities will require the irreversible and irretrievable commitment of natural resources, all grading, grubbing and stock-piling of soil should be done only during summer months to minimize impacts to stream and nearby coral reef ecosystems.





**PBR HAWAII**  
& ASSOCIATES, INC.

**Month XX, 2018-DRAFT**

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Also, it is important to understand that hydropower, depending upon the design and placement of the intake structure, and on the amount of water diverted from the stream, can have significant negative effects (e.g., entrainment and impingement and associated mortality, loss of habitat, decreased water quality) on migratory fishes, for example our native Hawaiian amphidromous stream fauna made up of goby fishes ('o'opu), prawns or shrimp ('opae) and snails (hihiwai and hapawai).

Appendix A, Section E. Wastewater System. It is unclear how placing the IWS absorption bed under the parking lot (which should be covered with gravel or pervious pavement to allow infiltration and minimize stormwater runoff and soil erosion) will provide separation of IWS effluent from groundwater; this needs to be clarified. Because if, as an alternative, a properly designed and sized IWS with a larger than existing constructed wetland that would treat wastewater to R-1 classification, then the R-1 water could be reused for many purposes within the Park.

Sincerely,

Donald E. Heacock, Kauai District Aquatic Biologist

**SUBJECT: COMMENTS ON THE HÄ'ENA STATE PARK MASTER PLAN DRAFT ENVIRONMENTAL IMPACT STATEMENT (EIS), HÄ'ENA, KAUAI, HAWAII**

Aloha Mr. Heacock,

Mahalo nui for your letter dated August 4, 2015 regarding the Hä'ena State Park Master Plan Draft Environmental Impact Statement (EIS). We sincerely apologize for the delay in responding. Due to the feedback received on the Draft EIS, the State of Hawai'i, Department of Land and Natural Resources (DLNR), Division of State Parks (State Parks) has worked on revising the master plan with a reorganized Hä'ena State Park Community Advisory Committee (HSPCAC) to address the concerns voiced by the larger community. As a result, the master plan presented in the Final EIS has been updated based on the feedback received from the public meetings, comments received, and subsequent extensive collaboration with the HSPCAC. As the planning consultant for State Parks, we offer the following responses to your comments.

#### General Comments:

Mahalo for your statement that the plan is well-written, documented, and referenced. We appreciate your comments that the DLNR Division of Aquatic Resources (DAR) should fully support the community-based management approach (CBM), and the goals, objectives, and recommendations within the plan including the increased CBM of natural and cultural resources, proposed 50 percent decrease in visitor daily traffic, and use of facilities and natural uses as they will be an essential step in the restoration of the park's ecological and cultural integrity. Unfortunately, the Education and Cultural Center has been removed from the proposed plan. However, this does not change the goal and ability of the simplified master plan to support and enhance community stewardship of the park and building community capacity in the long-term conservation and sustainable use of the natural and cultural resources in the park. In fact, many in the community believe leaving the park in a more natural state with fewer structures will strengthen this and State Parks envisions all of the park to be an outdoor classroom where community education can happen. The few new structures that are proposed in the current version of the master plan will provide shelter and interpretive opportunities in key locations such as the Cultural Gathering Area, Welcome Hale and Shuttle stop.

Mahalo for your recommendations to design or modify the facilities to minimize impervious surfaces and maximize stormwater infiltration. Also maintaining the existing hydrological and hydraulic conditions within the park to be in as natural a condition as possible to protect receiving waters to prevent erosion and promote infiltration are key design recommendations discussed throughout the EIS in the description of the master

plan, which includes permeable surfaces for the parking and pedestrian paths and an integrated water/wastewater/drainage system, as well as Section 4.7.3, which describes the proposed drainage for the park.

Mahalo for the comment that the existing wastewater septic system and constructed wetland at Kē'ē are not adequately designed to meet the current public demands on the system. The proposed master plan reduces the average visitor counts to 900 people per day, which is roughly half the current peak number of visitors, and adds a second set of restrooms at the entrance to help alleviate the demand at the Kē'ē restrooms. In addition, the master plan recommends improving all wastewater effluent generated at the park to R-2 and adding aeration to the existing constructed wetlands' primary treatment tanks, powered by a PV system. We have also added the recommendation to "replace the plants at the constructed wetlands to high-nutrient removing plants to improve water quality" in Sections 1.9.2, 2.5.3.1, 3.4.1, 3.7, and 4.7.3 and the first phase of improvements in Table 4.

The average number of daily visitors are recommended to be reduced to 900 per day as opposed to vehicles, but we agree that the reduction will also help the existing individual wastewater system at Kē'ē function better.

Mahalo for the recommendation that the first goal should include the word "ecologically." While we agree with your point, these specific goals were generated and worded by the community advisory group. Therefore, we are not comfortable revising this bullet as this was the primary point they wanted to emphasize. However, the fifth bullet in the list of goals also includes the preservation of natural resources and there is a separate set of "Natural Resources Objectives and Policies" that recognizes this important aspect of the park and emphasizes the restoration and preservation of the natural and ecologically significant resources at the park. Therefore, we believe these support your recommendation.

Mahalo for your comment regarding microhydropower systems. The following text has been added to Sections 1.9.2, 2.5.3.2, 3.4.2, 3.9, 4.7.4, and 5.3.5 of the EIS: "To minimize the impacts of microhydropower systems on native Hawai'i amphidromous biota, the diversion intakes must be designed to have low-velocity intakes placed subsurface in relatively deep pool in the center of the stream in order to minimize entrainment of larval or post-larval stream animals."

The text in now Section 2.5.3.4 has been edited as your recommend as follows, "... seabird fledging season of September to December, and during the sea turtle hatching period July to September, and yellow lighting invisible to honu should be used near the shoreline." This text has also been revised in Sections 1.9.2 and 3.9.

Given recent heavy rain events, we understand the point made regarding soil mitigation. Therefore, we have added the following text to Sections 3.3, 4.7.3, and 1.9.2, "Efforts will be made to minimize all large-scale grading, grubbing, and stockpiling of soil and limit such activity to the dry season whenever possible."

As none of the known diversions from Limahuli Stream are within the park, nor does State Parks control or own any of them, and no new diversion is recommended as part of the proposed master plan, this recommendation seems to be more applicable to the State Commission on Water Resources Management (CWRM) rather than the park master plan and EIS. However, State Parks is supportive of DAR and/or CWRM performing studies within park boundaries if there is any research or monitoring they wish to pursue.

Mahalo for your recommendation to integrate the microhydropower system as an ancillary use to taro lo'i production as it is a recognized "Public Trust Beneficial Use." We have added the following text to Sections 1.9.2, 2.5.3.2, 3.4.2, 4.7.4, 5.3.5, and 7.4 of the EIS: "As a potential in-stream use, any microhydropower system should be integrated with a public trust use such as the taro lo'i production should it be pursued."

The parking lot is being recommended to be paved with permeable surfaces as described in Section 2.5.1.2 of the EIS.

While the integration of wetlands into individual wastewater systems (IWS) may have the stated benefits, State Parks does not want to potentially impact the condition of the existing wetlands as they are recognized Waters of the United States. The master plan recommends treating all wastewater generated onsite to R-2 effluent water quality at a minimum and to pursue innovative wastewater technologies such as constructed wetlands similar to the existing IWS at Kē'ē.

As noted above, we have revised the EIS to include improvements to the constructed wetlands at Kē'ē to "replace the plants at the constructed wetlands to high-nutrient removing plants to improve water quality."

We have replaced the word "strategies" with "goals" in this statement in Section 3.7.

As noted in Section 3.7 of the EIS, "State Parks will also support the rules adopted for the Hā'ena Community-Based Subsistence Fishery Area [HCBFA]." This includes the "Management plan and review" required under §13-60.8-4, HAR that involves the development of a framework to assist the department [DLNR] and the community in monitoring, evaluating, and managing the area." The proposed master plan for the park purposefully defers to the HCBFA and remains silent on specifics of fishery-based management and resources to avoid potential conflicts or duplication of efforts and therefore the recommendation to add long-term monitoring related to fish catch and effort data is not included in the EIS.

We agree with your recommendation to restore the lo'i as they can help reduce nutrient loads in the watershed. The restoration of the lo'i is discussed throughout the EIS and is included as a main proposal of the master plan Section 2.5.1.15, which describes the restoration of the historic Agricultural Complex. Please see the above response regarding the water budget and the fact that no stream diversions exist or are recommended at the park.

Mr. Don Heacock  
SUBJECT: COMMENTS ON THE HĀ'ENA STATE PARK MASTER PLAN DRAFT ENVIRONMENTAL  
IMPACT STATEMENT (EIS), HĀ'ENA, KAUA'I, HAWAII  
Month XX, 2018  
Page 4

Although the exact term "grey water" is not used in the EIS, the same recommendation of using recycled water and treated effluent for non-potable uses such as irrigation is mentioned throughout the proposed master plan description and EIS. Please see Section 2.5.3.1, which describes the proposed integrated water/wastewater/drainage system for the park. We have added the following text to Sections 1.9.2, 2.5.3.1, 3.4.1, 3.4.2, 3.7, 4.7.2, 5.3.4, and 7.3, "Use environmentally-safe soaps that contain plant nutrients and biocompatible cleaners." Mahalo for the recommendation.

Please see the above response and revisions to the existing Kē'ē constructed wetlands recommendations.

As noted above, the following text has been added to Section 4.7.3, "Minimize all large-scale grading, grubbing, and stockpiling of soil and limit such activity to the dry season whenever possible" as recommended.

The following text has been added to Section 7.4, "Because the construction of the new proposed facilities will require the irreversible and irretrievable commitment of natural resources, all large-scale grading, grubbing, and stockpiling of soil will be minimized and limited to the dry season whenever possible."

Mahalo for describing the additional concerns related to hydropower. The following has been added to Section 7.4, "However, if pursued hydropower may also have negative effects on fauna depending upon the design and placement of the intake structure. These potential impacts include decreased water quality, loss of habitat, and entrainment and impingement and associated mortality of migratory fishes, such as native Hawaiian amphidromous stream fauna made up of goby fishes ('o'opu), prawns or shrimp (ōpae) and snails (hīhīwai and hapawai)." The potential impacts have also been added to Section 4.7.4 of the EIS. Please note that no water is diverted for a microhydropower system so that impact has been removed from your recommended text.

With regards to your question about locating the IWS absorption bed under the parking lot and providing adequate separation of effluent from groundwater, please note that the Wastewater Preliminary Engineering Report recommends utilizing aerobic treatment systems, with disinfection. For IWS that discharge directly into groundwater, the Department of Health (DOH) requires the use of aerobic treatment units certified by NSF/ANSI 254. System design will require review and approval by DOH. The aerobic treatment can be utilized to support achieving R-2 effluent water quality, which can be used for subsurface irrigation. The EIS also recognizes that if the effluent is treated to R-1 water quality, it could be reused for many more purposes. The specific wastewater treatment technology is not specified in the EIS purposefully to allow more flexibility at the time of implementation as the wastewater technologies and techniques continue to advance and improve. We will add "aerobic treatment" to the descriptions of the recommended IWS in the EIS and the following text has been revised as noted regarding effluent disposal under parking lots in Sections 2.5.3.1 and 4.7.2 of the EIS, "Locate effluent absorption beds under parking lots and driveways if permitted. DOH requires the use of aerobic treatment units certified by NSF/ANSI 245 for systems that discharge directly into the groundwater." As an alternative, vault systems, which are fully contained

Mr. Don Heacock  
SUBJECT: COMMENTS ON THE HĀ'ENA STATE PARK MASTER PLAN DRAFT ENVIRONMENTAL  
IMPACT STATEMENT (EIS), HĀ'ENA, KAUA'I, HAWAII  
Month XX, 2018  
Page 5

and can be pumped and treated at an off-site facility are also being considered should effluent reuse not be possible onsite. This statement has been added to Sections 2.5.3.1 and 4.7.2 of the EIS.

Mahalo nui for your input and participation in the environmental review process. Your letter will be included in the Final EIS. If you would like a copy of the Final EIS or portions thereof, please let us know. Otherwise, the electronic copy of the Final EIS will be available on the Office of Environmental Quality Control website at [http://oeqc2.doh.hawaii.gov/EA\\_EIS\\_Library/2018--KA-FEIS-Haena-State-Park-Master-Plan.pdf](http://oeqc2.doh.hawaii.gov/EA_EIS_Library/2018--KA-FEIS-Haena-State-Park-Master-Plan.pdf) on 11/15/2018.

Aloha,

Kimi Mikami Yuen, LEED AP BD+C  
Principal

cc: The Honorable David Y. Ige, Governor  
Office of Environmental Quality Control  
Board of Land and Natural Resources  
Division of State Parks

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DAVID Y. IGE  
GOVERNOR OF HAWAII



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



STATE OF HAWAII  
DEPARTMENT OF LAND AND NATURAL RESOURCES  
LAND DIVISION

POST OFFICE BOX 621  
HONOLULU, HAWAII 96809

September 3, 2015

PBR HAWAII & Associates, Inc.  
Attention: Ms. Kimi Yuen  
1001 Bishop Street, Suite 650  
Honolulu, Hawaii 96813-3484

State of Hawaii  
Department of Land and Natural Resources  
Division of State Parks, Attn: Lauren Tanaka  
1151 Punchbowl Street, #310  
Honolulu, Hawaii 96813

Dear Ms. Yuen and Ms. Tanaka,

SUBJECT: Draft Environmental Impact Statement for the Ha'ena State Park Master Plan

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

At this time, enclosed are comments from (1) Division of Boating & Ocean Recreation; and (2) Engineering Division. No other comments were received as of our suspense date. Should you have any questions, please feel free to call Supervising Land Agent Steve Molmen at 587-0439. Thank you.

Sincerely,

Russell Y. Tsuji  
Land Administrator

Enclosure(s)

DAVID Y. IGE  
GOVERNOR OF HAWAII



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



STATE OF HAWAII  
DEPARTMENT OF LAND AND NATURAL RESOURCES  
LAND DIVISION

POST OFFICE BOX 621  
HONOLULU, HAWAII 96809

July 23, 2015

MEMORANDUM

TO:

DLNR Agencies:

- X Div. of Aquatic Resources
- X Div. of Boating & Ocean Recreation
- X Engineering Division
- X Div. of Forestry & Wildlife
- X Div. of State Parks
- X Commission on Water Resource Management
- X Office of Conservation & Coastal Lands
- X Land Division - Kauai District
- X Historic Preservation

FROM:

SUBJECT:

LOCATION:

APPLICANT:

Russell Y. Tsuji, Land Administrator

Draft Environmental Impact Statement for the Ha'ena State Park Master Plan  
Ha'ena State Park, Kaua'i, Hanalei; Tax Map Keys (4) 5-9-008: 001, 5-9-001: 025, 5-9-001: 022 (portion)  
State of Hawai'i, Department of Land and Natural Resources, Division of State Parks, by its consultant PBR HAWAII & Associates, Inc.

Transmitted for your review and comment on the above-referenced document. We would appreciate your comments on this document which can be found here:

1. Go to: <https://sp01.ld.dlnr.hawaii.gov/LD>
2. Login: Username: LDVisitor Password: opa\$Sword0 (first and last characters are zeros)
3. Click on: Requests for Comments
4. Click on the subject file "Draft Environmental Impact Statement for the Ha'ena State Park Master Plan", then click on "Files" and "Download a copy". (Any issues accessing the document should be directed to Linda Kawakami at (808) 587-0371 or [Linda.Kawakami@hawaii.gov](mailto:Linda.Kawakami@hawaii.gov))

Please submit any comments by September 2, 2015. If no response is received by this date, we will assume your agency has no comments. If you have any questions about this request, please contact Supervising Land Agent Steve Molmen at (808) 587-0439. Thank you.

Attachments

( ) We have no objections.  
(x) We have no comments.  
( ) Comments are attached.

Signed:   
Print Name: Russell Y. Tsuji  
Date: 7/27/15

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NATURAL RESOURCES  
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Month XX, 2018

Mr. Russell Y. Tsuji, Land Administrator  
Department of Land and Natural Resources - Land Division  
State of Hawai'i  
1151 Punchbowl Street, Rm. 220  
Honolulu, HI 96813

**SUBJECT: COMMENTS ON THE HA'ENA STATE PARK MASTER PLAN  
DRAFT ENVIRONMENTAL IMPACT STATEMENT (EIS),  
HA'ENA, KAUAI, HAWAII**

Aloha Mr. Tsuji,

Mahalo nui for your comment letter dated September 3, 2015 regarding the Ha'ena State Park Master Plan Draft Environmental Impact Statement (EIS). We sincerely apologize for the delay in responding. Due to the feedback received on the Draft EIS, the State of Hawai'i, Department of Land and Natural Resources (DLNR), Division of State Parks (State Parks) has worked on revising the master plan with a reorganized Ha'ena State Park Community Advisory Committee (HSPCAC) to address the concerns voiced by the larger community. As a result, the master plan presented in the Final EIS has been updated based on the feedback received from the public meetings, comments received, and subsequent extensive collaboration with the HSPCAC. As the planning consultant for State Parks, we offer the following responses to your comments.

We recognize the DLNR Division of Boating and Ocean Recreation has no comments on the Draft EIS.

Mahalo nui for your input and participation in the environmental review process. Your letter will be included in the Final EIS. If you would like a copy of the Final EIS or portions thereof, please let us know. Otherwise, the electronic copy of the Final EIS will be available on the Office of Environmental Quality Control website at [http://oeqc2.doh.hawaii.gov/EA\\_EIS\\_Library/2018-06-23-KA-EIS-Haena-State-Park-Master-Plan.pdf](http://oeqc2.doh.hawaii.gov/EA_EIS_Library/2018-06-23-KA-EIS-Haena-State-Park-Master-Plan.pdf) on June 23, 2018.

Aloha,

Kimi Mikami Yuen, LEED AP BD+C  
Principal

cc: The Honorable David Y. Ige, Governor  
Office of Environmental Quality Control  
Board of Land and Natural Resources  
Division of State Parks  
**Division of Boating and Ocean Recreation**

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MANAGEMENT



STATE OF HAWAII  
DEPARTMENT OF LAND AND NATURAL RESOURCES  
LAND DIVISION

POST OFFICE BOX 621  
HONOLULU, HAWAII 96809

July 23, 2015

**MEMORANDUM**

**DLNR Agencies:**  
X Div. of Aquatic Resources  
X Div. of Boating & Ocean Recreation  
X **Engineering Division**  
X Div. of Forestry & Wildlife  
X Div. of State Parks  
X Commission on Water Resource Management  
X Office of Conservation & Coastal Lands  
X Land Division - Kauai District  
X Historic Preservation

Russell Y. Tsuji, Land Administrator  
Draft Environmental Impact Statement for the Ha'ena State Park Master Plan  
Ha'ena State Park, Kauai; Tax Map Keys (4) 5-9-008: 001, 5-9-001: 025, 5-9-001: 022  
(portion)  
State of Hawai'i, Department of Land and Natural Resources, Division of State Parks, by its  
consultant PBR HAWAII & Associates, Inc.

Transmitted for your review and comment on the above-referenced document. We would appreciate your comments on this document which can be found here:

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2. Login: Username: LDVisitor Password: Opta\$word0 (first and last characters are zeros)
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Please submit any comments by September 2, 2015. If no response is received by this date, we will assume your agency has no comments. If you have any questions about this request, please contact Supervising Land Agent Steve Molmen at (808) 587-0439. Thank you.

**addition>{**  
(X)  
{  
We have no objections.  
We have no comments.  
Comments are attached.

Signed: \_\_\_\_\_  
Print Name: Gary S. Chang, Chief Engineer  
Date: 8/27/15

Attachments



TO: RR

FROM: [Signature]  
SUBJECT:  
LOCATION:  
APPLICANT:



Month XX, 2018

Mr. Russell Y. Tsuji, Land Administrator  
Department of Land and Natural Resources - Land Division  
State of Hawai'i  
1151 Punchbowl Street, Rm. 220  
Honolulu, HI 96813

**SUBJECT: COMMENTS ON THE HĀ'ENA STATE PARK MASTER PLAN  
DRAFT ENVIRONMENTAL IMPACT STATEMENT (EIS),  
HĀ'ENA, KAUAI, HAWAII**

Aloha Mr. Tsuji,

Mahalo nui for your comment letter dated September 3, 2015 regarding the Hā'ena State Park Master Plan Draft Environmental Impact Statement (EIS). We sincerely apologize for the delay in responding. Due to the feedback received on the Draft EIS, the State of Hawai'i, Department of Land and Natural Resources (DLNR), Division of State Parks (State Parks) has worked on revising the master plan with a reorganized Hā'ena State Park Community Advisory Committee (HSPCAC) to address the concerns voiced by the larger community. As a result, the master plan presented in the Final EIS has been updated based on the feedback received from the public meetings, comments received, and subsequent extensive collaboration with the HSPCAC. As the planning consultant for State Parks, we offer the following responses to your comments.

We recognize the DLNR Engineering Division has no comments on the Draft EIS.

Mahalo nui for your input and participation in the environmental review process. Your letter will be included in the Final EIS. If you would like a copy of the Final EIS or portions thereof, please let us know. Otherwise, the electronic copy of the Final EIS will be available on the Office of Environmental Quality Control website at [http://oeqc2.doh.hawaii.gov/EA\\_EIS\\_Library/2018-06-23-KA-FEIS-Haena-State-Park-Master-Plan.pdf](http://oeqc2.doh.hawaii.gov/EA_EIS_Library/2018-06-23-KA-FEIS-Haena-State-Park-Master-Plan.pdf) on June 23, 2018.

Aloha,

Kimi Mikami Yuen, LEED AP BD+C  
Principal

cc: The Honorable David Y. Ige, Governor  
Office of Environmental Quality Control  
Board of Land and Natural Resources  
Division of State Parks  
**DLNR Engineering Division**

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DAVID Y. IGE  
GOVERNOR OF HAWAII



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

REF:OCCL-LY

Kimi Yuen, Senior Associate  
PBR Hawai'i & Associates, Inc.  
1001 Bishop Street, Suite 650  
Honolulu, HI 96813

CORR: KA 16-51  
SEP - 3 2015

**SUBJECT:** Comments on the Draft Environmental Impact Statement for the Hā'ena State Park Master Plan by the State of Hawai'i, Department of Land and Natural Resources, Division of State Parks Located at Hā'ena, Hanalei, Kauai  
Tax Map Key (TMK): (4) 5-9-008-001, 5-9-001:022 (por.) and 025

Dear Ms. Yuen:

The Office of Conservation and Coastal Lands (OCCL) is in receipt of your request for comments on the Draft Environmental Impact Statement (DEIS) for the subject project.

According to the information provided, the Division of State Parks is proposing the following improvements at Hā'ena State Park as outlined in their update master plan:

- An education and cultural center;
- A traditional hale, demonstration gardens, picnic areas and outdoor event space;
- A reconstructed hale and lo'i interpretive site;
- A caretaker's cottage and backyard;
- A Department of Land and Natural Resources (DLNR) helipad and backyard/staging area;
- A limited access corridor;
- A hula complex;
- Dune Restoration;
- Installation of a permanent lifeguard tower;
- A picnic area at Kā'ē;
- Loko and wetland restoration;
- Limahuli Stream restoration;
- A living agricultural complex;
- Rehabilitation of the Montgomery house;
- A cultural gathering place and Hāluu Wa'a;
- Installation of interpretive signage;
- Pedestrian and bicycle facilities;
- Hazard rockfall mitigation measures; and
- Infrastructure improvements (water, wastewater, drainage, electrical, communication, & artificial lighting).

Ms. Kimi Yuen  
PBR Hawai'i & Associates, Inc.

CORR: KA 16-51



In the near term, State Parks would like to initiate the managed access concepts and safety improvements within the park as interim measures until the full build out of the master plan can be achieved. These improvements include construction of a welcome pavilion with restroom and information desk, establishment of an interpretive pedestrian path, rehabilitation of the existing parking area, establishment of a parking entry and turn around area, and installation of safety signage for rockfall hazards.

The OCCL notes that the project area is located within the Conservation District Resource subzone. On April 28, 1978, the Board of Land and Natural Resources (Board) approved Conservation District Use Permit (CDUP) KA-1010 for Public Recreation Use that established the park. In addition, Executive Order 3391, effective September 13, 1988, designated the subject area as Hā'ena State Park.

Therefore, based on the proposed improvements as outlined in the updated Master Plan, we anticipate that the proposed near-term, interim projects will require a Site Plan Approval pursuant to Hawai'i Administrative Rules (HAR) 13-5-22 STRUCTURES, ACCESSORY (B-1) Construction or placement of structures accessory to existing facility or uses. Once the EIS process is complete and planning underway for the long-term master plan concepts, the Division of State Parks should then apply for a Conservation District Use Board Permit pursuant to HAR 13-5-22 PUBLIC PURPOSE USES (D-1) Not for profit land uses undertaken in support of a public service by an agency of the county, state, or federal government, or by an independent non-governmental entity, except that an independent non-governmental regulated public utility may be considered to be engage in a public purpose use. Please note that this letter does not constitute the Department's final decision regarding the level of permitting required for the subject project. We reserve the right to change our decision dependent on the final project description presented to us by the Division of State Parks and/or their consultant when they have submitted their Conservation District Use Application for our review and processing.

Should you have any questions regarding this correspondence, please contact Lauren Yasaka of our Office at (808) 587-0386.

Sincerely,

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

cc: KDLO  
COK Dept. of Planning

Month XX, 2018

Mr. Samuel J. Lemmo, Administrator  
Office of Conservation and Coastal Lands  
Department of Land and Natural Resources  
State of Hawai'i  
Kalanimoku Building  
1151 Punchbowl Street, Suite 131  
Honolulu, HI 96813

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Mr. Samuel J. Lemmo  
SUBJECT: COMMENTS ON THE HÄ'ENA STATE PARK MASTER PLAN DRAFT ENVIRONMENTAL  
IMPACT STATEMENT (EIS), HÄ'ENA, KAUAI, HAWAII  
Month XX, 2018  
Page 2

near-term plan anymore. However, the phasing plan provided in Table 4 remains and has been updated accordingly.

Mahalo for your comments confirming that the project area is located within the Conservation District Resource subzone and that there is an existing Conservation District Use Permit (CDUP) KA-1010 for the park, which was approved on April 28, 1978. We also understand that Executive Order 3391, effective September 13, 1988, designated the subject area as Hä'ena State Park. The following text has been added to Section 2.1.1 of the EIS, "There is an existing Conservation District Use Permit (CDUP) KA-1010 for Public Recreation Use, which was approved on April 28, 1978. Executive Order 3391, effective September 13, 1988, designated the subject area as Hä'ena State Park."

We understand that the master plan's proposed projects will require a Site Plan Approval pursuant to Hawai'i Administrative Rules (HAR) 13-5-22 STRUCTURES, ACCESSORY (B-1) and the Division of State Parks should apply for a Conservation District Use Board Permit pursuant to HAR 13-5-22 PUBLIC PURPOSE USES (D-1) once the EIS process is completed and planning for the long-term master plan concepts is underway. State Parks will continue to coordinate with the Office of Conservation and Coastal Lands (OCCL) as the project progresses and understands the permitting requirements may change based on the actual applications submitted to OCCL. The "Site Plan Approval" has been added to the list of anticipated required permits and approvals in Sections 1.1, 1.9.4, and 5.5 of the EIS.

Mahalo nui for your input and participation in the environmental review process. Your letter will be included in the Final EIS. If you would like a copy of the Final EIS or portions thereof, please let us know. Otherwise, the electronic copy of the Final EIS will be available on the Office of Environmental Quality Control website at [http://oeqc2.doh.hawaii.gov/EA\\_EIS\\_Library/2018-06-23-KA-EIS-Haena-State-Park-Master-Plan.pdf](http://oeqc2.doh.hawaii.gov/EA_EIS_Library/2018-06-23-KA-EIS-Haena-State-Park-Master-Plan.pdf) on June 23, 2018.

Aloha,

Kimi Mikami Yuen, LEED AP BD+C  
Principal

Attachments: Master Plan Summary  
Figure 1: Master Plan

cc: The Honorable David Y. Ige, Governor  
Office of Environmental Quality Control  
Board of Land and Natural Resources  
Division of State Parks

DAVID Y. IGE  
GOVERNOR



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STATE OF HAWAII  
DEPARTMENT OF TRANSPORTATION  
869 PUNCHBOWL STREET  
HONOLULU, HAWAII 96813-5097  
October 5, 2015

FORD N. FUCHIGAMI  
DIRECTOR  
Deputy Directors  
JADE T. BUTAY  
ROSS M. HIGASHI  
EDWIN H. SHIFFER  
DARRELL T. YOUNG  
IN REPLY REFER TO:  
STP 8.1867

TO: THE HONORABLE SUZANNE CASE, CHAIRPERSON  
DEPARTMENT OF LAND AND NATURAL RESOURCES (DLNR)

ATTN: LAUREN TANAKA  
DIVISION OF STATE PARKS

FROM: FORD N. FUCHIGAMI  
DIRECTOR OF TRANSPORTATION

SUBJECT: HAENA STATE PARK MASTER PLAN  
DRAFT ENVIRONMENTAL IMPACT STATEMENT (DEIS)  
HAENA, KAUAI, HAWAII  
TMK: (4) 5-9-008-001, 5-9-001-025 and 022 (POR.)

Our Department of Transportation (DOT) previously commented during Early Consultation and Environmental Impact Statement Preparation Notice (EISPN) in our letters STP 8.2979 dated September 4, 2008 (see Section 11 of the DEIS) and STP 8.1782 dated April 1, 2015 (see Section 12 of the DEIS) and now provide the following supplemental comments:

Airports Division (DOT-AIR)

DOT-AIR acknowledges PBR Hawaii & Associates, Inc.'s May 8, 2015 letter in Section 12.0 of the DEIS stating that the DLNR, Division of State Parks has been notified that it should file FAA Form 7480-1 Notice of Landing Area Proposal for the helipad.

Highways Division (DOT-HWY)

1. The Master Plan proposal to limit the number of visitors (by roughly half) will provide relief to the congestion along Kuhio Highway. However, we are concerned that a negative effect may be the distribution of traffic to other facilities on the North Shore. We recommend that visitor use of the surrounding facilities such as the County's Haena Beach Park be monitored to determine if the traffic congestion and parking issues shift from one facility to another.



STP 8.1867

2. The proposed shuttle service to the Park may need to expand the shuttle stop with shelters, benches and informational signage if a shuttle is the primary means of Park entry for local and visitor Park users.
  3. The proposed park improvements should reduce the traffic along Kuhio Highway and improve the parking situation at the Park entrance.
  4. To mitigate the traffic impacts of the proposed project, we recommend DLNR:
    - a. Continue to work with the DOT to satisfactorily address the traffic impacts of the proposed project on the State's highways facilities.
    - b. Fund the planning, design and construction of all traffic improvements required to mitigate local or direct project-generated traffic impacts.
    - c. Fund its share of the planning, design and construction of all traffic improvements required to mitigate regional project-generated related traffic improvements.
- If there are any questions, please contact Mr. Norren Kato of the DOT Statewide Transportation Planning Office at telephone number (808) 831-7976.

✓ Kimi Yuen, PBR HAWAII & Associates, Inc.  
Gordon Wong, Federal Aviation Administration



**PBR HAWAII**  
& ASSOCIATES, INC.

Month XX, 2018

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

**SUBJECT: COMMENTS ON THE HÅ'ENA STATE PARK MASTER PLAN  
DRAFT ENVIRONMENTAL IMPACT STATEMENT (EIS),  
HÅ'ENA, KAUAI, HAWAII**

Aloha Mr. Butay,

Mahalo nui for the Department of Transportation's comment letter dated October 5, 2015 (Reference No. STP 8.1867) regarding the Hå'ena State Park Master Plan Draft Environmental Impact Statement (EIS). We sincerely apologize for the delay in responding. Due to the feedback received on the Draft EIS, the State of Hawai'i, Department of Land and Natural Resources, Division of State Parks (State Parks) has worked on revising the master plan with a reorganized Hå'ena State Park Community Advisory Committee (HSPCAC) to address the concerns voiced by the larger community. As a result, the master plan presented in the Final EIS has been updated based on the feedback received from the public meetings, comments received, and subsequent extensive collaboration with the HSPCAC. As the planning consultant for State Parks, we offer the following responses to your supplemental comments as organized in the referenced DOT letter.

Airports Division (DOT-AIR)

Mahalo for acknowledging our letter regarding FAA notification. As previously stated, State Parks will file the Federal Aviation Administration (FAA) Form 7480-1 Notice of Landing Area Proposal for the proposed helipad as required. This form has been added to the list of anticipated approvals and permits required for the project in Sections 1.9.4, and 5.5 of the EIS.

Highways Division (DOT-HWY)

1. We appreciate your comment regarding the alleviation of traffic as a result of the proposed limit on the number of visitors by roughly half. We also recognize that there may be the negative impact of distributing traffic to other facilities on the North Shore as stated in Section 7.3 of the EIS. This is why one of the preferred recommendations by the HSPCAC is the implementation of a shuttle service that serves the larger North Shore community as discussed in Section 4.3.3 of the EIS. Based on recent events that have closed the highway due to mudslides and heavy rainfall events, support for this type of shuttle or transit service is growing and the proposed master plan supports this effort by providing a shuttle stop at the park.

2. We understand your concern regarding expansion of the proposed shuttle stop in the event the shuttle becomes a primary means of entry for park visitors. If the parking demand for vehicles is reduced, the area shown as the main parking lot can be reduced and used to expand the area for shuttle service. This is discussed in Section 2.5.1.2 of the EIS.

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MARC SHIMATSU, ASLA  
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Mr. Jade Butay  
SUBJECT: COMMENTS ON THE HÄ'ENA STATE PARK MASTER PLAN DRAFT ENVIRONMENTAL  
IMPACT STATEMENT (EIS), HÄ'ENA, KAUAI, HAWAII

Month XX, 2018  
Page 2

3. Mahalo for your comment stating that the proposed park improvements should reduce the traffic along Kūhiō Highway and improve the parking situation at the park entrance.
4. Mahalo for your recommendations to DLNR to mitigate project-related traffic impacts. As State Parks proposes to reduce the average daily number of visitors at the park, traffic is anticipated to be reduced by the proposed master plan. Therefore no project-related traffic impacts are anticipated by the project.

Mahalo nui for your input and participation in the environmental review process. Your letter will be included in the Final EIS. If you would like a copy of the Final EIS or portions thereof, please let us know. Otherwise, the electronic copy of the Final EIS will be available on the Office of Environmental Quality Control website at: [http://oeqc2.doh.hawaii.gov/EA\\_EIS\\_Library/2018-06-23-KA-FEIS-Haena-State-Park-Master-Plan.pdf](http://oeqc2.doh.hawaii.gov/EA_EIS_Library/2018-06-23-KA-FEIS-Haena-State-Park-Master-Plan.pdf) on June 23, 2018.

Aloha,

Kimi Mikami Yuen, LEED AP BD+C  
Principal

cc: The Honorable David Y. Ige, Governor  
Office of Environmental Quality Control  
Board of Land and Natural Resources  
Division of State Parks

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PHONE (808) 594-1888



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STATE OF HAWAII  
OFFICE OF HAWAIIAN AFFAIRS  
560 N. NIMITZ HWY., SUITE 200  
HONOLULU, HAWAII 96817

FAX (808) 594-1938

HRD15-3774 G

October 12, 2015

Kimi Yuen, Senior Associate  
PBR Hawaii & Associates, Inc.  
1001 Bishop Street, Suite 650  
Honolulu, HI 96813

Re: Draft Environmental Impact Statement for Hā'ena State Park Master Plan  
Hā'ena Ahupua'a, Halele'a Moku, Kaua'i Moku

Aloha e Kimi Yuen:

The Office of Hawaiian Affairs (OHA) is in receipt of your July 20, 2015 request for comments on the draft environmental impact statement (DEIS) which has been prepared to support the Hā'ena State Park Master Plan (master plan) on the island of Kaua'i. The DEIS serves to support the use of State land and funds, the use of county lands, and a use of the state historic district as designated in the Hawai'i and national registers of historic places. In 2010, OHA was invited to participate in the development of the Hā'ena State Park Master Plan. The State Parks staff and the thirty-two member Master Plan Advisory Committee developed the goals and vision of this project.

The near-term plan of the EIS includes a controlled entry to the park with a new welcome pavilion and restrooms, an interpretive path that will provide access to Kē'e beach, and an elevated boardwalk through the lo'i. As funding becomes available, the full buildout of the project will include additional facilities, a larger educational and cultural center, and a caretaker's cottage to support a 24-hour presence at the park. As mentioned in the DEIS, the Ka Ulu A Paoa Heiau and the former Allerton property are designated as the Hula Complex and are recognized as extremely significant to hula practitioners worldwide. The master plan prioritizes the restoration of the dune complex, recognizing the multiple benefits of ecological restoration, beach protection, and caring for the many sacred iwi kūpuna whose bones lay interred there.

According to the DEIS, visitors to the park will be impacted by the change in access policies and the daily visitor limit of 900 people per day, including hikers on the Kalalau trail. This daily visitor limit will not impact cultural practitioners, hula hālan, lo'i workgroups, cemetery caretakers, or

Kimi Yuen, Senior Associate  
October 12, 2015  
Page 2

school groups. OHA supports limiting the access to the park to preserve and protect this historic and cultural wahi pana while ensuring that our beneficiaries are still able to practice their constitutionally protected cultural practices.

As stated in the Archaeological and Historic Resources Section 4.1 of the DEIS, "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." (Yent 1983)<sup>1</sup> The report also mentions that in 1978, Dr. Hallett 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'e Beach sometime before 1000 A.D. After 1000 A.D., occupation expanded at Kē'e 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.<sup>2</sup>

In the CIA prepared by Maria Ka'imipono Orr and described in Cultural Resources Section 4.2, historic sites include Ka Ulu a Paoa Heiau, Ke Ahu a Laka hula platform, Lohi'au's house site and, Wai a Kanaioa, and Waiakapala'e caves. The whole area of Kē'e 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.<sup>3</sup>

OHA appreciates that the DEIS has provide extensive information on significance of this wahi pana. The planning has taken a proactive approach of protecting and restoring the varied natural, cultural, and historic resources, as they are all connected and essential to the cultural values of this place, and requiring visitor education of everyone who enters the park.

Thank you for the opportunity to provide comments on the EIS for the Hā'ena State Park Master Plan 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,

*Kamano*

Kamano'opono M. Crabbe, Ph.D.  
Ka Pōhanea, Chief Executive Officer

KC:kk

C: Dan Ahuna, OHA Kaua'i & Ni'ihau Trustee  
Kaliko Santos, OHA Kaua'i Community Outreach Coordinator (via email)

<sup>1</sup> 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.

<sup>2</sup> 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.

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



PBR HAWAII  
& ASSOCIATES, INC.

Month XX, 2018

Dr. Kamano'opono M. Crabbe, CEO  
Office of Hawaiian Affairs  
560 N. Nimitz Highway, Suite 200  
Honolulu, HI 96817

SUBJECT: COMMENTS ON THE HĀ'ENA STATE PARK MASTER PLAN  
DRAFT ENVIRONMENTAL IMPACT STATEMENT (EIS),  
HĀ'ENA, KAUA'I, HAWAII

Aloha Dr. Crabbe,

Mahalo nui for your comment letter dated October 12, 2015 (your Reference No. HRDI-5-3774 G) regarding the Hā'ena State Park Master Plan Draft Environmental Impact Statement (EIS). We sincerely apologize for the delay in responding. As you know, due to the feedback received on the Draft EIS, the State of Hawai'i, Department of Land and Natural Resources, Division of State Parks (State Parks) has worked on revising the master plan with a reorganized Hā'ena State Park Community Advisory Committee (HSPCAC) to address the concerns voiced by the larger community. As a result, the master plan presented in the Final EIS has been updated based on the feedback received from the public meetings, comments received, and subsequent extensive collaboration with the HSPCAC. As the planning consultant for State Parks, we offer the following responses to your comments. We greatly appreciate the Office of Hawaiian Affairs' (OHA) participation on both the original Master Plan Advisory Committee and the HSPCAC and dedication throughout this process.

As mentioned above, the master plan for the park has been revised and greatly simplified based on community feedback. Please note that as a result, the Education and Cultural Center and Caretaker's Cottage have been eliminated, as well as the need for a near-term plan. However, the creation of the Hula Complex and restoration of the ancient Agricultural Complex remain as well as the priority of the dune restoration. In addition, the pedestrian path, Cultural Gathering Place, Hālau Wa'a, and traditional hale for cultural education remain. A Welcome Hale and new restrooms are proposed at the park entry, with the latter providing an alternate comfort station away from sensitive cultural features. Please see the updated Figure 1 Master Plan graphic and the "Master Plan Summary" attachment, which describes the new plan and the shows the verbatim changes from Section 1.9.1 of the Final EIS. A full copy of the updated master plan report is available on the State Parks website for Hā'ena State Park: <http://dlnr.hawaii.gov/dsp/parks/kauai/haena-state-park/>.

Mahalo for your support of the proposed visitor limit, and the recognition that it helps to preserve and protect this historic and cultural wahi pana while ensuring that your beneficiaries are able to practice their constitutionally protected cultural practices.

Mahalo nui for also recognizing the archaeological, historic, and cultural information shared in the EIS, which help to document the significance of this wahi pana. We are humbled by your statement that the planning has taken a proactive approach of protecting and restoring the varied natural, cultural, and historic resources and agree that they are all connected and essential to the cultural values of this place. Visitor education prior to park entry remains a key management recommendation and State Parks and the project team truly appreciate

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OHA's participation, guidance, and kokua in helping this project continue to protect the natural, cultural, and historic elements that enrich Hå'ena today and for generations to come.

Mahalo nui for your input throughout the development of the master plan and participation in the environmental review process. Your letter will be included in the Final EIS. If you would like a copy of the Final EIS or portions thereof, please let us know. Otherwise, the electronic copy of the Final EIS will be available on the Office of Environmental Quality Control website at: [http://oeeq2.doh.hawaii.gov/EA\\_EIS\\_Library/2018-06-23-KA-EFIS-Haena-State-Park-Master-Plan.pdf](http://oeeq2.doh.hawaii.gov/EA_EIS_Library/2018-06-23-KA-EFIS-Haena-State-Park-Master-Plan.pdf) on June 23, 2018.

Aloha,

Kimi Mikami Yuen, LEED AP BD+C  
Principal

Attachments: Master Plan Summary  
Figure 1: Master Plan

cc: The Honorable David Y. Ige, Governor  
Office of Environmental Quality Control  
Board of Land and Natural Resources  
Division of State Parks

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## DISABILITY AND COMMUNICATION ACCESS BOARD

919 Ala Moana Boulevard, Room 101 • Honolulu, Hawaii 96814  
Ph. (808) 586-8121 (V/TDD) • Fax (808) 586-8129

September 4, 2015

Ms. Lauren Tanaka  
Division of State Parks  
Department of Land and Natural Resources  
PO Box 621  
Honolulu, HI 96809

Regarding: Hå'ena State Park Master Plan

Dear Ms. Tanaka,

The Disability and Communication Access Board (DCAB) would like to thank you for the opportunity to review the Hå'ena State Park Master Plan dated July 2015. The purpose of this review is to ensure that this project will take into account accessibility design requirements for persons with disabilities.

While DCAB is not an approval agency, we recommend the Plan include the general statement below with regards to construction projects that may be developed for Hå'ena State Park:

*"All buildings, facilities, and sites shall conform to applicable federal, state, and county accessibility guidelines and standards. Hawaii Revised Statutes §103-50 requires all State of Hawaii or County government buildings, facilities, and sites to be designed and constructed to conform to the Americans with Disabilities Act Accessibility Guidelines, the Federal Fair Housing Amendments Act, and other applicable design standards as adopted and amended by the Disability and Communication Access Board. The law further requires all plans and specifications prepared for the construction of State of Hawaii or County government buildings, facilities, and sites to be reviewed by the Disability and Communication Access Board for conformance to those guidelines and standards."*

New construction and alterations of buildings and facilities (restrooms, caretaker residence, 'Welcome Pavilion', 'Educational & Cultural Center', Montgomery House rehabilitation, etc.) are required to comply with the Department of Justice's (DOJ) 2010 ADA Standards for Accessible Design (2010 Standards). The standards can be viewed at [http://www.ada.gov/2010ADAStandards\\_index.htm](http://www.ada.gov/2010ADAStandards_index.htm).



Ms. Lauren Tanaka  
Department of Land and Natural Resources  
Division of State Parking  
Regarding: Hā'ena State Park Master Plan  
September 4, 2015

To be consistent with the DOJ's standard, DCAB adopted the 2004 Americans with Disabilities Act Accessibility Guidelines (ADAAG) as of January 1, 2011 and passed interpretive opinions consistent with the 2010 ADA Standards. All of DCAB's Interpretive Opinions can be viewed or downloaded at <http://www.health/hawaii.gov/dcab/facility-access/interpretive-opinions>.

In reviewing the Hā'ena State Park Master Plan there were a few references and items that appear to conflict with the 2010 Standards or are of concern:

- **Parking Areas (Various pages):** The utilization of permeable materials such as grass pavers, turf blocks and gravel for parking surfaces if used for accessible parking will not comply with the 2010 Standards or DCAB Interpretive Opinion 2011-02 Ground and Floor Surfaces. Grass is not considered an accessible surface. Gravel is not considered firm, stable or slip resistant. Grass pavers and turf block are not considered accessible surfaces per DCAB's Interpretive Opinion.
- **Pedestrian Paths:** The Master Plan calls out permeable pavers in a number of areas. Similar to the comment above, grass, gravel, grass pavers and turf blocks are not considered an accessible surface.
- **Princeville Shuttle:** Any new or expanded shuttle service vehicles must be accessible. The drop-off and boarding facilities at both Princeville and Hā'ena State Park are considered passenger-loading areas and must comply with the requirements for an accessible bus loading area.
- **Caretaker's Cottage:** Any new residential facility shall be designed as accessible. Alterations to existing residential facilities are also required to comply with scoping and technical provisions of the 2010 Standards.
- **Bicycle racks:** Where provided, bicycle racks must be connected to an accessible route and provide a wheelchair clear floor space that is firm, stable and slip resistant adjacent to the bike rack.
- **Electric Vehicle Charging Station(s):** Where provided, electric vehicle parking and charging stations must comply with DCAB Interpretive Opinion 2012-01.
- **Restrooms:** New or altered composting toilet facilities and temporary toilet facilities must be accessible and comply with the 2010 Standards.

The Plan describes proposed improvements to provide trails, beach access and areas for camping and overnight stays. DCAB strongly encourages the use of the following accessibility guideline related to outdoor developed areas when newly built or altered as best practice:

Ms. Lauren Tanaka  
Department of Land and Natural Resources  
Division of State Parking  
Regarding: Hā'ena State Park Master Plan  
September 4, 2015

- **Final Guidelines, Architectural Barriers Act Accessibility Guidelines (ABAAG); Outdoor Developed Areas:** published September 26, 2013. These guidelines became effective for federal agencies on November 25, 2013 and provide scoping and technical provisions for accessible trails, picnic and camping areas, viewing areas, beach access routes and other components of outdoor developed areas.

Improvements to existing roadways, access roads, intersections and other areas of the public right-of-way are covered by Hawaii Revised Statutes (HRS) §103-50.

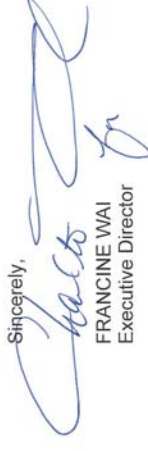
The Master Plan indicates the development of pathways for use by both pedestrians and bicyclists. DCAB recommends the use of the following guidelines that were published by the U.S. Access Board for shared use paths and pedestrian routes. Although they are not yet enforceable by the DOJ under the Americans with Disabilities Act (ADA), nor have they been adopted by state rules under HRS §103-50, these accessibility guidelines provide guidance for a minimal level of accessibility for those elements not addressed by the enforceable ADAAG:

- **Accessibility Guidelines for Pedestrian Facilities in the Public Right-of-Way; Shared Use Paths;** Supplemental Notice of Proposed Rulemaking; published February 13, 2013.
- **Proposed Guidelines for Pedestrian Facilities in the Public Right-of-Way;** published July 26, 2011.

The above comments reflect DCAB's advice and recommendations for the Department of Land and Natural Resources. Please note that the individual Hā'ena State Park projects must still be submitted to DCAB for review per HRS §103-50.

Thank you again for allowing DCAB the opportunity to provide these comments. Should you have any further questions, please feel free to contact Mona Higa, Facility Access Coordinator at 586-8121 or via email at [mona.higa@doh.hawaii.gov](mailto:mona.higa@doh.hawaii.gov).

Sincerely,



FRANCINE WAI  
Executive Director



THOMAS WITTEN, FASLA  
Chairman / Principal

R. SEAN DUNCAN, ASLA  
President / Principal

RUSSELL Y. CHUNG, FASLA, LEED® AP BD+C  
Executive Vice President / Principal

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Ms. Francine Wai  
SUBJECT: COMMENTS ON THE HĀ'ENA STATE PARK MASTER PLAN DRAFT ENVIRONMENTAL  
IMPACT STATEMENT (EIS), HĀ'ENA, KAUA'I, HAWAII  
Month XX, 2018  
Page 2

historic structures in order to ensure compliance with required accessibility laws. Mahalo for the link to DCAB's Interpretive Opinions.

In response to your two comments that permeable materials do not comply with 2010 ADA standards for accessible parking surfaces or pedestrian paths, please note that there are new materials available that include ADA-compliant permeable surfaces and pavers. Here are a few examples from the Internet including a structured gravel surface installed in a national park that is ADA compliant:

- <https://www.truegridpaver.com/testimonials/ada-compliant-permeable-paver/>
- <https://unilock.com/products/classic/ada-paver/?region=2>
- <https://www.basallite.com/projects/berkeley-high-school-stadium-permeable-pavers>

The design team will work closely with DCAB to ensure compliance with current requirements.

We also understand that any new or expanded third-party shuttle service vehicles must be accessible. The following statement has been added to Section 5.1.1, "Any new shuttle service must be accessible. The drop-off and boarding facilities at the park and any remote parking are considered passenger loading zone and must comply with the requirements for an accessible bus loading area."

We recognize your comment regarding the caretaker's cottage accessibility. The caretaker's cottage has been removed from the updated master plan.

We appreciate your comment regarding bicycle racks in the master plan. The following statement will be added to Section 5.1.1, "Bicycle racks must connect to an accessible route and a wheelchair clear floor space that is firm, stable, and slip resistant adjacent to the bike racks."

We recognize your comment regarding electric vehicle charging stations. The following text has been added to Sections 2.5.1.2 and 5.1.1 of the EIS, "If electric vehicle parking and charging stations are provided, they must comply with DCAB Interpretive Opinion 2012-01, which states, 'Where EV charging stations are provided, 5%, but not less than one of each type of EV station shall be accessible.'"

We recognize new or altered composting toilet facilities must be accessible and comply with ADA standards. This is included in Section 5.1.1 of the EIS. The temporary toilet facilities have been removed from the EIS.

For improvements to trails, beach access, and areas for camping and overnight stays, we appreciate the reference to the Final Guidelines, Architectural Barriers Act Accessibility Guidelines (ABAAG); Outdoor Developed Areas, published in September 26, 2013. These guidelines have been added to Section 5.1.1 of the EIS and used to guide detailed design of the various outdoor elements.

We also recognize your comment stating improvements to existing roadways, access roads, intersections, and other areas of the public right-of-way must comply with HRS §103-50. This statement also has been added to Section 5.1.1.

SUBJECT: COMMENTS ON THE HĀ'ENA STATE PARK MASTER PLAN  
DRAFT ENVIRONMENTAL IMPACT STATEMENT (EIS),  
HĀ'ENA, KAUA'I, HAWAII

Aloha Ms. Wai,

Mahalo nui for your comment letter dated September 4, 2015 regarding the Hā'ena State Park Master Plan Draft Environmental Impact Statement (EIS). We sincerely apologize for the delay in responding. Due to the feedback received on the Draft EIS, the State of Hawai'i, Department of Land and Natural Resources, Division of State Parks (State Parks) has worked on revising the master plan with a reorganized Hā'ena State Park Community Advisory Committee (HSPCAC) to address the concerns voiced by the larger community. As a result, the master plan presented in the Final EIS has been updated based on the feedback received from the public meetings, comments received, and subsequent extensive collaboration with the HSPCAC. As the planning consultant for State Parks, we offer the following responses to your comments.

Mahalo for your recommendation to include the following statement with regards to construction projects:

*All buildings, facilities, and sites shall conform to applicable federal, state, and county accessibility guidelines and standards. Hawai'i Revised Statutes §103-50 requires all State of Hawai'i or County government buildings, facilities, and sites to be designed and constructed to conform to the Americans with Disabilities Act (ADA) Accessibility Guidelines, the Federal Fair Housing Amendments Act, and other applicable design standards as adopted and amended by the Disability and Communication Access Board. The law further requires all plans and specifications prepared for the construction of State of Hawai'i or County government buildings, facilities, and sites to be reviewed by the Disability and Communication Access Board for conformance to those guidelines and standards.*

It is already included in Section 5.1.1 of the EIS.

We also acknowledge that new construction and alterations of buildings and facilities are required to comply with the Department of Justice's (DOJ) 2010 ADA Standards for Accessible Design. This statement has been added to Section 5.1.1. Mahalo for providing the link to the DOJ's 2010 ADA Standards. Please note that the many of the existing structures such as the Montgomery House, Allerton Caretaker's Cottage, and the interpretive restoration site's foundation are over fifty years old and State Parks will need to balance historic preservation with ADA accessibility. State Parks will consult with the Disability and Communication Access Board (DCAB) as it proceeds with detailed design and implementation of the master plan particularly with regards to restoring any of the

Please note that bicycles will no longer be permitted on the Pedestrian Path so there are no shared-use paths in the proposed master plan. Mahalo for the references. State Parks will reference them should they decide to pursue shared paths in the future.

State Parks also understand that individual projects of the master plan must be submitted to DCAB for review per HRS §103-50. This is noted in Section 5.1.1 of the EIS.

Mahalo nui for your input and participation in the environmental review process. Your letter will be included in the Final EIS. If you would like a copy of the Final EIS or portions thereof, please let us know. Otherwise, the electronic copy of the Final EIS will be available on the Office of Environmental Quality Control website at [http://oeqc2.doh.hawaii.gov/EA\\_EIS\\_Library/2018-06-23-KA-FEIS-Haena-State-Park-Master-Plan.pdf](http://oeqc2.doh.hawaii.gov/EA_EIS_Library/2018-06-23-KA-FEIS-Haena-State-Park-Master-Plan.pdf) on June 23, 2018.

Aloha,

Kimi Mikami Yuen, LEED AP BD+C  
Principal

cc: The Honorable David Y. Ige, Governor  
Office of Environmental Quality Control  
Board of Land and Natural Resources  
Division of State Parks

O:\obj262627\01 DLNR-Haena State Park Master Plan\EIS\DEIS\Responses\STATE-14\_2015-09-04 DCAB - JSN.docx

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## Nathalie Razo

**From:** Daryl Date <DDate@kauai.gov>  
**Sent:** Tuesday, September 15, 2015 2:13 PM  
**To:** Kimi Yuen; Lauren A. Tanaka@hawaii.gov  
**Subject:** Haena State Park Master Plan

Aloha Kimi and Lauren

I believe Fire Chief Westernman submitted comments regarding this project. I'm not sure exactly what was given. Some comments I have are as follows:

- Project shall comply with the Kauai County Fire Code
- Emergency access via Fire apparatus and ambulance must be considered
- Fire protection by means of water supply for fighting fires, especially for the structures that will be built.
- Helipad must be clear of people and objects that may create a hazard for the chopper. Is this area going to be accessible to the public, or cordoned off?

Please contact me if you have further questions.

Mahalo

*Daryl Date*

Fire Prevention Captain  
County of Kauai  
Pi'ikoi Building  
4444 Rice St., Suite 315  
Lihue, HI 96766  
Phone: 808-241-4982  
Cell: 808-645-6353



Month XX, 2018

Mr. Daryl Date, Fire Prevention Captain  
Kauai Fire Department  
4444 Rice Street, Suite 315  
Lihue, HI 96766

**SUBJECT: COMMENTS ON THE HĀ'ENA STATE PARK MASTER PLAN  
DRAFT ENVIRONMENTAL IMPACT STATEMENT (EIS),  
HĀ'ENA, KAUA'I, HAWAII**

Aloha Mr. Date,

Mahalo nui for your emailed comment dated September 15, 2015 regarding the Hā'ena State Park Master Plan Draft Environmental Impact Statement (EIS). We sincerely apologize for the delay in responding. Due to the feedback received on the Draft EIS, the State of Hawai'i, Department of Land and Natural Resources, Division of State Parks (State Parks) has worked on revising the master plan with a reorganized Hā'ena State Park Community Advisory Committee (HSPCAC) to address the concerns voiced by the larger community. As a result, the master plan presented in the Final EIS has been updated based on the feedback received from the public meetings, comments received, and subsequent extensive collaboration with the HSPCAC. As the planning consultant for State Parks, we offer the following responses to your comments.

1. With regards to your first two comments, the following text has been added to Sections 1.9.2 and 4.9.1 of the EIS, "State Parks will work with the County Police and Fire Departments to comply with requirements of the Kaua'i County Fire Code including emergency access by fire apparatus, ambulance, and other emergency vehicles as required."

2. Please note that the master plan has been simplified based on community input and many of the larger structures that were originally proposed, such as the Education and Cultural Center and Caretaker's Cottage, have been eliminated from the plan. Please see the updated Figure 1 showing the revised master plan and Master Plan Summary attached for your reference. Because the last fire hydrant/standpipe is located outside of the park, roughly 75 feet away, non-potable water is recommended for fire protection. Collected rainwater via the proposed catchment systems or even ocean water could be used for fire protection in emergencies.

3. The helicopter landing zone closest to the main parking lot will be fenced or separated from the public areas by a hedge (see Figure 1). Also, an alternate landing zone is shown in the lo'i as we understand the Fire Department prefers the open grassy area near the Hui's current shelter for emergency helicopter landings. We also understand that the Fire Department will land wherever they need to as appropriate for the emergency situation.

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Mr. Daryl Date  
SUBJECT: COMMENTS ON THE HĀ'ENA STATE PARK MASTER PLAN DRAFT ENVIRONMENTAL  
IMPACT STATEMENT (EIS), HĀ'ENA, KAUA'I, HAWAII  
Month XX, 2018  
Page 2

Mahalo nui for your input and participation in the environmental review process. Your letter will be included in the Final EIS. A copy of the Final EIS has been sent to the County of Kaua'i for your reference. An electronic copy of the Final EIS will be available on the Office of Environmental Quality Control website at: [http://oeqc2.doh.hawaii.gov/EA\\_EIS\\_Library/2018-06-23-KA-HEIS-Haena-State-Park-Master-Plan.pdf](http://oeqc2.doh.hawaii.gov/EA_EIS_Library/2018-06-23-KA-HEIS-Haena-State-Park-Master-Plan.pdf) on June 23, 2018

Aloha,

Kimi Mikami Yuen, LEED AP BD+C  
Principal

Attachments: Master Plan Summary  
Figure 1: Master Plan

cc: The Honorable David Y. Ige, Governor  
Office of Environmental Quality Control  
Board of Land and Natural Resources  
Division of State Parks

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COUNTY OF KAUAI  
PLANNING DEPARTMENT  
4444 RICE STREET, SUITE A473  
LIHUE, KAUAI, HAWAII 96766-1326

RECEIVED  
AUG 31 2015  
PBR HAWAII

MEMORANDUM

DATE: August 25, 2015

TO: Kimi Yuen, Senior Associates  
PBR Hawaii & Associates, Inc.  
1001 Bishop Street, Suite 650  
Honolulu, Hawaii 96813

FROM: Kauai Historic Preservation Review Commission

SUBJECT: Request for Comments on Draft Environmental Impact Statement (EIS) for the Hā'ena State Park Master Plan that has been prepared pursuant to Chapter 343 of the Hawaii Revised Statutes and Administrative Rules, Title 11, Chapter 200

This is to inform you that the Kauai Historic Preservation Review Commission (KHPRC) met on August 6, 2015 to discuss and review on Draft Environmental Impact Statement (EIS) for the Hā'ena State Park Master Plan.

The KHPRC appreciated the opportunity to comment on the project. Based on their review of the KHPRC voted to defer comments on the project until the next scheduled meeting on September 3, 2015 to provide the KHPRC with additional time to review the Draft EIS.

Please feel free to contact us should you have any questions regarding this matter.

Mahalo.

cc: State Historic Preservation Division

Bernard P. Carvalho, Jr.  
Mayor

Nadine K. Nakamura  
Managing Director



PLANNING DEPARTMENT  
County of Kauai, State of Hawaii  
4444 Rice Street, Suite A-473, Lihue, Hawaii 96766  
TEL (808) 241-4050 FAX (808) 241-6699

Michael A. Dahilig  
Director of Planning

Ka'aina S. Hull  
Deputy Director of Planning

MEMORANDUM

TO: Kauai Historic Preservation Review Commission

Fr: Ka'aina Hull  
Deputy Director of Planning

Date: September 24, 2015

RE: Hā'ena State Park Master Plan  
Comments for Draft EIS

On August 6, 2015, the Kauai Historic Preservation Commission (KHPRC) received and reviewed the Draft Environmental Impact Statement for the Hā'ena State Park Master Plan. At the meeting, KHPRC had questions for and discussions with the representative of the Department of Land and Natural Resources (DLNR). In order to allow members of the KHPRC to forward comments to the Department, and for the Department to review and gather the comments together, action for the subject agenda item was deferred to the next KHPRC meeting.

The following are the comments that the Department has received concerning this subject agenda item. The Department is in concurrence with the following comments and recommends adoption so that they can be forwarded to be incorporated into the Comments for the subject Draft EIS.

The KHPRC is charged with "protecting, preserving, perpetuating, promoting, enhancing and developing the historic resources of the County of Kauai." Hā'ena State Park and areas around it contain many such resources, sites of legendary cultural significance where the importance of preservation, protection and perpetuation can hardly be overstated. Yet some of the *wahi pana* at Hā'ena have been abused over time through ignorance, neglect and overuse.

The "Hā'ena State Park Master Plan" recommends important steps toward reversing the cumulative impacts of misuse and creates a blueprint for sound practices going forward, including:

1. The recognition of the entire park as culturally and historically significant.
2. The importance of preserving significant cultural and historic sites.
3. The need for the park to be "a living place" that includes revival of cultural practices.

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C.I.A.

OCT 01 2015



Month XX, 2018-DRAFT

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Planning Department  
County of Kaua'i  
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Lihue, HI 96766-1326

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4. The establishment of a county partnership with State Parks to create a Hula Complex, encompassing Ka Ulu a Paoa Heiau and Ke Alu a Laka.
5. The protection of former burial sites and restoration of the dune system.
6. The importance of preserving/restoring/cultivating the traditional agricultural complex.
7. The commitment to locate new facilities "in previously disturbed areas to minimize impacts to archaeologically sensitive areas" (p. 4-9).
8. The intention to rehabilitate two historic houses: the Allerton Caretaker's Cottage and Montgomerly House.
9. The creation and continuing involvement of a cultural advisory group consisting of individuals, families and local community members with historic and cultural ties to Hā'ena, who will assure appropriate interpretation, management practices and uses.
10. The establishment of a community advisory group for "ongoing support and consultation" (p. 2-31) about general & relevant regional issues as well as plan implementation.
11. The exemption of those engaging in cultural practices (e.g., hula, fishing, agriculture, family care of ancestral remains) from total daily visitor count.
12. The requirement of first-time visitors to attend an education and orientation session to enhance sensitivity and understanding of the park's cultural/historic resources.
13. The appointment of caretaker and security staff to deter vandalism and misuse of the park's resources.

Concerns about obstacles that could impede the successful protection, preservation, perpetuation, promotion and enhancement of Hā'ena's cultural and historic resources include:

1. Failure to complete the Hā'ena State Park Master Plan (which in one form or another has already been in process for 21 years) or if adopted, to actively utilize it as a working conceptual and management document.
2. The inability to acquire the many millions of dollars required to achieve the stated end results.
3. The failure to mitigate current stress on the park as a result of increasing overuse.
4. The lack of management capabilities to maintain dynamic cultural and community advisory groups.
5. Pressure to expand recreation uses in the park that undermine protection of cultural/historic resources.
6. The potential that efforts to protect the park's cultural resources will lead to a visual blight of educational structures, signage and walkways, creating more of an outdoor museum experience than a very special "living" place.

**SUBJECT: COMMENTS ON THE HĀ'ENA STATE PARK MASTER PLAN  
DRAFT ENVIRONMENTAL IMPACT STATEMENT (EIS),  
HĀ'ENA, KAUAI, HAWAII**

Aloha Mr. Hull,

Mahalo nui for your two memorandums dated August 25, 2015 and September 24, 2015, respectively, regarding the Hā'ena State Park Master Plan Draft Environmental Impact Statement (EIS). We sincerely apologize for the delay in responding. Due to the feedback received on the Draft EIS, the State of Hawai'i, Department of Land and Natural Resources, Division of State Parks (State Parks) has worked on revising the master plan with a reorganized Hā'ena State Park Community Advisory Committee (HSPCAC) to address the concerns voiced by the larger community. As a result, the master plan presented in the Final EIS has been updated based on the feedback received from the public meetings, comments received, and subsequent extensive collaboration with the HSPCAC. As the planning consultant for State Parks, we offer the following responses to your comments.

Mahalo for your first memorandum informing us that the Kaua'i Historic Preservation Review Commission (KHPRC) met on August 6, 2015 to review the Draft EIS for Hā'ena State Park and voted to defer comments on the project until the next scheduled meeting on September 3, 2015 to allow the KHPRC time to review the Draft EIS.

Mahalo for the second memorandum, which summarized the above KHPRC meeting actions and included their comments on the Draft EIS with which the County of Kaua'i Planning Department concurred.

We understand that the KHPRC is charged with protecting, preserving, perpetuating, promoting, enhancing, and developing the historic resources of the County of Kaua'i. We recognize and agree with your comments that Hā'ena State Park and areas around it contain many such resources, sites of legendary cultural significance where the importance of preservation, protection and perpetuation can hardly be overstated and that the wahi pana at Hā'ena have been abused over time through ignorance, neglect, and overuse. We appreciate your comment that the Hā'ena State Park Master Plan recommends important steps toward reversing the cumulative impacts of misuse and creates a blueprint for sound practices going forward including 1) the recognition of the entire park as culturally and historically significant, 2) the importance of preserving significant cultural and historic sites, 3) the need for the park to be "a living place" that includes the revival of cultural practices, 4) the establishment of a County partnership with State Parks to create the Hula Complex, encompassing Ka Ulu a Paoa Heiau and Ke Alu a Laka, 5) the protection of former burial sites and restoration of the dune system, 6) the importance of preserving/restoring/cultivating the traditional Agricultural Complex, 7) the commitment to locate new facilities in previously disturbed areas to minimize archaeologically sensitive

areas, 8) the rehabilitation of two historic houses: the Allerton Caretaker's Cottage and Montgomery House, 9) the creation and continuing involvement of a cultural advisory group consisting of individuals, families, and local community members with historic and cultural ties to Hä'ena and who will assure appropriate interpretation, management practices and uses at the park, 10) the establishment of a community advisory group for ongoing support and consultation about general and relevant regional issues as well as plan implementation, and 11) the exemption of those engaging in cultural practices such as hula, fishing, agriculture, family care of ancestral remains from the daily visitor limit.

Please note that the required attendance at an education and orientation session prior to park entry and the onsite caretaker have been eliminated based on community input. However, the plan still includes visitor education and orientation prior to park entry as one of the key recommendations. This could be done via the State Parks website, email, text messages, and/or other means and it could be tied entry ticket distribution. Also, while the onsite caretaker has been eliminated, additional park staffing to supplement the existing park ranger is still recommended to deter vandalism and misuse of the park's resources as well as support visitor education and park management.

In response to the concerns raised about obstacles that could impede the successful protection, preservation, perpetuation, promotion, and enhancement of Hä'ena's cultural and historic resources, we offer the following responses:

1. The Final EIS for Hä'ena State Park based on the revised master plan will be before the Board of Land and Natural Resources (Board) on May 25, 2018. State Parks has been working closely with the Board and understands this a critical step in continuing the progression towards implementation as working conceptual and management documents. If approved, the Final EIS will be submitted to the Governor and the Office of Environmental Quality Control (OEQC) for acceptance and if accepted, State Parks can move forward with implementation of the plan.
2. We understand your concern regarding funding for the initiatives laid out in the master plan. Unfortunately, we cannot predict or guarantee the State Legislature will approve funding for the implementation of the plan. However, completion of the master plan and Chapter 343, HRS processing will enable State Parks to submit funding requests related to the plan and implement those aspects that may not require capital improvement project (CIP) funds. They may also seek funding from other sources such as grants.
3. We recognize your concerns regarding mitigating current stress on the park as a result of increasing overuse. The revised master plan calls for an average daily visitor limit of 900 people per day to be instituted at the park as an initial step towards managing the park's overuse. An adaptive management approach will also be implemented so that those numbers can be adjusted as needed based on the observed impacts to the park and community feedback.
4. State Parks has been building a stronger relationship with the community and are actively involved and open to addressing their concerns with regards to the park. We recognize those dynamics can change over time, but State Parks is currently working well with the HSPC/AC and appreciates the ongoing support and input of this group.

5. The five main goals of the Master Plan stated in Section 2.1.3 of the EIS are driven by the recognition of the cultural and historic significance of the site. One of them specifically states the priority of "balancing the provision of recreational opportunities with the preservation of the significant natural and cultural resources." State Parks recognizes that protection and preservation of the park's natural and cultural features will enrich the experience for all and that outdoor recreation and visitor activities have the potential to undermine the cultural significance of a place if not managed appropriately. They also understand that such activities can also impact a cultural practitioner's ability to access sites of cultural importance or perform their constitutionally protected cultural practice. The Master Plan, therefore, prioritizes the protection and restoration of the varied natural, cultural, and historic resources at the park and managing recreational uses to avoid potential conflicts.

6. Mahalo for voicing your concern regarding the potential visual impacts of educational structures, signage, and walkways and the loss of a very special living place experience. Many others in the community echo your concern and therefore the master plan has been greatly simplified with the removal of the larger structures including the Education and Cultural Center and Caretaker's Cottage. The number of trails and interpretive displays have been reduced and the park is left in a much more natural state. Please see the revised master plan graphic in Figure 1 and the updated master plan summary from the EIS.

Mahalo nui for your input and participation in the environmental review process. Your letter will be included in the Final EIS. You will also be receiving a copy of the Final EIS under separate cover. Please let us know if you would prefer a different format, or if you would prefer an electronic copy of the Final EIS, it will be available for download on the Office of Environmental Quality Control website at [http://oeqc2.doh.hawaii.gov/EA\\_EIS\\_Library/2018--KA-FEIS-Haena-State-Park-Master-Plan.pdf](http://oeqc2.doh.hawaii.gov/EA_EIS_Library/2018--KA-FEIS-Haena-State-Park-Master-Plan.pdf) on 2018.

Aloha,

Kimi Mikami Yuen, LEED AP BD+C  
Principal

Attachments: Master Plan Summary  
Figure 1: Master Plan

cc: The Honorable David Y. Ige, Governor  
Office of Environmental Quality Control  
Board of Land and Natural Resources  
Division of State Parks





**Bernard P. Carvalho, Jr.**  
Mayor

**Nadine K. Nakamura**  
Managing Director

**DEPARTMENT OF PUBLIC WORKS**  
County of Kaua'i, State of Hawai'i  
4444 Rice Street, Suite 275, Lihue, Hawai'i 96766  
TEL (808) 241-4992 FAX (808) 241-6604

August 14, 2015

State of Hawai'i  
Department of Land and Natural Resources  
Division of State Parks  
Attn: Lauren Tanaka  
1151 Punchbowl Street, Suite 650  
Honolulu, HI 96813

PBR HAWAII & Associates, Inc.  
Attn: Kimi Yuen, Senior Associate  
1001 Bishop Street, Suite 650  
Honolulu, Hawai'i 96813

**SUBJECT:** Haena State Park Master Plan  
Draft Environmental Impact Statement (DEIS)  
Division of State Parks - Applicant  
TMK: (4) 5-6-008: 001, (4) 5-9-001: 025, (4) 5-9-001: 022  
Hanalei, Kaua'i, Hawai'i  
**PW 7.15.110**

The Engineering Division of the Department of Public Works (DPW) received the subject DEIS by transmittal dated July 20, 2015. We appreciate the opportunity to review the DEIS. We have no comments.

We look forward to receiving a copy of the Final Environmental Impact Statement. If you have any questions or need additional information, please contact Stanford Iwamoto, Engineering Division at (808) 241-4896 or siwamoto@kauai.gov.

Very truly yours,

**MICHAEL MOULE, P.E.**  
Chief, Engineering Division

SI/MM

Copies to: DPW-Design & Permitting

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Month XX, 2018

Mr. Michael Moule, P.E., Chief  
Engineering Division  
County of Kaua'i  
Department of Public Works  
4444 Rice Street  
Lihue, HI 96766

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RUSSELL Y. J. CHUNG, FASLA, LEED® AP BD+C  
Executive Vice President / Principal  
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Cultural Sustainability Planner  
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GATE COLLISON, AICP  
Senior Associate  
MARIE SHIMIZU, ASLA  
Senior Associate  
DACHENG DONG, LEED® AP  
Senior Associate  
SCOTT MURAKAMI, ASLA, LEED® AP  
Associate  
MICHAEL MURILIN, ASLA, LEED® AP  
Associate  
NATHALIE BAO  
Associate

**SUBJECT: COMMENTS ON THE HA'ENA STATE PARK MASTER PLAN  
DRAFT ENVIRONMENTAL IMPACT STATEMENT (EIS),  
HA'ENA, KAUAI, HAWAII**

Aloha Mr. Moule,

Mahalo nui for your comment dated August 14, 2015 (your Reference No. PW 7.15.110) regarding the Ha'ena State Park Master Plan Draft Environmental Impact Statement (EIS). We sincerely apologize for the delay in responding. Due to the feedback received on the Draft EIS, the State of Hawai'i, Department of Land and Natural Resources, Division of State Parks (State Parks) has worked on revising the master plan with a reorganized Ha'ena State Park Community Advisory Committee (HSPCAC) to address the concerns voiced by the larger community. As a result, the master plan presented in the Final EIS has been updated based on the feedback received from the public meetings, comments received, and subsequent extensive collaboration with the HSPCAC. As the planning consultant for State Parks, we offer the following responses to your comments.

Mahalo for your comment confirming the receipt of the Draft EIS. We understand that you have no comments on the Draft EIS.

Mahalo nui for your input and participation in the environmental review process. Your letter will be included in the Final EIS. If you would like a copy of the Final EIS or portions thereof, please let us know. Otherwise, the electronic copy of the Final EIS will be available on the Office of Environmental Quality Control website at [http://oeqc2.doh.hawaii.gov/EA\\_EIS\\_Library/2018-06-23-KA-FEIS-Haena-State-Park-Master-Plan.pdf](http://oeqc2.doh.hawaii.gov/EA_EIS_Library/2018-06-23-KA-FEIS-Haena-State-Park-Master-Plan.pdf) on June 23, 2018.

Aloha,

Kimi Mikami Yuen, LEED AP BD+C  
Principal

cc: The Honorable David Y. Ige, Governor  
Office of Environmental Quality Control  
Board of Land and Natural Resources  
Division of State Parks

HONOLULU OFFICE  
1001 Bishop Street, Suite 650  
Honolulu, HI 96813-3484  
Tel: (808) 521-5611  
Fax: (808) 523-1402  
E-mail: syadaming@pbrhawaii.com

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Water has no substitute..... Conserve it

September 3, 2015

Ms. Lauren Tanaka  
State of Hawaii-DLNR – Division of State Parks  
1151 Punchbowl Street, #310  
Honolulu, HI 96804

Dear Ms. Tanaka:

Subject: Draft Environmental Impact Statement for the Haena State Park Master Plan,  
TMK: 5-9-01:025, TMK: 5-9-01:022, and TMK: 5-9-08:001, Kuhio Highway,  
Haena, Kauai

This is in regard to your letter dated July 20, 2015. The Department of Water (DOW) has no objections to the Draft Environmental Impact Statement (DEIS). The following are our comments to the DEIS for the Haena State Park Master Plan.

Any actual subdivision or development of this area will be dependent on the adequacy of the source, storage, and transmission facilities existing at that time. At the present time, the existing storage facilities are operating at capacity and the DOW is limiting water service to three 5/8-inch water meters or three single family dwellings per existing lot of record. The existing source facilities are nearing capacity. The Department's water system ends near the Limahuli Stream along Kuhio Highway. Adequacy of the existing transmission facilities will be dependent on the required domestic and fireflow demands of the proposed project (i.e. fire flow requirements may depend on the actual land use or zoning designation of the proposed development).

Prior to the DOW recommending water service or building permit approval, the applicant will be required to:

1. Be made aware that water service to TMK: 5-9-08:001 will be limited to the existing water meter serving the parcel until adequate water system facilities are available.
2. Submit detailed water demand (both domestic and irrigation) calculations along with the proposed water meter size for the proposed use for our review and approval. Water demand calculations submitted by your engineer or architect should also include fixture count and water meter sizing worksheets. The Department's comments will be dependent on the approved water demand calculations.
3. Submit a formal request for water service for our review and approval, if necessary.

All conditions stated above are subject to the Rules and Regulations of the DOW as amended or as will be amended.

Ms. Lauren Tanaka  
State of Hawaii-DLNR – Division of State Parks  
Subject: Draft Environmental Impact Statement for the Haena State Park Master Plan, TMK: 5-9-01:025,  
TMK: 5-9-01:022, and TMK: 5-9-08:001, Kuhio Highway, Haena, Kauai  
September 3, 2015  
Page 2

If you have any questions, please contact Mr. Joel Bautista at (808) 245-5441.  
Sincerely,

*Edward Doi*  
Edward Doi  
Water Resources and Planning Division

c: Kimi Yuen, PBR Hawaii & Associates, Inc.

JB:boo  
5-9-08-001, 5-9-01-025, 5-9-01-022, T-17285, Tanaka



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Project Director

RAMAN E. M. TAMM  
Cultural Sustainability Planner

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Mr. Bryan Wienand, P.E.  
SUBJECT: COMMENTS ON THE HÄ'ENA STATE PARK MASTER PLAN DRAFT ENVIRONMENTAL  
IMPACT STATEMENT (EIS), HÄ'ENA, KAUA'I, HAWAII  
Month XX, 2018  
Page 2

- the project, the existing meter is anticipated to be sufficient for the proposed improvements.
- Detailed water demand for both domestic and irrigation calculations along with the proposed meter size for the proposed use must be submitted for DOW review and approval. State Parks will have their architect or engineer include fixture counts and water meter sizing worksheets and understand that DOW comments will be dependent on the approved water demand calculations.
  - That a formal request for water service will be required for DOW review and approval if necessary and all conditions stated are subject to the Rules and Regulations of the DOW as amended or as will be amended.

Mahalo nui for your input and participation in the environmental review process. Your letter will be included in the Final EIS. If you would like a copy of the Final EIS or portions thereof, please let us know. Otherwise, the electronic copy of the Final EIS will be available on the Office of Environmental Quality Control website at [http://oeqc2.doh.hawaii.gov/EA\\_EIS\\_Library/2018\\_KA-EIS-Haena-State-Park-Master-Plan.pdf](http://oeqc2.doh.hawaii.gov/EA_EIS_Library/2018_KA-EIS-Haena-State-Park-Master-Plan.pdf) on 11/15/2018.

Aloha,

Kimi Mikami Yuen, LEED AP BD+C  
Principal

Attachments: Master Plan Summary  
Figure 1: Master Plan

cc: The Honorable David Y. Ige, Governor  
Office of Environmental Quality Control  
Board of Land and Natural Resources  
Division of State Parks

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Mr. Bryan Wienand, P.E., Manager and Chief Engineer  
Department of Water  
County of Kaua'i  
P.O. Box 1706  
Lihue, HI 96766

SUBJECT: COMMENTS ON THE HÄ'ENA STATE PARK MASTER PLAN  
DRAFT ENVIRONMENTAL IMPACT STATEMENT (EIS),  
HÄ'ENA, KAUA'I, HAWAII

Aloha Mr. Wienand,

Mahalo for the Department of Water's comment letter from Mr. Edward Doi dated September 3, 2015 regarding the Hä'ena State Park Master Plan Draft Environmental Impact Statement (EIS). We sincerely apologize for the delay in responding. Due to the feedback received on the Draft EIS, the State of Hawai'i, Department of Land and Natural Resources, Division of State Parks (State Parks) has worked on revising the master plan with a reorganized Hä'ena State Park Community Advisory Committee (HSPCAC) to address the concerns voiced by the larger community. As a result, the master plan presented in the Final EIS has been updated based on the feedback received from the public meetings, comments received, and subsequent extensive collaboration with the HSPCAC. As the planning consultant for State Parks, we offer the following responses to your comments.

We appreciate your statement that you have no objections to the Draft EIS.

We understand that any subdivision or development of this area will be dependent on the adequacy of the source, storage, and transmission facilities existing at that time. At the time of your letter, the existing storage facilities were operating at capacity and the Department of Water (DOW) was limiting water service to three 5/8-inch water meters or three single family dwellings per existing lot of record. We also understand the existing source facilities were nearly capacity and that the DOW water system ends near Limahuli Stream along Kūhiō Highway. State Parks recognizes that adequacy of the existing transmission facilities will be dependent on the required domestic and fire flow demands of the proposed project.

Please note that the master plan has been greatly simplified and the Education and Cultural Center and Caretaker's Cottage have been eliminated from the plan. However, new restrooms are proposed by the Welcome Hale and will require DOW water service. This would be in addition to the Cultural Gathering Place, restored Montgomery House and Allerton Caretaker's Cottage, and existing comfort station at Kē'e, all of which were described in the Draft EIS. Please see the attached revised "Master Plan Summary" and Figure 1, which shows the updated text and master plan graphic from the EIS. State Parks will work closely with DOW to ensure adequate water supply is available for the proposed facilities prior to implementation.

State Parks also understands:

- That water service to the parcel will be limited to the existing water meter until adequate facilities are available. Based on the preliminary engineering performed for

TULSI GABBARD  
2ND DISTRICT, HAWAII

COMMITTEE ON ARMED SERVICES

SUBCOMMITTEE ON  
SEAPOWER AND PROJECTION FORCES

SUBCOMMITTEE ON READINESS

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EUROPE, EURASIA, AND EMERGING THEATERS

Congress of the United States  
House of Representatives  
Washington, DC 20515-1102

August 21, 2015

Ms. Kimi Yuen  
Senior Associate  
PBR Hawaii & Associates  
1001 Bishop Street, Suite 650  
Honolulu, HI 96813-3484

Dear Ms. Yuen,

Thank you for taking the time to contact me about what is important to you. I appreciate having the benefit of your thoughts.

Replying to my constituents' inquiries is one of my topmost priorities. At times, a large influx of correspondence can cause delays in sending out a timely reply. Please be assured that my staff and I are working to investigate what is important to you and will send a more detailed reply as soon as possible.

Thank you again for your correspondence, I'll be in touch soon.

Sincerely,  
*Tulsi Gabbard*  
TULSI GABBARD  
Member of Congress

TG/ac

300 ALA MOANUA BOULEVARD, ROOM 5-104  
HONOLULU, HI 96850  
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Month XX, 2018

The Honorable Tulsi Gabbard,  
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United States Congress  
Washington, DC 20515-1102

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SUBJECT: COMMENTS ON THE HĀ'ENA STATE PARK MASTER PLAN  
DRAFT ENVIRONMENTAL IMPACT STATEMENT (EIS),  
HĀ'ENA, KAUA'I, HAWAII

Aloha Representative Gabbard,

Mahalo nui for your comment letter dated August 21, 2015 regarding the Hā'ena State Park Master Plan Draft Environmental Impact Statement (EIS). We sincerely apologize for the delay in responding. Due to the feedback received on the Draft EIS, the State of Hawai'i, Department of Land and Natural Resources, Division of State Parks (State Parks) has worked on revising the master plan with a reorganized Hā'ena State Park Community Advisory Committee (HSPCAC) to address the concerns voiced by the larger community. As a result, the master plan presented in the Final EIS has been updated based on the feedback received from the public meetings, comments received, and subsequent extensive collaboration with the HSPCAC. As the planning consultant for State Parks, we offer the following responses to your comments.

We understand you and your team were not able to respond at the time of request for comment on the Draft EIS. For your information, we have attached a copy of the revised Figure 1 Master Plan graphic and the "Master Plan Summary" from the EIS, which show the verbatim changes from the Draft EIS for this section.

Mahalo nui for your input and participation in the environmental review process. Your letter will be included in the Final EIS. If you would like a copy of the Final EIS or portions thereof, please let us know. Otherwise, the electronic copy of the Final EIS will be available on the Office of Environmental Quality Control website at [http://oeqc2.doh.hawaii.gov/EA\\_EIS\\_Library/2018-06-23-KA-FEIS-Haena-State-Park-Master-Plan.pdf](http://oeqc2.doh.hawaii.gov/EA_EIS_Library/2018-06-23-KA-FEIS-Haena-State-Park-Master-Plan.pdf) on June 23, 2018.

Aloha,

Kimi Mikami Yuen, LEED AP BD+C  
Principal

Attachments: Master Plan Summary  
Figure 1: Master Plan

cc: The Honorable David Y. Ige, Governor  
Office of Environmental Quality Control  
Board of Land and Natural Resources  
Division of State Parks

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Hawaiian Telcom

August 7, 2015

PBR HAWAII & Associates, Inc. (via email)  
Attn: Kimi Yuen, Senior Associate  
1001 Bishop Street, Suite 650  
Honolulu, HI 96813

Subject: DRAFT ENVIRONMENTAL IMPACT STATEMENT FOR THE HA'ENA STATE PARK MASTER PLAN

Dear Mr. Yuen:

Thank you for the opportunity to comment on the Draft Environmental Impact Statement for the Ha'ena State Park Master Plan. Our comment is essentially the same as made in my email related to the Pre-consultation for the Proposed Ha'ena State Park Master Plan dated September 2, 2008, with one minor correction.

Hawaiian Telcom has a pay phone and an emergency phone at Kee Beach. Both phones are serviced from a DLNR owned 11 pair cable (NOT 6 pair as originally mentioned) running parallel to Kuhio Hwy on the makai side of the road, originating from Limahuli Stream. Any proposed projects in the area should consider the possible impact to this State owned telephone cable.

Call me at 808-241-5052 or email [jimmy.sone@hawaiiantel.com](mailto:jimmy.sone@hawaiiantel.com) should you have any questions.

Sincerely,

James 'Jimmy' Sone P.E.  
Lead Network Engineer  
OSP Engineering - Kauai

cc: Lauren Tanaka via email [lauren.a.tanaka@hawaii.gov](mailto:lauren.a.tanaka@hawaii.gov)

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4040 Halau St., Lihue, HI 96766 [hawaiiantel.com](http://hawaiiantel.com)



Month XX, 2018

Mr. James Sone, P.E., Lead Network Engineer  
Hawaiian Telcom  
4040 Halau Street  
Lihue, HI 96766

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SUBJECT: COMMENTS ON THE HA'ENA STATE PARK MASTER PLAN  
DRAFT ENVIRONMENTAL IMPACT STATEMENT (EIS),  
HA'ENA, KAUAI, HAWAII

Aloha Mr. Sone,

Mahalo nui for your emailed comment dated August 7, 2015 regarding the Ha'ena State Park Master Plan Draft Environmental Impact Statement (EIS). We sincerely apologize for the delay in responding. Due to the feedback received on the Draft EIS, the State of Hawai'i, Department of Land and Natural Resources (DLNR), Division of State Parks (State Parks) has worked on revising the master plan with a reorganized Ha'ena State Park Community Advisory Committee (HSPCAC) to address the concerns voiced by the larger community. As a result, the master plan presented in the Final EIS has been updated based on the feedback received from the public meetings, comments received, and subsequent extensive collaboration with the (HSPCAC). As the planning consultant for State Parks, we offer the following response to your comments.

Mahalo nui for your corrected statement that the existing Hawaiian Telcom pay phone and emergency phone located at Ke'e Beach are both serviced from a DLNR-owned 11 pair cable (as opposed to a 6 pair) running parallel to Kāhīō Highway on the makai side of the road, originating from Limahuli Stream. State Parks understands that any proposed projects in the area should consider the possible impact to this State-owned telephone cable. The following text has been revised in Section 4.7.4 of the EIS, "A 3/4-inch Hawaiian Telcom DLNR-owned 11 pair cable telephone line runs along Kāhīō Highway to the pay phone near the ~~emergency station~~ and emergency phone at Ke'e Beach and parallels the existing three-inch water line." The emergency phone has also been added to the text in Sections 1.9.2 and 2.5.3.3 of the EIS.

Mahalo nui for your input and participation in the environmental review process. Your letter will be included in the Final EIS. If you would like a copy of the Final EIS or portions thereof, please let us know. Otherwise, the electronic copy of the Final EIS will be available on the Office of Environmental Quality Control website at [http://oeqc2.doh.hawaii.gov/EA\\_EIS\\_Library/2018-06-23-KA-EIS-Haena-State-Park-Master-Plan.pdf](http://oeqc2.doh.hawaii.gov/EA_EIS_Library/2018-06-23-KA-EIS-Haena-State-Park-Master-Plan.pdf) on June 23, 2018.

Aloha,

Kimi Mikami Yuen, LEED AP BD+C  
Principal

cc: The Honorable David Y. Ige, Governor  
Office of Environmental Quality Control



Board of Land and Natural Resources  
Division of State Parks

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**Nathalie Razo**

**From:** Hanapepe Hotel <hanapepehotel@gmail.com>  
**Sent:** Saturday, September 12, 2015 9:55 PM  
**To:** Kimi Yuen  
**Subject:** Haena Park plan

Along with many other concerns on the project, my concern is the State of Hawaii maintenance of the road to Haena. There are at least 16 dangerous areas between Hanalei and Haena that have no guardrails on the Makai side of the road. Tactly approving the operation of a bus or van would open up the State to liability for the unsafe conditions. In addition, the previous operator of the van service picked up riders who parked in the overburdened Princeville Shopping Center parking areas. There is no State facility for parking cars.

There are interim solutions to the issue that could be implemented before resorting to an Oahu model on Kauai.





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Cultural Sustainability Planner

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Hanapepe Hotel  
SUBJECT: COMMENTS ON THE HĀ'ENA STATE PARK MASTER PLAN DRAFT ENVIRONMENTAL  
IMPACT STATEMENT (EIS), HĀ'ENA, KAUA'I, HAWAII  
Month XX, 2018  
Page 2

cc: The Honorable David Y. Ige, Governor  
Office of Environmental Quality Control  
Board of Land and Natural Resources  
Division of State Parks

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SUBJECT: COMMENTS ON THE HĀ'ENA STATE PARK MASTER PLAN  
DRAFT ENVIRONMENTAL IMPACT STATEMENT (EIS),  
HĀ'ENA, KAUA'I, HAWAII

Aloha,

Mahalo nui for your emailed comment dated September 12, 2015 regarding the Hā'ena State Park Master Plan Draft Environmental Impact Statement (EIS). We sincerely apologize for the delay in responding. Due to the feedback received on the Draft EIS, the State of Hawai'i, Department of Land and Natural Resources, Division of State Parks (State Parks) has worked on revising the master plan with a reorganized Hā'ena State Park Community Advisory Committee (HSPCAC) to address the concerns voiced by the larger community. As a result, the master plan presented in the Final EIS has been updated based on the feedback received from the public meetings, comments received, and subsequent extensive collaboration with the HSPCAC. As the planning consultant for State Parks, we offer the following responses to your comments.

Mahalo for your comment concerning the State of Hawai'i's maintenance of the road to Hā'ena State Park. The State Department of Transportation (DOT) currently owns and maintains the stretch of highway you describe. State Parks has no control or jurisdiction over it and this is out of the scope of the project. State Parks' support of a third-party shuttle to the park would not expose the State to any additional liability as the State DOT is already responsible for the conditions of its facilities. Mahalo for the information that the previous operator of the van service picked up riders who parked at the Princeville Shopping Center. The proposed master plan includes an area within the park, which will be large enough to park roughly 100 cars, as well as a special access parking lot at Kē'e.

We appreciate your statement that there are interim solutions to the issue that could be implemented before resorting to an O'ahu model on Kaua'i. As one of the key recommendations of the plan, State Parks will continue to involve the HSPCAC, cultural advisory group, and the broader community in addressing the issues at Hā'ena State Park and adaptively manage any implementation actions or policies as needed based on the feedback.

Mahalo nui for your input and participation in the environmental review process. Your email will be included in the Final EIS. If you would like a copy of the Final EIS or portions thereof, please let us know. Otherwise, the electronic copy of the Final EIS will be available on the Office of Environmental Quality Control website at [http://oeqc2.doh.hawaii.gov/EA\\_EIS\\_Library/2018-06-23-KA-FEIS-Haena-State-Parks-Master-Plan.pdf](http://oeqc2.doh.hawaii.gov/EA_EIS_Library/2018-06-23-KA-FEIS-Haena-State-Parks-Master-Plan.pdf) on June 23, 2018.

Aloha,

Kimi Mikami Yuen, LEED AP BD+C  
Principal

## Nathalie Razo

**From:** Kaimi Hermosura <konohikiokauai@gmail.com>  
**Sent:** Tuesday, September 08, 2015 10:30 PM  
**To:** Kimi Yuen  
**Subject:** Section 106 Consultation Notice  
**Attachments:** Ke'e Master Plan Notice.pdf; Native Hawaiian Consultation Handbook.pdf

To Whom it may concern:

The Ohanas of Kauai, Konohiki of Kauai, and the community of Hale'ena are requesting to enter into a Section 106 Consultation Process with the Department of Land and Natural Resources, Divisions of State Parks regarding the Ha'ena/ Ke'e State Park Master Plan. The Ha'ena/ Ke'e state park is very culturally and historically significant to the ohanas and community of Hale'ena and this proposed undertaking will have negative effects to our community and its resources. Due to the impacts this master plan will cause, the DLNR and all federal agencies funding this master plan must enter into a Section 106 Consultation with Native Hawaiian Organizations Review Process under the National Historic Preservation Act prior to any federal funding. As it says in the handbook, the Section 106 meeting must be set up at a proper time and place that is convenient to the above parties.

Aloha and Mahalo

Kaimi C.D. Hermosura/ Konohiki  
Native Hawaiian Traditional Religious Practitioner by genealogy  
Email: [konohikiokauai@gmail.com](mailto:konohikiokauai@gmail.com)  
Cell: 808-278-8979

Jesse Steele  
Secretary of the Konohiki of Hale'ena  
Email: [jsteele@hawaii.edu](mailto:jsteele@hawaii.edu)  
Cell: 808-212-5140

<http://law.justia.com/codes/hawaii/2012/title-12/chapter-187a/section-187a-23>

[http://www.achp.gov/fhwa\\_section106\\_HI\\_MOA-KuhioHighway.html](http://www.achp.gov/fhwa_section106_HI_MOA-KuhioHighway.html)

<http://www.hawaii-nation.org/publawall.html>



Month XX, 2018-DRAFT

Mr. Kaimi Hermosura  
Via Email: [konohikiokauai@gmail.com](mailto:konohikiokauai@gmail.com)

**SUBJECT: COMMENTS ON THE HA'ENA STATE PARK MASTER PLAN  
DRAFT ENVIRONMENTAL IMPACT STATEMENT (EIS),  
HA'ENA, KAUAI, HAWAII**

Aloha Mr. Hermosura,

Mahalo nui for your emailed comment dated September 8, 2015 regarding the Ha'ena State Park Master Plan Draft Environmental Impact Statement (EIS). We sincerely appreciate your involvement early in the project as a member of the Master Plan Advisory Committee and apologize for the delay in responding. Due to the feedback received on the Draft EIS, the State of Hawai'i, Department of Land and Natural Resources, Division of State Parks (State Parks) has worked on revising the master plan with a reorganized Ha'ena State Park Community Advisory Committee (HSPCAC) to address the concerns voiced by the larger community. As a result, the master plan presented in the Final EIS has been updated based on the feedback received from the public meetings, comments received, and subsequent extensive collaboration with the HSPCAC. We hope you have been well. As the planning consultant for State Parks, we offer the following responses to your comments.

We acknowledge your comments requesting a Section 106 Consultation Process. We apologize for the confusion. Although Federal Land and Water Conservation Funds (LWCF) were originally received in the past for the park, Section 106 consultation is only sought during the initial application process for an LWCF grant and is therefore not included as part of the current master plan process. Section 106 would only apply if there is a new request for a LWCF grant or if there is a conversion of the park into some other use besides outdoor recreation, neither of which is part of this process.

We appreciate your statement that the Ha'ena State Park and Ke'e are very culturally and historically significant to the ohana and community of Hale'ena and the plan proposed in the Draft EIS would have negative effects on the community and its resources. Please note that due to your and the community's feedback, the master plan has been greatly simplified in order to maintain the natural beauty and openness of this wahi pana. Please see the attached updated master plan graphic in Figure 1 and the master plan summary that have been revised in the EIS. The updated version of the full master plan report can also be downloaded from the State Parks Ha'ena State Park website at <http://dlnr.hawaii.gov/dsp/parks/kaui/haena-state-park/>.

Also, please note that no federal funding is currently being sought for the project. Therefore no Section 106 consultation is being initiated at this time.

Mahalo nui for your input and participation in the master plan and environmental review process. Your email will be included in the Final EIS. If you would like a copy of the Final EIS or portions thereof, please let us know. Otherwise, the electronic copy of the Final EIS will be available on the Office of Environmental Quality Control website at [http://oeqc2.doh.hawaii.gov/EA\\_EIS\\_Library/2018--KA-EIS-Haena-State-Park-Master-Plan.pdf](http://oeqc2.doh.hawaii.gov/EA_EIS_Library/2018--KA-EIS-Haena-State-Park-Master-Plan.pdf) on 2018

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Aloha,

Kimi Mikami Yuen, LEED AP BD+C  
Principal

Attachments: Master Plan Summary  
Figure 1: Master Plan

cc: The Honorable David Y. Ige, Governor  
Office of Environmental Quality Control  
Board of Land and Natural Resources  
Division of State Parks

August 19, 2015

Ms. Lauren Tanaka  
Division of State Parks  
1151 Punchbowl Street, Room 310  
Honolulu, HI 96813  
[lauren.a.tanaka@hawaii.gov](mailto:lauren.a.tanaka@hawaii.gov)

Ms. Kimi Yuen  
PBR Hawaii  
1001 Bishop Street, Suite 650  
Honolulu, HI 96813  
[kyuen@pbrhawaii.com](mailto:kyuen@pbrhawaii.com)

Re: Comments on July 2015 Draft EIS for Ha'ena State Park Master Plan

Aloha Lauren and Kimi,

The Draft Environmental Impact Statement (Draft EIS) comprehensively addresses most of the environmental impacts of the proposed Ha'ena State Park Master Plan (HSPMP). We truly appreciate all of the time and effort that you and your colleagues have put into the HSPMP, the DEIS, and the public processes that led to those documents. We offer the following comments on two areas in which we believe additional information is needed.

#### **Access, Transportation and Parking Management**

We firmly support the recommendation that the number of people in the park be limited to 900 per day, the preferred access scenario of implementing a shuttle from the Princeville facility at the start of Phase I, and transportation and parking Scenario 1 (Princeville-based park entry).

It is disappointing that DLNR/State Parks is "unlikely to initiate its own shuttle service" (page 4-2), as DLNR/State Parks is the entity whose facilities are directly responsible for creating the parking and transportation impacts that need to be mitigated. Even so, DLNR/State Parks does have the means at its disposal, through access and parking management policies, to achieve the objective (stated in Section 2.1.3) of "ensur[ing] that parking and traffic impacts do not spill out from the Park into the neighboring residential communities."

We therefore believe that both the Final EIS and HSPMP should unequivocally commit (in Section 4.3.2 Parking Mitigation Measures, Section 6.4.2.4 Preferred Vehicular Access Scenario and elsewhere) to ensuring that Ha'ena State Park's parking impacts do not spill into the neighboring communities and Ha'ena Beach Park, regardless of which transportation and parking scenario (*Princeville-based Park Entry*, *Combination On-site Parking and Princeville Entry Facility*, or *On-site Parking Only*) materializes. This can be achieved by committing, in the Final EIS and Final HSPMP, to access and parking management policies that include the following:

- All Ha'ena State Park users (except those with special access rights) must obtain entry permits to the park only through an on-line reservation system or a Princeville-based park entry facility (if it exists). No visitor entry permits and no parking permits will be issued at the park itself, as doing so would encourage users to drive to the park in the hope of obtaining entry or parking permits there.
- The precise hours and the durations (number of hours) of permits for the on-site parking lot will be managed and limited as necessary to ensure that there is sufficient turnover, so that the on-site parking lot will be adequate to meet all needs without creating any spillover impacts. The hours and durations of park access permits for users who are granted such on-site parking permits will be similarly limited.





Month XX, 2018-DRAFT

Mr. Carl Imparato  
P.O. Box 1102  
Hanalei, HI 96714

Ms. Maka'ala Ka'aumoana  
P.O. Box 1045  
Hanalei, HI 96714

**SUBJECT: COMMENTS ON THE HĀ'ENA STATE PARK MASTER PLAN  
DRAFT ENVIRONMENTAL IMPACT STATEMENT (EIS),  
HĀ'ENA, KAUAI, HAWAII**

Aloha Ms. Ka'aumoana and Mr. Imparato,

Mahalo nui for your comment letter dated August 19, 2015 regarding the Hā'ena State Park Master Plan Draft Environmental Impact Statement (EIS). We truly appreciate your participation and dedication as members of the original Master Plan Advisory Committee and reorganized Hā'ena State Park Community Advisory Committee (HSPCAC). We sincerely apologize for the delay in responding. As you know, due to the feedback received on the Draft EIS, the State of Hawai'i, Department of Land and Natural Resources, Division of State Parks (State Parks) has worked on revising the master plan with the HSPCAC to address the concerns voiced by the larger community. As a result, the master plan presented in the Final EIS has been updated based on the feedback received from the public meetings, comments received, and subsequent extensive collaboration with the HSPCAC. As the planning consultant for State Parks, we offer the following responses to your comments.

Mahalo nui for your comments that the Draft EIS comprehensively addresses most of the environmental impacts of the proposed master plan. We are humbled by your support of the project team and our collective efforts, including yours as part of the community advisory groups. We could not have developed this master plan without everyone's input and guidance.

#### Access, Transportation and Parking Management

Mahalo for your support of the proposed daily visitor limits, the preferred access scenario of implementing a shuttle from the Princeville facility at the start of Phase I, and transportation and parking Scenario I (Princeville-based park entry).

While State Parks is unlikely to initiate its own shuttle service, several options are identified in the EIS including extending the County public transit service to Kē'e, contracting with a third-party operator to provide the service, or allowing independent private shuttles to stop at the park, or a combination of the above. As you know, recent events with the record rainfall, mudslides, and closure of the highway to Hā'ena have brought a new focus and opportunity to change how transportation operates on the North Shore as a whole. State Parks is actively working with the County and the community to discuss potential solutions and appreciate your involvement in these discussions as well.

We recognize that the reduction in the average daily number of visitors to the park may have the negative impact of shifting people and traffic to Hā'ena Beach Park and areas east of the park. Also, as you know, many local residents voiced the concern over loss of access to the park due to the visitor limits, competition for the limited parking at the park, complicated park entry and parking management rules, and not wanting to drive to

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- No overnight parking will be permitted at Hā'ena State Park for users of Hā'ena State Park (with appropriate exceptions for cultural practitioners and subsistence fishermen)
- Napali Coast State Park users and campers will access Napali Coast State Park using similar access management and parking procedures (i.e., there will be no access through Hā'ena State Park into Napali Coast State Park without permits issued on-line).
- No parking will be allowed at Hā'ena State Park for users of Napali Coast State Park.
- Parking lot permit time limits will be strictly enforced, to help ensure the adequacy of the parking lot.

Commitment to the above measures would go a long way towards ensuring that even if a shuttle does not materialize, the 100 space parking lot would be sufficient to fully accommodate the parking needs generated by Hā'ena State Park. Alternatively, if DLNR/State Parks is not willing to make such a commitment in the Final EIS and HSPMP, the Final EIS would need to address the magnitude and mitigation of the impacts of Hā'ena State Park's vehicle spillover into the neighboring communities and Hā'ena Beach Park.

#### Mitigation of Impacts on Police and Fire Protection Services (Section 4.9.1)

As you are aware, discussions are ongoing regarding the possible construction of a bridge over Hanakapiā Stream, because users of both Hā'ena State Park and Napali Coast State Park increasingly hike portions of the Kalalau Trail without adequate preparation, becoming stranded and creating burdens on the Kauai Fire Department's rescue services. As Hā'ena State Park users are major contributors to these burdens, it is imperative that both the Final EIS and Final HSPMP explicitly acknowledge and address this issue.

The proposed 900 person/day visitor limit will of course reduce the magnitude of the problem, but that is nonetheless insufficient mitigation of the problem. DEIS Appendix I, Section 4.6.3 (Napali Trailhead Management) briefly outlines some components of a management strategy, which might include hiker education and "consideration of" check-in/check-out for day hikers as well as overnight campers. But these ideas are also clearly insufficient to address the problem.

Participation by all Kalalau Trail users - both day hikers and overnight campers - in a mandatory orientation program that includes comprehensive safety orientation is a start. But additional mitigation measures need to be incorporated into the FEIS. Please consider including a requirement that users of the Trail pass a trail safety examination, and a requirement that all users of the Trail must sign waivers acknowledging the hazards of the Trail, acknowledging the potential for being stranded on the Trail for one-or-more days, acknowledging state/county non-responsibility for "rescue"/extraction after stream flooding and other normal events, and agreement to personally assume full responsibility for the cost of any rescues in such events.

Thank you again, Lauren and Kimi, for your years of commitment to Hā'ena State Park and for your consideration throughout the entire process.

*Carl E. Imparato*

Carl Imparato  
PO Box 1102  
Hanalei, HI 96714

*Maka'ala Ka'aumoana*

Maka'ala Ka'aumoana  
PO Box 1045  
Hanalei, HI 96714

Princeville in order to catch a shuttle to the park, especially if they live near the park. As you note, access and parking management can mitigate these impacts and mahalo for your hard work as part of the HSPAC to revise the proposed access and parking management options which are now included in the master plan and EIS. This includes instituting the visitor limits only during the peak hours of park use and using 900 daily visitors as an average limit over those peak hours. The proposed parking lot is also now divided into two areas, one for fee payers and another for non-fee payers, and can be adjusted and actively managed to accommodate fluctuations in parking demand as often as needed. Please see the revised EIS text regarding the visitor limits and parking in the respective attachments as well as the updated Figure 1 showing the master plan graphic.

With regards to overnight parking, and given the proposed changes to apply adaptive parking management, we have added the following text to Section 4.3.2 of the EIS, "Overnight parking could also be reduced or restricted and parking lot time limits could be proposed as needed to encourage turnover of the stalls." Please see the attached revisions to Section 4.3.2, which show the verbatim changes to the EIS related to parking.

We agree that Nāpali Coast State Wilderness Park (SWP) users and campers will access the Nāpali Coast SWP through Hā'ena State Park under the same access management and parking procedures as other park users. The only exception is that those with valid camping permits will not be counted against the daily visitor limit as discussed in the EIS.

As noted above, Nāpali Coast State Wilderness Park users will be subject to the same access and parking management rules as many day hikers also use the park.

As noted above, parking lot permit time limits could be proposed if found to help ensure the adequacy of the parking lot. However, adaptive management of the proposed fee-paying and non-fee paying lot will be tried first to see if this works.

**Mitigation of Impacts on Police and Fire Protection Services**

Mahalo for your concerns regarding the safety and lack of preparation of Kalaheo Trail hikers. As you note, Nāpali hikers enter from Hā'ena State Park and Section 4.6.3 of the master plan report includes proposed Nāpali Trailhead Management strategies. Please note the following changes that are currently happening at State Parks that help address your concerns:

- Three (3) new staff positions have been created for the Nāpali Coast SWP in the 2018 legislative session, greatly increasing the management capacity of State Parks to address visitor safety and education, resource protection, and permit compliance within the park.
  - The proposed bridge over Hanakāpī'ai Stream will greatly mitigate the strandings in Hanakāpī'ai and the associated need for extraction by emergency personnel.
- Implementing other measures such as an administering an examination, and mandatory signing of waivers are not in consideration at this time but we thank you for the suggestions.

Mahalo nui to you both for your dedication and commitment to Hā'ena State Park and for your input in the environmental review process. Your letter will be included in the Final EIS. If you would like a copy of the Final EIS or portions thereof, please let us know. Otherwise, the electronic copy of the Final EIS will be available on the Office of

Environmental Quality Control website at:  
[http://oesh2.doh.hawaii.gov/EA\\_EIS\\_Library/2018-06-23-KA-FEIS-Haena-State-Park-Master-Plan.pdf](http://oesh2.doh.hawaii.gov/EA_EIS_Library/2018-06-23-KA-FEIS-Haena-State-Park-Master-Plan.pdf) on June 23, 2018

Aloha,

Kimi Mikami Yuen, LEED AP BD+C  
Principal

Attachments: Parking  
Visitor Limits  
Figure 1: Master Plan

cc: The Honorable David Y. Ige, Governor  
Office of Environmental Quality Control  
Board of Land and Natural Resources  
Division of State Parks

---

**Nathalie Razo**

**From:** Maka'ala Kaumooana <makaala@hawaiian.net>  
**Sent:** Friday, August 21, 2015 11:04 AM  
**To:** Kimi Yuen; Catie Cullison; Russell.P.Kumabe@hawaii.gov; Alan.B.Carpenter@hawaii.gov; lauren.a.tanaka@hawaii.gov  
**Subject:** Ha'ena State Park Master Plan  
**Attachments:** Hui Hoomalu testimony Ha'ena Master Plan 8-18-15 mk.docx

Aloha all,

I have attached the testimony ( I thought the meeting was a hearing ☺) from Hui Ho'omalu I ka 'Āina. I compliment you all on a good meeting. It was wonderful to see the large turnout!

I have a few suggestions for "next time":

- Be sure you have a good sound system
- Please make the presentation portion shorter, no longer than ½ hour
  - No need to read the slides
  - Skip over the verbiage, use the graphics
- Be sure there are enough comment cards with clear instructions on the cards as to what to do with them

My personal comments on the plan:

I like the plan very much. I am concerned about the need for commitments for the shuttle , without which the plan will fail. The County should be urged to schedule the Kauai bus to the park as well. I think the EIS should include potential impacts on Makua and Ha'ena County Beach Park.

Mahalo one and all, job well done.

Makaala

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*The Hanalei Watershed Hui mission is to support and protect the ecology, cultures and sustainable economies of Hanalei.*



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August 19, 2015

Hawaii Department of Land and Natural resources  
Division of State Parks

Re: Hā'ena State Park Master Plan  
Testimony

Aloha,

Hui Ho'omalu i ka 'Āina has participated in every effort to plan this park since the land was purchased for the purpose of establishing a park. Many of our members come from Hā'ena.

We thank all of those who have been a part of the process in developing this plan and caring for this place. The list is very long and the process has taken over twenty years and we are grateful it has finally come to this point, a hearing where we can say what we think of the plan.

We like this plan. We like it very much.

It protects our rights as kanaka; it protects the place for the future and it begins the process for Kauai of declaring a capacity for a place. This is a very necessary first and the critical part of this plan. We believe that not every person has the right to go every place. This is our place, our kuleana and we must do difficult things to protect it for the future.

It is hard to see change like this, a place that never had rules that now has rules, a place that anyone could go, anytime, that now will have limits. But this is all about this place and this place is in trouble. We are loving it to death. We must do this difficult thing to take care of this place, to practice our kuleana and take care of this place so that our mo'opuna can enjoy this place too.

Every place has a capacity and we should consider that for many other places on Kaua'i. For Ha'ena, this Master Plan addresses the issues of this place and makes many good suggestions on how to take better care of and share this place.

We appreciate the hard work that went into the development of this plan. Mahalo.

Makaala Kaumooana  
Vice Chair

Hui Ho'omalu i ka 'Āina is a taro root organization founded in the early 1980's by traditional practitioners of moku Halele'a to address threats and impacts to the natural and cultural resources of Kaua'i. Founded by farmers and fishermen, weavers and hunters, we seek to provide context for issues related to the ecology of our ahupua'a. The organization is an active advocate for those native things and ways that are disappearing. We are not a nonprofit, we are an activist organization. We do not whine and wait, we act.

**POB 1045, Hanalei, Hawaii 96714**



Month XX, 2018

Mrs. Maka'ala Ka'aumoana, Executive Director  
Hanalei Watershed Hui  
P.O. Box 1285  
Hanalei, HI 96714

**SUBJECT: COMMENTS ON THE HÄ'ENA STATE PARK MASTER PLAN  
DRAFT ENVIRONMENTAL IMPACT STATEMENT (EIS),  
HÄ'ENA, KAUA'I, HAWAII**

Aloha Mrs. Ka'aumoana,

Mahalo nui for your email dated August 21, 2015 with the attached letter from Hui Ho'omalu i ka 'Aina regarding the Hä'ena State Park Master Plan Draft Environmental Impact Statement (EIS). We have separated our responses to your email in two letters. This letter is sent in response to the comments in your cover email and the other will address the comments in the Hui Ho'omalu i ka 'Aina letter. As the planning consultant for State Parks, we offer the following responses to your email.

Our apologies for the misunderstanding with regards to the type of meeting held on August 19, 2015. We appreciate your submitting the testimony from Hui Ho'omalu i ka 'Aina. Mahalo for your suggestions regarding the meeting presentation and materials. We take those to heart and appreciate your guidance on procedures, acoustics, and comment cards and will follow through at subsequent meetings.

With regards to your personal comments, we understand your concern regarding the shuttle commitments and Kaula'i bus service. As you know, with the recent heavy rainfall and road closures, State Parks is working with the County and the community to address transportation and access along the North Shore. We agree that the County should develop transit service to the Park and State Parks will encourage this as best they can. The master plan report has been updated with the reorganized Hä'ena State Park Community Advisory Committee's recommendations for park access and parking and can be downloaded in full at the State Parks website for Hä'ena State Park.  
<http://dlnr.hawaii.gov/dsp/parks/kaui/haena-state-park/>

Mahalo for voicing your concerns regarding overcrowding and overflow to other parks on the North Shore. We recognize the potential negative effects of the master plan may include the distribution of recreational demand to other facilities on the North Shore, especially Hä'ena Beach Park and Makua. Section 7.3 of the EIS discusses the secondary impacts of the plan, which include the potential negative impact of distributing recreational demand and use of surrounding shoreline areas, especially Hä'ena Beach Park. We have revised the text to include Makua. Based on input from the HSPCAC, the following text has been edited in this section of the EIS, "The HSPCAC is also working with State Parks and other public agencies such as the County and USFWS ~~with also coordinate~~ on transportation, parking, and area circulation improvements ~~with other public agencies such as the County and USFWS~~ to come up with solutions that benefit the North Shore communities." While the shuttle is a major part of the proposed solution, the community is actively involved in developing solutions in all aspects of transportation on the North Shore as you know, and State Parks is open to working together on these issues.

THOMAS WITTEN, ESQ.  
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Ms. Maka'ala Ka'aumoana  
SUBJECT: COMMENTS ON THE HÄ'ENA STATE PARK MASTER PLAN DRAFT ENVIRONMENTAL  
IMPACT STATEMENT (EIS), HÄ'ENA, KAUA'I, HAWAII  
Month XX, 2018  
Page 2

Mahalo nui for your input and participation in the environmental review process. Your email will be included in the Final EIS. If you would like a copy of the Final EIS or portions thereof, please let us know. Otherwise, the electronic copy of the Final EIS will be available on the Office of Environmental Quality Control website at [http://oeqsc2.doh.hawaii.gov/EA\\_EIS\\_Library/2018-06-23-KA-PEIS-Haena-State-Park-Master-Plan.pdf](http://oeqsc2.doh.hawaii.gov/EA_EIS_Library/2018-06-23-KA-PEIS-Haena-State-Park-Master-Plan.pdf) on June 23, 2018.

Aloha,

Kimi Mikami Yuen, LEED AP BD+C  
Principal

cc: The Honorable David Y. Ige, Governor  
Office of Environmental Quality Control  
Board of Land and Natural Resources  
Division of State Parks

O:\job\267627\01 DLNR-Haena State Park Master Plan\EIS\DEIS\Responses\5-004\_2015-08-21\_Makaala-Haena State Park Master Plan (with attachment) - JSK.docx





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Ms. Maka'ala Ka'aumoana

SUBJECT: COMMENTS ON THE HÄ'ENA STATE PARK MASTER PLAN DRAFT ENVIRONMENTAL  
IMPACT STATEMENT (EIS), HÄ'ENA, KAUA'I, HAWAII

Month XX, 2018

Page 2

[http://oeoc2.doh.hawaii.gov/EA\\_EIS\\_Library/2018-06-23-KA-EIJS-Haena-State-Park-Master-Plan.pdf](http://oeoc2.doh.hawaii.gov/EA_EIS_Library/2018-06-23-KA-EIJS-Haena-State-Park-Master-Plan.pdf) on June 23, 2018

Aloha,

Kimi Mikami Yuen, LEED AP BD+C  
Principal

Attachments: Master Plan Summary  
Figure 1: Master Plan

cc: The Honorable David Y. Ige, Governor  
Office of Environmental Quality Control  
Board of Land and Natural Resources  
Division of State Parks

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Month XX, 2018

Ms. Maka'ala Ka'aumoana, Vice Chair  
Hui Ho'omalua i ka' Aina  
P.O. Box 1045  
Hanalei, HI 96714

SUBJECT: COMMENTS ON THE HÄ'ENA STATE PARK MASTER PLAN  
DRAFT ENVIRONMENTAL IMPACT STATEMENT (EIS),  
HÄ'ENA, KAUA'I, HAWAII

Aloha Ms. Ka'aumoana,

Mahalo nui for your comment dated August 19, 2015 regarding the Hä'ena State Park Master Plan Draft Environmental Impact Statement (EIS). We sincerely appreciate all of your effort over the years and mana'o in helping to develop a plan for the park. We are humbled by your kind words and apologize for the delay in responding. As you know, due to the feedback received on the Draft EIS, the State of Hawai'i, Department of Land and Natural Resources, Division of State Parks (State Parks) has worked on revising the master plan with a reorganized Hä'ena State Park Community Advisory Committee to address the concerns voiced by the larger community. As a result, the master plan presented in the Final EIS has been updated based on the feedback received from the public meetings, comments received, and subsequent extensive collaboration with the HSPCAC. As the planning consultant for State Parks, we offer the following responses to your comments.

Mahalo nui loa for your recognition of all those who have participated in this process of developing a plan for the park. We echo that gratitude and also wish to acknowledge all those who came before us over the many years to contribute to the plan and share their thoughts.

We hope you still support the updated plan. We have attached the revised master plan summary and Figure 1 master plan graphic from the EIS for your reference. The full version of the master plan report is available for download from the State Parks Hä'ena State Park website: <http://dlnr.hawaii.gov/dsp/parks/kaui/haena-state-park/>.

Mahalo for your comments that the plan protects your rights as kanaka; and that it protects the place for the future and it begins the process for Kaua'i of declaring a limit of acceptable change for a place. State Parks appreciates your desire to help protect this wahi pana and that difficult things sometimes must be done to protect it for the future including instituting rules where there once were no rules. We agree that the park needs help in better managing and protecting its varied resources for future generations and we appreciate all that you have done over the years to help State Parks develop this master plan.

We appreciate your statement that the master plan for Hä'ena State Park addresses the issues of this place and makes many good suggestions on how to take better care of and share this place. Mahalo for your support and long dedication to this wahi pana.

Your letter will be included in the Final EIS. If you would like a copy of the Final EIS or portions thereof, please let us know. Otherwise, the electronic copy of the Final EIS will be available on the Office of Environmental Quality Control [website](http://www.oeq.hawaii.gov).

PO Box 369  
Hanalei, HI 96714  
August 6, 2015

Kimi Yuen  
PBR Hawaii'i  
1001 Bishop Street, Suite 650  
Honolulu, HI 96713

RE: Hā'ena State Park Master Plan & Environmental Impact Statement

Aloha Ms. Yuen,

As a member of the MP Advisory Committee, I am very appreciative of PBR's community outreach, meetings, information provided, and response to the various concerns and comments by our Committee. The Master Plan and EIS are very descriptive and explanatory of the various recommendations outlined and described in the various sections and documents. The additional reports and studies add to the Plan and provide baseline information for current and future reference.

Preservation of the Hā'ena State Park area should be a high priority for our community, the County of Kauai, and the State of Hawai'i. Preservation of the Hā'ena State Park is significant as the entire park area has a historic and cultural history that is significant to preserve for future generations.

I support:

- Reduction in the number of persons that can access the Park area each day.
- Management of the area and education of those visiting the Park
- Restoration of various areas and recognition for those individuals, families, and local community members with historic and cultural ties to the Park area, and revive cultural practices.
- Identification of the areas where the public's safety should be established<sup>1</sup>
- Decrease and limit of the number of vehicles permitted in the proposed parking area.
- Description and benefits of a shuttle system which would decrease the number of vehicles travelling along Route 560, Kūhiō Highway<sup>2</sup> in the Tsunami Evacuation Zone and encourage the use of a shuttle to the Park.

Mahalo for the opportunity to provide the above comments.

  
Barbara Robeson

<sup>1</sup> Rockfall hazard area, for example

<sup>2</sup> Route 560 is on the State and National Register of Historic Places. The area from Hanalei to Ke'e is in the Tsunami Evacuation Zone. During an evacuation, vehicles would travel from Ke'e, through Hanalei, and up to Princeville, and crossing one-lane bridges and culverts. See Appendix G of the Plan.



Month XX, 2018-DRAFT

Ms. Barbara Robeson  
P.O. Box 369  
Hanalei, HI 96713

SUBJECT: COMMENTS ON THE HĀ'ENA STATE PARK MASTER PLAN  
DRAFT ENVIRONMENTAL IMPACT STATEMENT (EIS),  
HĀ'ENA, KAUAI, HAWAII

Aloha Ms. Robeson,

Mahalo nui for your comment letter dated August 6, 2015 regarding the Hā'ena State Park Master Plan Draft Environmental Impact Statement (EIS). We truly appreciate your participation in the original Master Plan Advisory Committee (MPAC) and dedication to this effort. We apologize for the delay in responding. As you know, due to the feedback received on the Draft EIS, the State of Hawai'i, Department of Land and Natural Resources, Division of State Parks (State Parks) has worked on revising the master plan with a reorganized Hā'ena State Park Community Advisory Committee (HSPCAC) to address the concerns voiced by the larger community. As a result, the master plan presented in the Final EIS has been updated based on the feedback received from the public meetings, comments received, and subsequent extensive collaboration with the HSPCAC. As the planning consultant for State Parks, we offer the following responses to your comments.

Mahalo for your kind words of support of the community outreach, meetings, information provided, and response to the concerns and comments from the MPAC. We appreciate your comments that the master plan report and EIS are very descriptive and explanatory of the various recommendations outlined in the documents and that the additional reports and studies add to the plan and provide baseline information for current and future reference.

We recognize and agree with your comments on the importance of preserving the park and making it a priority for the County of Kauai and State of Hawai'i as the entire area has historic and cultural significance that should be preserved for future generations.

We appreciate your support of the following:

- Reduction in the number of persons that can access the park each day.
- Management of the area and education of those visiting the park.
- Restoration of various areas and recognition for those individuals, families, and local community members with historic and cultural ties to the park area, and revival of cultural practices.
- Identification of the areas where the public's safety should be established such as the rockfall hazard areas.
- Decrease and limit of the number of vehicles permitted in the proposed parking area.
- Description and benefits of a shuttle system which would decrease the number of vehicles travelling along Route 560, Kūhiō Highway in the Tsunami Evacuation Zone and encourage the use of a shuttle to the park.

All of the elements you support have been preserved in the revised plan. We have attached copies of the updated master plan summary and Figure 1 master plan graphic from the EIS

THOMAS WITTEN, FASLA  
Chairman / Principal

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Ms. Barbara Robeson  
SUBJECT: COMMENTS ON THE HÄ'ENA STATE PARK MASTER PLAN DRAFT ENVIRONMENTAL  
IMPACT STATEMENT (EIS), HÄ'ENA, KAUAI, HAWAII  
Month XX, 2018  
Page 2

for your reference. You may also download an electronic version of the full master plan report from the State Parks website for Hä'ena State Park: <http://dlnr.hawaii.gov/dsp/parks/kaui/haena-state-park/>.

Mahalo nui again for your participation and support of the master plan for Hä'ena State Park. Your letter will be included in the Final EIS. If you would like a copy of the Final EIS or portions thereof, please let us know. Otherwise, the electronic copy of the Final EIS will be available on the Office of Environmental Quality Control website at: [http://oeq2.doh.hawaii.gov/EA\\_EIS\\_Library/2018-04-15-FEIS-Haena-State-Park-Master-Plan.pdf](http://oeq2.doh.hawaii.gov/EA_EIS_Library/2018-04-15-FEIS-Haena-State-Park-Master-Plan.pdf) on 4/15/2018.

Aloha,

Kimi Mikami Yuen, LEED AP BD+C  
Principal

Attachments: Master Plan Summary  
Figure 1: Master Plan

cc: The Honorable David Y. Ige, Governor  
Office of Environmental Quality Control  
Board of Land and Natural Resources  
Division of State Parks

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**Nathalie Razo**

**From:** Mehana <mehana@hawaii.edu>  
**Sent:** Friday, October 09, 2015 3:38 PM  
**To:** Lauren.A.Tanaka@hawaii.gov; Kimi Yuen  
**Subject:** my own personal comments to add to the record  
**Attachments:** Kee State Park EIS comments.docx

Aloha Lauren and Kimi,  
Since it sounds like we are still accepting EIS comments I'll add these, they are my own. Mahalo nui to both of you for all your great hard work. Much aloha, M

Comment:

Keep bicycles off of pedestrian path way, so as to keep it smaller in width. Leave the existing road open for bicyclists (mainly local residents ideally) to use at their own risk.

Representation that 900 visitors is less than half visiting the park is based on just two counts of 1900 and 2028 visitors both conducted in the summer. I propose either lowering the allowable visitor figure from 900 OR creating seasonal limits, so that 900 might apply during the high summer season, but 500 (less than half of the visitors counted during non summer seasons) would be more appropriate September – May.

Section 2. 5.2.18

Though encouraged by the federal Funding that initially secured the Haena park, I do not support trails through the agricultural complex, behind the dunes (including current road providing access to cemetery etc.) and between that area and the halau wa'a, as suggested in the plan, UNLESS these areas were accessible by guided tour only. Unguided visitor pedestrian traffic should be restricted to the Interpretive path and board walk. In addition signage and displays should be minimized and limited to the interpretive path. If other areas are only accessible with guides, then there will be no need for signs as a live person can explain the significance of the site instead. I would rather see the money used for signs and infrastructure spent on management and personnel. Signs only will add to the urban, park feel of what is a sacred landscape that should remain as uncluttered with human structures or materials other than plants, rocks, and wood as possible.

Further, I do not feel it is culturally appropriate to identify cemeteries and grave sites in publically available documents such as these out of respect for those graves and the families related to them. Might those sites be removed from the maps with simply a footnote to indicate that plans are designed to avoid and protect them?  
Mai Kaula'i I na iwi I ka lā.

IN GENERAL, ALL Facilities should be as low impact as possible with as low permanent construction materials as possible given the very real threat of sea level rise which could mean all will have to be moved within the half century. Use of metal or concrete or other materials that cannot simply biodegrade back into the landscape should be prevented.

I advise building the educational pavilion as provided in phase I then not building up to the full ECC, in order to save money and imposition of infrastructure and urbanization on the area.

I encourage use of composting toilets, particularly for caretakers house and Montgomery house. Though I appreciate the value of having the caretakers house

close to the entrance, I also suggest considering use of the Montgomery home as a caretakers residence to avoid new building. It should use a composting toilet.

The less introduction of water mixed with waste in this area subject to sea level rise, tsunami, ground water transport to streams and flooding, the better.

Who is Geometrician Associates?

Allow walking and bike access on the old roadway without counting in visitor counts so that locals may access even if parking lot is closed. This would be at your own risk as noted with rock fall hazard signs.

Include more discussion of management options identified by MPAC for park access. These include 20 per year fee for residents and 5 per visit for visitors. Also showing drivers license to access and not pay fee etc. Violate plan? LWSC funding?

No picnic areas in lo'i and agricultural complex. Keep visitor traffic through this area to interpretive corridor. Part of making it possible to give that area up and allow visitor traffic is being able to move further makai so amenities which bring visitors in that way are not acceptable.

No ECC

Smaller caretaker cottage.

Make MPAC a permanent council and make their responsibilities with regards to implementation of plan more explicit. They should have final oversight of plan implementation and final say on when and whether aspects go forward.





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Chairman / Principal

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Ms. Mehana Vaughn  
SUBJECT: COMMENTS ON THE HĀ'ENA STATE PARK MASTER PLAN DRAFT ENVIRONMENTAL  
IMPACT STATEMENT (EIS), HĀ'ENA, KAUA'I, HAWAII  
Month XX, 2018  
Page 2

We have also eliminated the Caretaker's Cottage and recommended all future wastewater treatment facilities be designed with innovative environmentally-friendly technologies that includes composting toilets. We appreciate your comment to reduce the mixing of water with waste in this sensitive area and encourage State Parks to investigate emerging wastewater treatment systems that are improving effluent quality and to treat wastewater to a minimum of R-2 water quality to minimize environmental impacts due to sea level rise, tsunami, ground water transport to streams, and flooding. Vault systems, which are fully contained and can be pumped and treated at an off-site facility are also being considered.

Please see the revised Figure 1 Master Plan graphic and the "Description of the Master Plan" attachment from Section 2.5 of the Final EIS, which show the verbatim changes.

Geometrician Associates LLC is a Hawai'i-based firm specializing in biological surveys. Headed by Ron Terry, Ph.D., Geometrician has performed more than 150 Environmental Impact Statements (EIS) and Environmental Assessments for county, state, federal and private projects. Geometrician Associates conducted the biological survey report for this project. The survey included a physical survey of flora and fauna; a review of previous surveys of the area; report of the results describing plant communities, and habitats; and, discussion of potential effects from increased recreation on wildland resources. A copy of the entire Geometrician Associates report can be found in Appendix C of the EIS.

Mahalo for your comment regarding allowing pedestrian and bike access to the park along the old highway without counting against the visitor counts. The visitor limits are proposed to only be instituted over the peak visitor hours at the park. Therefore, access will be allowed into the park and parking lot both before and after those hours and will be adjusted as appropriate based on ongoing input from the community. Due to the potential rockfall hazards along the old highway, warning signs will be posted at gate at the old highway to advise visitors who attempt to enter at that point. The gate is envisioned to have an open design that will allow views down towards Kē'e. However, State Parks will not encourage general public access via the highway due to the known rockfall hazards.

The full range of management options identified by the MPAC and refined by the HSPCAC for park access is included in the master plan report, which is available online at the State Parks website: <http://dlnr.hawaii.gov/dsp/parks/kaui/haena-state-park/>. The revised master plan calls for an adaptive management approach for both the parking and the proposed visitor limits. As the State has more time to analyze user patterns, other options can be explored over time, and they are actively engaged in discussions regarding parking enforcement and increased fines along the roadway outside of the park as well. Currently, entry fees for all state parks are established by Hawai'i Administrative Rules (HAR) 13-146-6, at the rate of \$5/car or \$1/person. HAR 13-146-6 also states that Hawai'i residents are exempt from paying park entry fees if they can show a valid Hawai'i ID. Similar fees could be instituted at Hā'ena State Park. However, State Parks will continue to work on the different options with the advisory committee and could include a variety of options as long as they do not violate State Parks Administrative Rules, or the Federal Land and Water Conservation Fund rules, which allow charging different fees for residents and nonresidents as long as they are comparable to current fee differences between the two.

Mahalo for your concerns regarding the placement of picnic areas in the lo'i and Agricultural Complex. The revised master plan does not locate any picnic areas within lo'i or the Agricultural Complex. Visitor traffic is directed to the Pedestrian Path through this area as requested.

As noted earlier, the ECC and Caretaker's Cottage have both been removed from the master plan. Please reference the attached Figure 1.

Ms. Mehana Vaughn  
SUBJECT: COMMENTS ON THE HÅ'ENA STATE PARK MASTER PLAN DRAFT ENVIRONMENTAL  
IMPACT STATEMENT (EIS), HÅ'ENA, KAUAI, HAWAII  
Month XX, 2018  
Page 3

One of the key management recommendations is to establish a permanent Cultural Advisory Group and Community Advisory Committee. These are described in Section 2.5.4.2 of the EIS and the verbatim description of these groups is included in the "Cultural and Community Advisory Groups" attachment.

Mahalo nui for your dedication and input throughout the master plan and environmental review processes. Your letter will be included in the Final EIS. If you would like a copy of the Final EIS or portions thereof, please let us know. Otherwise, the electronic copy of the Final EIS will be available on the Office of Environmental Quality Control website at: [http://oeqc2.doh.hawaii.gov/EA\\_EIS\\_Library/2018--KA-EIS-Haena-State-Park-Master-Plan.pdf](http://oeqc2.doh.hawaii.gov/EA_EIS_Library/2018--KA-EIS-Haena-State-Park-Master-Plan.pdf) on 11/11/2018, 2018.

Aloha,

Kimi Mikami Yuen, LEED AP BD+C  
Principal

Attachments: Description of the Master Plan  
Cultural and Community Advisory Groups  
Figure 1: Master Plan

cc: The Honorable David Y. Ige, Governor  
Office of Environmental Quality Control  
Board of Land and Natural Resources  
Division of State Parks

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Nathalie Razo

From: Lauren.A.Tanaka@hawaii.gov  
Sent: Monday, August 10, 2015 4:31 PM  
To: Kimi Yuen  
Subject: Fw: Haena Plans - Agree!

----- Forwarded by Lauren A. Tanaka/DLNR/State/HUS on 08/10/2015 04:30 PM -----

From: kokee@okaulaui.com  
To: "Lauren Tanaka" <Lauren.A.Tanaka@hawaii.gov>  
Date: 07/25/2015 11:01 PM  
Subject: Haena Plans - Agree!

Lauren,

I admire your work and agree in general with what I understand [from what was reported in The Garden Island. I will write a letter so stating. Could you send me the executive summary, please, so that I can be more informed.

I'm quite sure you will once again draw a lot of fire, but would like to support you and State Parks in your effort to bring some sense into the mess at the end of the road.

Me ke aloha,

Frank



THOMAS WITTEN, FASLA  
Chairman / Principal

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President / Principal

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MICHAEL MCELLEN, ASLA, LEED® AP  
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## Nathalie Razo

**From:** J.K. Harpstrite <drkimoh@gmail.com>  
**Sent:** Saturday, July 25, 2015 8:21 AM  
**To:** Kimi Yuen; lauren.a.tanaka@hawaii.gov  
**Subject:** State parks

Dear Kimi Yuen and Lauren Tanaka

I was pleased to read the article in advertiser today about the state taking over Haena Beachpark and controlling the number of visits. As a lifetime resident of Hawaii with deep roots, I have watched the slow destruction of our environment by the multitude of visitors as well as residence overusing the hiking trails and parks. Our environment is Hawaii's most precious resource and it is now time to protect it. This will allow generations of people to enjoy this beautiful natural resource. I live on Windward Oahu and can think of several other places that need protection. Lanikai pillbox, Maunawili falls and the Stairway to heaven are in need of help. I am not suggesting closing them. In fact I would implore maintaining the trails. Controlling access and charging fees may be the only way to do it. The fees should be enough to maintain and improve the trails as well as create employment for our community.

J. Kimo Harpstrite M.D.  
Orthopedic Associates of Hawaii

**SUBJECT: COMMENTS ON THE HÄ'ENA STATE PARK MASTER PLAN  
DRAFT ENVIRONMENTAL IMPACT STATEMENT (EIS),  
HÄ'ENA, KAUAI, HAWAII**

Mr. Frank Hay  
Via Email: kokee@okauai.com

Aloha Mr. Hay,

Mahalo nui for your emailed comment dated July 25, 2015 regarding the Hä'ena State Park Master Plan Draft Environmental Impact Statement (EIS). We sincerely apologize for the delay in responding. Due to the feedback received on the Draft EIS, the State of Hawaii, Department of Land and Natural Resources, Division of State Parks (State Parks) has worked on revising the master plan with a reorganized Community Advisory Committee to address the concerns voiced by the larger community. As a result, the master plan presented in the Final EIS has been updated based on the feedback received from the public meetings, comments received, and subsequent extensive collaboration with the Community Advisory Committee. As the planning consultant for State Parks, we offer the following responses to your comments.

Mahalo for your kind words of support for the Hä'ena State Park Master Plan as reported in *The Garden Island* newspaper. We appreciate your willingness to voice your support and your concern for the existing conditions. We have attached the updated master plan summary for your reference.

Mahalo nui for your input and participation in the environmental review process. Your letter will be included in the Final EIS. If you would like a copy of the Final EIS or portions thereof, please let us know. Otherwise, the electronic copy of the Final EIS will be available on the Office of Environmental Quality Control website at [http://oeqc2.doh.hawaii.gov/EA\\_EIS\\_Library/2018--KA-PEIS-Haena-State-Park-Master-Plan.pdf](http://oeqc2.doh.hawaii.gov/EA_EIS_Library/2018--KA-PEIS-Haena-State-Park-Master-Plan.pdf) on 7/29/2018.

Aloha,

Kimi Mikami Yuen, LEED AP BD+C  
Principal

Attachments: Master Plan Summary

cc: The Honorable David Y. Ige, Governor  
Office of Environmental Quality Control  
Board of Land and Natural Resources  
Division of State Parks

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Mr. J. Kim Harpstrite  
SUBJECT: COMMENTS ON THE HĀ'ENA STATE PARK MASTER PLAN DRAFT ENVIRONMENTAL  
IMPACT STATEMENT (EIS), HĀ'ENA, KAUA'I, HAWAII  
Month XX, 2018  
Page 2

Board of Land and Natural Resources  
Division of State Parks

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SUBJECT: COMMENTS ON THE HĀ'ENA STATE PARK MASTER PLAN  
DRAFT ENVIRONMENTAL IMPACT STATEMENT (EIS),  
HĀ'ENA, KAUA'I, HAWAII

Aloha Mr. Harpstrite,

Mahalo nui for your emailed comment dated July 25, 2015 regarding the Hā'ena State Park Master Plan Draft Environmental Impact Statement (EIS). We sincerely apologize for the delay in responding. Due to the feedback received on the Draft EIS, the State of Hawai'i, Department of Land and Natural Resources, Division of State Parks (State Parks) has worked on revising the master plan with a reorganized Community Advisory Committee to address the concerns voiced by the larger community. As a result, the master plan presented in the Final EIS has been updated based on the feedback received from the public meetings, comments received, and subsequent extensive collaboration with the Community Advisory Committee. As the planning consultant for State Parks, we offer the following responses to your comments.

Mahalo for your support of the Hā'ena State Park Master Plan, including proposals to manage the number of visitors and establish park entry fees. We recognize your concerns with the impact of current conditions on the natural environment and your desire to protect our environment and as you note, allow generations to enjoy it. Mahalo for sharing other places on O'ahu that also need help; many of those locations are also receiving attention as well. We appreciate your comment that closing these areas is not the answer and acknowledge your support for controlling access and charging fees as possible solutions. We also appreciate your suggestion to charge fees that are high enough to maintain and improve the trails as well as create employment for the local community.

Mahalo nui for your input and participation in the environmental review process. Your letter will be included in the Final EIS. If you would like a copy of the Final EIS or portions thereof, please let us know. Otherwise, the electronic copy of the Final EIS will be available on the Office of Environmental Quality Control website at [http://oeqc2.doh.hawaii.gov/EA\\_EIS\\_Library/2018--KA-FEIS-Haena-State-Park-Master-Plan.pdf](http://oeqc2.doh.hawaii.gov/EA_EIS_Library/2018--KA-FEIS-Haena-State-Park-Master-Plan.pdf) on 2018

Aloha,

Kimi Mikami Yuen, LEED AP BD+C  
Principal

cc: The Honorable David Y. Ige, Governor  
Office of Environmental Quality Control



Nathalie Razo

From: Rodger Elble <rielble@gmail.com>  
Sent: Saturday, July 25, 2015 1:48 PM  
To: lauren.a.tanaka@hawaii.gov  
Cc: Kimi Yuen  
Subject: Haena State Park

I am writing you with regard to the Star Advertiser article about proposed changes at Haena State Park.

I can support your proposal to charge reasonable parking fees in order to support and maintain the park and facilities but I strongly oppose limits to park guests and find the idea of an educational and cultural center to be unnecessary.

Visitors to Kauai and the park spend thousands of dollars to enjoy the natural beauty of the island. Attempting to control and limit access not only makes it a less attractive destination but is an elitist proposal seeking to restrict access for the benefit of a few as opposed to the principles of public park resources which are meant to benefit the public at large. Ever since the access at Hanauma Bay was altered and restricted, you have unpredictable access and delays that cause more traffic issues and pollution. I recently visited Hanauma as well and initially the access was coned off but upon doing a u-turn and driving back it was open. What is the point of that? Such issues would be MUCH worse at Haena given the narrow roads and more basic infrastructure.

If anything, you should be opening the park for MORE people to enjoy with better parking lots and roads funded by access / parking fees. A state park is meant for public enjoyment and should not be limited to the privileged few.

KEEP HAENA OPEN!

Thank you

Rodger Elble

Sent from my iPhone



Month XX, 2018-DRAFT

Mr. Rodger Elble  
31287 Monterey Street  
Laguna Beach, CA 92651

SUBJECT: COMMENTS ON THE HÄ'ENA STATE PARK MASTER PLAN  
DRAFT ENVIRONMENTAL IMPACT STATEMENT (EIS),  
HÄ'ENA, KAUAI, HAWAII

Aloha Mr. Elble,

Mahalo nui for your email dated July 25, 2015 regarding the Hä'ena State Park Master Plan Draft Environmental Impact Statement (EIS). We sincerely apologize for the delay in responding. Due to the feedback received on the Draft EIS, the State of Hawai'i, Department of Land and Natural Resources, Division of State Parks (State Parks) has worked on revising the master plan with a reorganized Hä'ena State Park Community Advisory Committee (HSPCAC) to address the concerns voiced by the larger community. As a result, the master plan presented in the Final EIS has been updated based on the feedback received from the public meetings, comments received, and subsequent extensive collaboration with the HSPCAC. As the planning consultant for State Parks, we offer the following responses to your comments.

Mahalo for your support of the proposal to charge reasonable parking fees in order to maintain the park and facilities. We recognize your concerns regarding potential limitations on the number of visitors, the perception that this may have on Kauai visitors, and your comments on maintaining public access to the park. The problem with the currently unlimited access to the park is the traffic and illegal parking that often blocks the narrow and already congested highway. To allow more visitors would further compound the problem. The revised master plan proposes the 900-person visitor limit as an initial number during peak hours when traffic is the heaviest, and it can be adaptively managed and adjusted as appropriate. If there continue to be issues, State Parks will work with the advisory committees on adjusting the number. Also, by setting a limit, people will be able to plan ahead to see which days will be available to visit and would help reduce unnecessary traffic circling or traveling down the narrow highway unless they have an entry ticket. There is also no other space in the park for additional parking as the historic Agricultural Complex spans most of the flat areas of the park and so expanding the parking or adding more roads is not possible. The park remains open to the public for public enjoyment.

The Education and Cultural Center has been eliminated from the master plan and a simple Welcome Hale has been added in its place.

Mahalo nui for your input and participation in the environmental review process. Your letter will be included in the Final EIS. If you would like a copy of the Final EIS or portions thereof, please let us know. Otherwise, the electronic copy of the Final EIS will be available on the Office of Environmental Quality Control website at [http://oeq2.doh.hawaii.gov/EA-EIS\\_Library/2018--KA-EIS-Haena-State-Park-Master-Plan.pdf](http://oeq2.doh.hawaii.gov/EA-EIS_Library/2018--KA-EIS-Haena-State-Park-Master-Plan.pdf) on 2018.

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NATHALIE RAZO  
Associate

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Aloha,

Kimi Mikami Yuen, LEED AP BD+C  
Principal

Attachments: Visitor Limits  
Welcome Hale  
Parking  
Park Entry  
Adaptive Management  
Figure 1: Master Plan

cc: The Honorable David Y. Ige, Governor  
Office of Environmental Quality Control  
Board of Land and Natural Resources  
Division of State Parks

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**Nathalie Razo**

**From:** Lynn Sari <lynnsari78@gmail.com>  
**Sent:** Sunday, July 26, 2015 10:52 AM  
**To:** Kimi Yuen  
**Subject:** Haena State Park preservation, response to public comment 7/25 StarAd

I am in favor of limiting visitors and fee charges to the park. I live on Oahu, third generation resident, and just came back from the Cruise ship visiting the islands. We rented a car to drive to Haena Park only to be disappointed with the overpopulation of visitors. The cars parked must do damage to the land, there was no quiet space to really enjoy the beauty of the Park. I did not dare look into the restroom. We got there at about 11:00 a.m. I should have done more research prior to heading towards Hanalei. I have been going to the park nearly annually, though this time may have been the last time due to the crowds. As with Hanauma Bay it has become too crowded for the locals to enjoy, we might as well make it nice for the tourist (and early riser local), and charge a fee with limited vehicle access. This may also cut back with some of the traffic going through Kapaa. Some thing really has to be done before the place is ruined. Kea Beach is the most beautiful spot with the mountain on one side and beautiful crystal clear reef snorkeling and a heiau to worship. Thank you for your efforts to preserve this spot for generations to come.

Sent from my iPad



Ms. Lynn Sari  
SUBJECT: COMMENTS ON THE HĀ'ENA STATE PARK MASTER PLAN DRAFT ENVIRONMENTAL  
IMPACT STATEMENT (EIS), HĀ'ENA, KAUA'I, HAWAII  
Month XX, 2018  
Page 2

Board of Land and Natural Resources  
Division of State Parks

O:\Job6262627\01 DLNR-Haena State Park Master Plan EIS\DEIS Responses\5-010\_2015-07-26 Sari Email-Haena State  
Park preservation response to public comment 725 StarAd - DSH.docx

Ms. Lynn Sari  
98-685D Kaonohi Street  
Aiea, HI 96701

**SUBJECT: COMMENTS ON THE HĀ'ENA STATE PARK MASTER PLAN  
DRAFT ENVIRONMENTAL IMPACT STATEMENT (EIS),  
HĀ'ENA, KAUA'I, HAWAII**

Aloha Ms. Sari,

Mahalo nui for your email dated July 26, 2015 regarding the Hā'ena State Park Master Plan Draft Environmental Impact Statement (EIS). We sincerely apologize for the delay in responding. Due to the feedback received on the Draft EIS, the State of Hawai'i, Department of Land and Natural Resources, Division of State Parks (State Parks) has worked on revising the master plan with a reorganized Hā'ena State Park Community Advisory Committee (HSPCAC) to address the concerns voiced by the larger community. As a result, the master plan presented in the Final EIS has been updated based on the feedback received from the public meetings, comments received, and subsequent extensive collaboration with the HSPCAC. As the planning consultant for State Parks, we offer the following responses to your comments.

Mahalo for your support of the proposed visitor limits and charging fees to the park. We recognize your concern for the existing conditions and the impact on traffic congestion and overcrowding in the park. We appreciate your concern regarding damage from the parked cars, the lack of quiet space to enjoy the park, and concern for the restroom conditions. The proposed visitor limits during the peak hours of park usage will hopefully help encourage visitors to plan their trips to the park prior to arrival and reduce traffic. We appreciate your concern about doing something before the place is ruined and the master plan has been designed to help protect those resources you value, Kē'e Beach, Makama, and Ka Ulu A Paea Heiau.

Mahalo nui for your input and participation in the environmental review process. Your letter will be included in the Final EIS. If you would like a copy of the Final EIS or portions thereof, please let us know. Otherwise, the electronic copy of the Final EIS will be available on the Office of Environmental Quality Control website at [http://oese2.doh.hawaii.gov/EA\\_HIS\\_Library/2018-04-04-FEIS-Haena-State-Park-Master-Plan.pdf](http://oese2.doh.hawaii.gov/EA_HIS_Library/2018-04-04-FEIS-Haena-State-Park-Master-Plan.pdf) on 04/04/2018.

Aloha,

Kimi Mikami Yuen, LEED AP BD+C  
Principal

cc: The Honorable David Y. Ige, Governor  
Office of Environmental Quality Control

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Nathalie Razo

From: Valerie Weiss <valerieweiss31@gmail.com>  
Sent: Tuesday, July 28, 2015 2:30 PM  
To: Kimi Yuen  
Subject: KAUAI (HRS 343)

7-25-2015

RE: Haena State Park Master Plan (HRS 343)

Aloha.

As a Kauai resident unable to visit Haena often due to overcrowding and lack of parking, my comments will consist of thoughts on Hawaii State Residents use and access. Our Islands are promoted by the HTA and loved to death by visitors. In the process residents are competing with ever increasing numbers of visitors for less access to our own prime areas. Many times residents have limited days off or limited time to leave early enough to find parking at our own parks.

I disagree with removing half of the parking at or near Ke'e. It should stay and be available to residents only. Leave it in place for now and allow access to only Hawaii licensed drivers and their Hawaii licensed passengers, driving their Hawaii registered personal vehicle. If the personal vehicle has not more than 2 out of state occupants, allow them in for a charge per each out of state person (up to 2). All other visitors should pay an authorized tram or van to be brought in from a specific parking area at Princeville or Hanalei.

Past a check point or kiosk there should be no visitor rental cars unless their Haena rental has private off street parking, they can show their rental agreement at the access kiosk and continue to their rental's private parking. They can be given a placard to hang from their mirror showing their dates of rental and road access.

Residents should not have to park a mile away from their chosen Haena beach location and walk past rental car after car, parked in NO PARKING zones and which are rarely ticketed.

Mahalo.

Valerie Weiss  
6616 Alahele St  
Kapaa



Month XX, 2018-DRAFT

Ms. Valerie Weiss  
6616 Alahele St  
Kapaa, HI 96746

SUBJECT: COMMENTS ON THE HAENA STATE PARK MASTER PLAN  
DRAFT ENVIRONMENTAL IMPACT STATEMENT (EIS),  
HAENA, KAUAI, HAWAII

Aloha Ms. Weiss,

Mahalo nui for your emailed comment dated July 28, 2015 regarding the Haena State Park Master Plan Draft Environmental Impact Statement (EIS). We sincerely apologize for the long delay in responding. Due to the feedback received on the Draft EIS, the State of Hawaii's Department of Land and Natural Resources, Division of State Parks (State Parks) has worked on revising the master plan with a reorganized Haena State Park Community Advisory Committee (HSPCAC) to address the concerns voiced by the larger community. As a result, the master plan presented in the Final EIS has been updated based on the feedback received from the public meetings, comments received, and subsequent extensive collaboration with the HSPCAC. As the planning consultant for State Parks, we offer the following responses to your comments.

We recognize your concerns regarding the current parking and overcrowding issues at Haena State Park, as well as the impact on access for local residents. We also acknowledge your concern with restricting access to the parking areas near Ke'e and your suggestions for exclusive access to this parking area for local residents. The revised master plan proposes limited access to mitigate public exposure to the rock hazard area. However, special users groups from the community, including cultural practitioners and those with ADA parking placards, will continue to have access. Please see the attached revised sections on the Rockfall Hazard, Limited Access Corridor, and Park Entry from the Final EIS.

We acknowledge your comments suggesting parking lots reserved for park visitors with Hawaii's-issued licenses and check points preventing access for rental cars, requiring other visitors to use a shuttle from Princeville or Hanalei. The park entry includes design similar to your suggested check point. While the potential shuttle service is not proposed to be administered by State Parks in the revised master plan, it does include specific elements to support effective implementation with infrastructure design for the proposed park entry and main parking lot to support a recommended shuttle service with shuttle stop structures, as described in Section 2.5.1.1 and Section 2.5.1.2 from the Final EIS, for supporting recommendations for shuttle service similar to your suggested tram or van.

While the main parking area does not have designated areas for residents and nonresidents, it includes improvements for parking enforcement with an entry fee structure. As the State has more time to analyze user patterns, other options can be explored over time, and they are actively engaged in discussions regarding parking enforcement and increased fines along the roadway outside of the park as well. Currently, entry fees for all state parks are established by Hawaii's Administrative Rules (HAR) 13-146-6, at the rate of \$5/car or \$1/person. HAR 13-146-6 also states that Hawaii's residents are exempt from paying park

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entry fees if they can show a valid Hawai'i ID. Similar fees could be instituted at Hā'ena State Park. However, State Parks will continue to work on the different options with the advisory committee. Please see the attached section from the Final EIS related to **Parking** for more details on the revised master plan.

Mahalo nui for your input and participation in the environmental review process. Your letter will be included in the Final EIS. If you would like a copy of the Final EIS or portions thereof, please let us know. Otherwise, the electronic copy of the Final EIS will be available on the Office of Environmental Quality Control website at [http://oeqc2.doh.hawaii.gov/EA\\_EIS\\_Library/2018-\\_-KA-FEIS-Haena-State-Park-Master-Plan.pdf](http://oeqc2.doh.hawaii.gov/EA_EIS_Library/2018-_-KA-FEIS-Haena-State-Park-Master-Plan.pdf) on 2018

Aloha,

Kimi Mikami Yuen, LEED AP BD+C  
Principal

Attachments: Park Entry  
Limited Access Corridor  
Parking  
Rockfall Hazard

cc: The Honorable David Y. Ige, Governor  
Office of Environmental Quality Control  
Board of Land and Natural Resources  
Division of State Parks

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**Nathalie Razo**

**From:** Christopher Rivera <riveraqualitysvcs@gmail.com>  
**Sent:** Saturday, August 01, 2015 10:32 PM  
**To:** lauren.a.tanaka@hawaii.gov  
**Cc:** Kimi Yuen  
**Subject:** Feedback Regarding Haena State Park Plan

I would like to suggest some ideas I have for Haena State Park (particularly the Kee beach area) which would solve many of the current problems. I believe some of the "proposed" ideas are invasive, expensive, and will have a terrible visual impact.

First of all: *Leave the area alone as much as possible!* Do not install an overhead walkway, as this would be far too expensive and ugly. A simple walking path through the woods or shoulder on the side of the road is sufficient.

There is no need to build a building or expensive plaques pertaining to the history or culture of the area. Building things there is expensive and unsightly. A link to the history of the area should be posted so that people can access the cultural, historical, and geological information via the internet. Almost everyone has a "smart phone." A wireless internet connection should be set up in the area so that people can be informed while they are there.

Do not install a gate or park hours, as some enjoy the serenity of the twilight or dusk hours.

Pertaining to the ¼ mile back parking lot for Kee beach: Please fix the lot as it is a mud pit full of rock hazards. Pave it properly with marked parking stalls. All hikers should be required to park in this lot. As it is now, a huge number of the stalls near Kee beach are taken up by hikers/ Kalalau campers for days on end. Beach parking should be only for beach-goers, and overflow should be in the ¼ mile back parking lot only. All parking on the side of the road must be stopped.

To enforce the parking rules, a ranger should be posted at the ¼ mile back parking lot, directing cars to the appropriate area. Clear signs should also be posted, stating that hikers must park at this lot. A police officer should also be in the park issuing citations for illegal and dangerous parking. The revenue from the citations would likely ameliorate some of the expense for the ranger and police officer.

Please do NOT charge to go to the beach. This is not Oahu or the mainland and we like it that way.

Thank You  
Christopher A. Rivera  
Kauai Resident and Kee Beach User  
(808)896-1725



Mr. Christopher Rivera  
SUBJECT: COMMENTS ON THE HĀ'ENA STATE PARK MASTER PLAN DRAFT ENVIRONMENTAL  
IMPACT STATEMENT (EIS), HĀ'ENA, KAUA'I, HAWAII  
Month XX, 2018  
Page 2

Month XX, 2018 - DRAFT

Mr. Christopher Rivera  
2037 Puu Kaa Street  
Kapaa, HI 96746

SUBJECT: COMMENTS ON THE HĀ'ENA STATE PARK MASTER PLAN  
DRAFT ENVIRONMENTAL IMPACT STATEMENT (EIS),  
HĀ'ENA, KAUA'I, HAWAII

Aloha Mr. Rivera,

Mahalo nui for your emailed comment dated August 1, 2015 regarding the Hā'ena State Park Master Plan Draft Environmental Impact Statement (EIS). We sincerely apologize for the delay in responding. Due to the feedback received on the Draft EIS, the State of Hawai'i, Department of Land and Natural Resources, Division of State Parks (State Parks) has worked on revising the master plan with a reorganized Hā'ena State Park Community Advisory Committee (HSPCAC) to address the concerns voiced by the larger community. As a result, the master plan presented in the Final EIS has been updated based on the feedback received from the public meetings, comments received, and subsequent extensive collaboration with the HSPCAC. As the planning consultant for State Parks, we offer the following responses to your comments.

We recognize your comments on preserving the natural state of the park and concerns with the originally proposed walkway and buildings. We also recognize your concern that the proposals would be costly and have a negative visual impact. The revised master plan includes significant changes with minimal physical improvements to preserve the natural beauty of the park as described in the attached **Master Plan Summary**. Most of the proposed buildings, including the visitor center and caretaker's cottage, have been removed in the revised master plan. The boardwalk has been modified in the revised master plan. The new pedestrian pathway follows along the first berm of the lot closest to the highway and is proposed to be slightly elevated so as not to impact the berm or any of the historic resources. The original Educational and Cultural Center (ECC) has been eliminated from the master plan, and only shows a simple, traditional hale at the entrance. The Welcome Hale is envisioned as an "open pavilion without walls", which will provide educational information to the public. Please find the attached **Section 2.5.1.3** and **Section 2.5.1.4** from the Final EIS describing the Welcome Hale and Pedestrian Path.

In response to your comments regarding park hours and access during dusk hours, the proposed limits will be instituted only during peak hours of park use and will allow visitors to enter before and after without being counted against the visitor limit. Therefore, access will be allowed into the park and parking lot outside of those peak hours and will be adjusted as appropriate based on ongoing input from the community. Please reference the attached sections from the Final EIS on **Visitor Limits** for a description of these aspects within the revised master plan.

We acknowledge your concerns with installing a gate, however, the suggested gate design is proposed to allow pedestrian access and envisioned to have an open design that will allow views down towards Kē'e. However, State Parks will not encourage general public access via the highway due to the known rockfall hazards. We also acknowledge your

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MICHAEL MCHILLEN, ASLA, LEED® AP  
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NATHALIE BAO  
Associate

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suggestions for providing educational information online and improvements to the parking lots. The revised plan includes proposals to provide information to all visitors prior to entry as well as availability online, including notices and educational material as suggested in your comments. The new main parking lot improvement is intended to alleviate the strain on current parking demand, which will also be adjusted daily to allow flexibility depending on future demand for parking and the potential use of the proposed shuttle. As noted in your comments, access and parking enforcement will be managed at the proposed entry near the new main parking lot. Please review the sections on **Park Entry**, **Parking**, and **Visitor Orientation** from the Final EIS for more details.

We also acknowledge your suggestions to enforce parking with citations and directing cars to appropriate areas. The revised plan calls for adaptive management as well and includes designated exemptions from park entry fees. The main parking lot is proposed to be separated into a fee-paying lot and non-fee-paying lot. As the State has more time to analyze user patterns, other options can be explored over time, and they are actively engaged in discussions regarding parking enforcement and increased fines along the roadway outside of the park as well. Currently, entry fees for all state parks are established by Hawai'i Administrative Rules (HAR) 13-146-6, at the rate of \$5/car or \$1/person. HAR 13-146-6 also states that Hawai'i residents are exempt from paying park entry fees if they can show a valid Hawai'i ID. Similar fees could be instituted at Hā'ena State Park. However, State Parks will continue to work on the different options with the advisory committee and could include a variety of options as long as they do not violate the federal Land and Water Conservation Fund rules, which allow charging different fees for residents and nonresidents as long as they are comparable to current fee differences between the two. A description of parking enforcement improvements and adaptive management proposed is attached in **Sections 2.5.1.2** and **2.5.4.1** from the Final EIS.

We recognize your suggestion to require hikers to use the new main parking lot while beachgoers have access to the smaller lot at Ke'e Beach. Due to the rockfall hazard proximity along the existing road, the Ke'e Beach parking lot and restricted corridor will only be accessible to a limited group of users, such as lifeguards and ADA permitted users. A description of the **Rockfall Hazard** and **Limited Access Corridor** can be found in the attached sections from the Final EIS as well.

Mahalo nui for your input and participation in the environmental review process. Your letter will be included in the Final EIS. If you would like a copy of the Final EIS or portions thereof, please let us know. Otherwise, the electronic copy of the Final EIS will be available on the Office of Environmental Quality Control website at [http://oeq2.doh.hawaii.gov/EA\\_EIS\\_Library/2018-04/EA-FEIS-Haena-State-Parks-Master-Plan.pdf](http://oeq2.doh.hawaii.gov/EA_EIS_Library/2018-04/EA-FEIS-Haena-State-Parks-Master-Plan.pdf) on **Month XX, 2018**.

Aloha,

Kimi Mikami Yuen, LEED AP BD+C  
Principal

- Attachments:
- Master Plan Summary
  - Park Entry
  - Pedestrian Path
  - Limited Access Corridor
  - Visitor Limits
  - Visitor Orientation
  - Rockfall Hazard

cc: The Honorable David Y. Ige, Governor  
Office of Environmental Quality Control  
Board of Land and Natural Resources  
Division of State Parks

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Feedback Regarding Haena State Park Plan -DSI.docx

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**Nathalie Razo**

**From:** Lauren.A.Tanaka@hawaii.gov  
**Sent:** Monday, August 10, 2015 4:33 PM  
**To:** Kimi Yuen  
**Subject:** Fw: End of the Road

----- Forwarded by Lauren A Tanaka\DLNR\State\HUS on 08/10/2015 04:33 PM -----

From: Sally4fun@aol.com  
To: lauren.a.tanaka@hawaii.gov,  
Date: 08/01/2015 09:51 AM  
Subject: Fw: End of the Road

---

From: Sally4fun@aol.com  
To: laura.a.tanaka@hawaii.gov, kyuen@pbhawaii.com  
CC: sally4fun@aol.com  
Sent: 8/1/2015 9:27:37 A.M. Hawaiian Standard Time  
Subj: End of the Road

Aloha,

I am writing this to ask for your further help @ doing something for Ke'e (end of the road). Us locals can't even go there anymore. Can't bring our friends and family visiting the island to the beautiful place that it is.

I don't even try to go up there anymore. I know I won't find a parking place; and then the beach is so crowded, it's very disappointing and frustrated.

I'm asking you all to please come up with a plan that can hopefully benefit locals, as well as some tourists.

I LOVE "end of the road". Can't wait to be able to go there & find a parking place...

Mahalo,  
Sharon Turnbull  
826-0253



Ms. Sharon Turnbull  
SUBJECT: COMMENTS ON THE HĀ'ENA STATE PARK MASTER PLAN DRAFT ENVIRONMENTAL  
IMPACT STATEMENT (EIS), HĀ'ENA, KAUA'I, HAWAII  
Month XX, 2018  
Page 2

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DACHENG DONG, LEED® AP  
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Associate

MICHAEL MCMILLIN, ASLA, LEED® AP  
Associate

NATHALIE BAGO  
Associate

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Month XX, 2018 - DRAFT

Ms. Sharon Turnbull  
5115 Kapiolani Loop  
Princeville, HI 96722

SUBJECT: COMMENTS ON THE HĀ'ENA STATE PARK MASTER PLAN  
DRAFT ENVIRONMENTAL IMPACT STATEMENT (EIS),  
HĀ'ENA, KAUA'I, HAWAII

Aloha Ms. Turnbull,

Mahalo nui for your comment dated August 1, 2015 regarding the Hā'ena State Park Master Plan Draft Environmental Impact Statement (EIS). We sincerely apologize for the delay in responding. Due to the feedback received on the Draft EIS, the State of Hawai'i, Department of Land and Natural Resources, Division of State Parks (State Parks) has worked on revising the master plan with a reorganized Hā'ena State Park Community Advisory Committee (HSPCAC) to address the concerns voiced by the larger community. As a result, the master plan presented in the Final EIS has been updated based on the feedback received from the public meetings, comments received, and subsequent extensive collaboration with the HSPCAC. As the planning consultant for State Parks, we offer the following responses to your comments.

Mahalo for your support of the Hā'ena State Park Master Plan for doing "something" to address the existing conditions. We recognize your concerns regarding the current parking and overcrowding issues at Hā'ena State Park, as well as the impact on access for local residents. The draft version of the master plan has been revised to reflect feedback received from the community. Please see the attached Master Plan Summary from the Final EIS for reference to review the revisions to the plan.

Mahalo nui for your input and participation in the environmental review process. Your letter will be included in the Final EIS. If you would like a copy of the Final EIS or portions thereof, please let us know. Otherwise, the electronic copy of the Final EIS will be available on the Office of Environmental Quality Control website at [http://oeqc2.doh.hawaii.gov/EA\\_EIS\\_Library/2018--KA-FEIS-Haena-State-Park-Master-Plan.pdf](http://oeqc2.doh.hawaii.gov/EA_EIS_Library/2018--KA-FEIS-Haena-State-Park-Master-Plan.pdf) on 2018.

Aloha,

Kimi Mikami Yuen, LEED AP BD+C  
Principal

Attachments: Master Plan Summary

cc: The Honorable David Y. Ige, Governor  
Office of Environmental Quality Control  
Board of Land and Natural Resources  
Division of State Parks





Re: Ha'ena State Park  
Lauren A Tanaka to: Heather Huit

08/17/2015 09:21 AM

Thank you Mrs. Huit for your comments. It will be noted in the final EIS.

Although you live on Oahu, if you know of anyone who might be interested in hearing more about the master plan for the park, we are having a public meeting this coming Wednesday, August 19, 2015 from 6 to 8 p.m. at the Hanalei Elementary School Cafeteria.

Heather Huit Hi Lauren, I read with interest the proposal to lim... 08/14/2015 08:17:49 PM

From: Heather Huit <dashcapt@hawaii.rr.com>  
To: Lauren A Tanaka@hawaii.gov,  
Date: 08/14/2015 08:17 PM  
Subject: Ha'ena State Park

Hi Lauren,

I read with interest the proposal to limit parking at Ha'ena State Park.

My husband and I visited the park several years ago, for the first time in over 20 years (we are Oahu residents). I was horrified at the crowds, the mess, and worst of all, the degradation to the heavily used trail.

Even though we started hiking in the later afternoon, we still ran into many people coming back. I would be completely supportive of a limit to the people that can park there, though I wonder how the State would control it, and what a good number would be. Even 900 sounds like an awful lot. Not sure how much more the trail can take without needing complete reconstruction.

Which by the way, my husband and I are heavily involved in here on Oahu!

I hope my opinion helps!

Aloha, Heather Huit



Month XX, 2018 - DRAFT

Ms. Heather Huit  
Via Email: dashcapt@hawaii.rr.com

SUBJECT: COMMENTS ON THE HA'ENA STATE PARK MASTER PLAN  
DRAFT ENVIRONMENTAL IMPACT STATEMENT (EIS),  
HA'ENA, KAUAI, HAWAII

Aloha Ms. Huit,

Mahalo nui for your comment dated August 14, 2015 regarding the Ha'ena State Park Master Plan Draft Environmental Impact Statement (EIS). We sincerely apologize for the delay in responding. Due to the feedback received on the Draft EIS, the State of Hawaii, Department of Land and Natural Resources, Division of State Parks (State Parks) has worked on revising the master plan with a reorganized Ha'ena State Park Community Advisory Committee (HSPCAC) to address the concerns voiced by the larger community. As a result, the master plan presented in the Final EIS has been updated based on the feedback received from the public meetings, comments received, and subsequent extensive collaboration with the HSPCAC. As the planning consultant for State Parks, we offer the following responses to your comments.

We recognize your concerns regarding the current parking, trail degradation and overcrowding issues at Ha'ena State Park. We appreciate your support for limiting the number of visitors accessing the park to address these concerns. We also acknowledge your concern for the condition of the hiking trail. While directly refurbishing the hiking trail is beyond the scope of the master plan for Ha'ena State Park, the proposed visitor limits are intended to mitigate the impact on the surrounding area. The proposed visitor limits will be adjusted based on an average number of visitors rather than a set limit per day. We also acknowledge your desire for a lower limit than the proposed number in the master plan. The revised master plan proposes the 900-person visitor limit as an initial number which can be adaptively managed and adjusted as appropriate, especially if there continues to be unwanted impacts at the park. If there continue to be issues, State Parks will work with the advisory committees on adjusting the number. Please find the attached sections from the Final EIS on [Visitor Limits](#).

Mahalo nui for your input and participation in the environmental review process. Your letter will be included in the Final EIS. If you would like a copy of the Final EIS or portions thereof, please let us know. Otherwise, the electronic copy of the Final EIS will be available on the Office of Environmental Quality Control website at [http://oeqc2.doh.hawaii.gov/EA\\_EIS\\_Library/2018--KA-FEIS-Haena-State-Park-Master-Plan.pdf](http://oeqc2.doh.hawaii.gov/EA_EIS_Library/2018--KA-FEIS-Haena-State-Park-Master-Plan.pdf) on 2018.

Aloha,

Kimi Mikami Yuen, LEED AP BD+C  
Principal

THOMAS WITTEN, FASLA  
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Attachments: Visitor Limits  
cc: The Honorable David Y. Ige, Governor  
Office of Environmental Quality Control  
Board of Land and Natural Resources  
Division of State Parks

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State Park Visitor Limit - DSI.docx



Re: Haena State Park plans  
Lauren A Tanaka to: Larry jolly 08/17/2015 09:28 AM

Thank you for your comments. After the comment period ends on September 8, 2015, a formal response will be sent to you and both will be included in the final EIS.  
If we charge an entry fee, Hawaii residents will be exempt from that fee, but not a parking fee

Larry jolly We are very supportive of the plan to limit parkin... 08/15/2015 10:47:41 AM

---

From: Larry jolly <larry.jolly@att.net>  
To: "Lauren A Tanaka@hawaii.gov" <Lauren.A.Tanaka@hawaii.gov>  
Date: 08/15/2015 10:47 AM  
Subject: Haena State Park plans

We are very supportive of the plan to limit parking at Kee and Haena and to limit the number of people accessing these areas. A charge to use these areas is totally acceptable. Would like to see reduced rates and consideration of residents/locals.

Mahalo!

Sent from my iPad  
5230 Honoiki Road  
Princeville, HI. 96722



Month XX, 2018 - DRAFT

Mr. Larry Jolly  
5230 Honoiki Road  
Princeville, HI 96722

**SUBJECT: COMMENTS ON THE HĀ'ENA STATE PARK MASTER PLAN  
DRAFT ENVIRONMENTAL IMPACT STATEMENT (EIS),  
HĀ'ENA, KAUA'I, HAWAII**

Aloha Mr. Jolly,

Mahalo nui for your emailed comment dated August 15, 2015 regarding the Hā'ena State Park Master Plan Draft Environmental Impact Statement (EIS). We sincerely apologize for the delay in responding. Due to the feedback received on the Draft EIS, the State of Hawai'i, Department of Land and Natural Resources, Division of State Parks (State Parks) has worked on revising the master plan with a reorganized Hā'ena State Park Community Advisory Committee (HSPCAC) to address the concerns voiced by the larger community. As a result, the master plan presented in the Final EIS has been updated based on the feedback received from the public meetings, comments received, and subsequent extensive collaboration with the HSPCAC. As the planning consultant for State Parks, we offer the following responses to your comments.

Mahalo for your support of the visitor limit and park entry fee aspects of the master plan. We recognize your concerns regarding the current parking and overcrowding issues at Hā'ena State Park. The revised master plan calls for an adaptive management approach for both the parking and the proposed visitor limits, which will be adjusted based on an average number of visitors rather than a set limit per day. The limits will also be instituted only during peak hours of park use and will allow visitors to enter before and after without being counted against the visitor limit. Therefore, access will be allowed into the park and parking lot outside those peak hours and will be adjusted as appropriate based on ongoing input from the community. Please reference the attached **Section 2.5.4.3** and **Section 2.5.4.1** from the Final EIS for more details.

We also acknowledge your support for charging access fees and your interest in reduced fee rates and special consideration for local residents. The new main parking lot improvements are intended to alleviate the strain on current parking demand. The revised plan includes designated exemptions from park entry fees as well, and the main parking lot is proposed to be separated into a fee-paying lot and non-fee-paying lot, which will also be adjusted daily to allow flexibility depending on future demand for parking and the potential use of the proposed shuttle. As the State has more time to analyze user patterns, other options can be explored over time, and they are actively engaged in discussions regarding parking enforcement and increased fines along the roadway outside of the park as well. Currently, entry fees for all state parks are established by Hawai'i Administrative Rules (HAR) 13-146-6, at the rate of \$5/car or \$1/person. HAR 13-146-6 also states that Hawai'i residents are exempt from paying park entry fees if they can show a valid Hawai'i ID. Similar fees could be instituted at Hā'ena State Park, however, State Parks will continue to work on the different options with the advisory committee. The attached section from the Final EIS related to **Parking** provide more information on the revised master plan.

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Associate

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Mr. Larry Jolly  
SUBJECT: COMMENTS ON THE HĀ'ENA STATE PARK MASTER PLAN DRAFT ENVIRONMENTAL  
IMPACT STATEMENT (EIS), HĀ'ENA, KAUA'I, HAWAII  
Month XX, 2018  
Page 2

Mahalo nui for your input and participation in the environmental review process. Your letter will be included in the Final EIS. If you would like a copy of the Final EIS or portions thereof, please let us know. Otherwise, the electronic copy of the Final EIS will be available on the Office of Environmental Quality Control website at [http://oeq2.doh.hawaii.gov/EA\\_EIS\\_Library/2018-04-04-FEIS-Haena-State-Park-Master-Plan.pdf](http://oeq2.doh.hawaii.gov/EA_EIS_Library/2018-04-04-FEIS-Haena-State-Park-Master-Plan.pdf) on 04/04/2018.

Aloha,

Kimi Mikami Yuen, LEED AP BD+C  
Principal

Attachments: Parking  
Visitor Limits  
Adaptive Management

cc: The Honorable David Y. Ige, Governor  
Office of Environmental Quality Control  
Board of Land and Natural Resources  
Division of State Parks

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**Nathalie Razo**

**From:** Lauren.A.Tanaka@hawaii.gov  
**Sent:** Wednesday, August 19, 2015 10:16 AM  
**To:** Dan.Quinn@hawaii.gov; Russell.P.Kumabe@hawaii.gov; Alan.B.Carpenter@hawaii.gov;  
Kimi.Yuen; Nathalie.Razo; Cattie.Cullison  
**Subject:** Fw: Haena State Park on Kauai proposed changes

----- Forwarded by Lauren A Tanaka/DLNR/StateHUS on 08/19/2015 10:14 AM -----

**From:** <poppylu@hawaii.ir.com>  
**To:** Lauren.A.Tanaka@hawaii.gov,  
**Date:** 08/18/2015 08:17 PM  
**Subject:** Haena State Park on Kauai proposed changes

We agree with the proposal to limit the number of visitors to approx. 900 per day and to improve the parking area.  
We also agree with the proposed fees for park entry and/or parking with Hawaii residents being exempt.  
We do not agree with the proposed elevated board walk for entry.

Thank you,  
Robert and Lila Dolan, Kalaheo, HI 96741



Month XX, 2018 - DRAFT

Mr. and Mrs. Robert and Lila Dolan  
4369 Kalaheo Drive  
Kalaheo, HI 96741

**SUBJECT: COMMENTS ON THE HA'ENA STATE PARK MASTER PLAN  
DRAFT ENVIRONMENTAL IMPACT STATEMENT (EIS),  
HA'ENA, KAUA'I, HAWAII**

Aloha Mr. and Mrs. Dolan,

Mahalo nui for your emailed comment dated August 18, 2015 regarding the Ha'ena State Park Master Plan Draft Environmental Impact Statement (EIS). We sincerely apologize for the delay in responding. Due to the feedback received on the Draft EIS, the State of Hawaii's Department of Land and Natural Resources, Division of State Parks (State Parks) has worked on revising the master plan with a reorganized Ha'ena State Park Community Advisory Committee (HSPCAC) to address the concerns voiced by the larger community. As a result, the master plan presented in the Final EIS has been updated based on the feedback received from the public meetings, comments received, and subsequent extensive collaboration with the HSPCAC. As the planning consultant for State Parks, we offer the following responses to your comments.

Mahalo for your support of the park entry fee and visitor limit aspects of the master plan. The revised master plan proposes the 900-person visitor limit as an initial number which can be adaptively managed and adjusted as appropriate, especially if there continues to be unwanted impacts at the park. If there continue to be issues, State Parks will work with the advisory committees on adjusting the number.

The revised master plan also calls for an adaptive management approach for proposed visitor limits, which will be adjusted based on an average number of visitors rather than a set limit per day. The limits will also be instituted only during peak hours of park use and will allow visitors to enter before and after without being counted against the visitor limit. Therefore, access will be allowed into the park and parking lot outside those peak hours and will be adjusted as appropriate based on ongoing input from the community. Please reference the attached sections from the Final EIS on **Visitor Limits** and **Adaptive Management** for a description of these aspects within the revised master plan.

We recognize your concerns with local resident access and the originally proposed elevated boardwalk. The revised plan includes designated exemptions from park entry fees, and the main parking lot is proposed to be separated into a fee-paying lot and non-fee-paying lot, which will also be adjusted daily to allow flexibility depending on future demand. As the State has more time to analyze user patterns, other options can be explored over time, and they are actively engaged in discussions regarding parking enforcement and increased fines along the roadway outside of the park as well. Currently, entry fees for all state parks are established by Hawaii's Administrative Rules (HAR) 13-146-6, at the rate of \$5/car or \$1/person. HAR 13-146-6 also states that Hawaii's residents are exempt from paying park entry fees if they can show a valid Hawaii's ID. Similar fees could be instituted at Ha'ena State Park. However, State Parks will continue to work on the different options with the advisory committee. Please review the section on **Parking** from the Final EIS for more details.

THOMAS WITTEN, FASLA  
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Mr. and Mrs. Robert and Lila Dolan  
SUBJECT: COMMENTS ON THE HA'ENA STATE PARK MASTER PLAN DRAFT ENVIRONMENTAL  
IMPACT STATEMENT (EIS), HA'ENA, KAUAI, HAWAII  
Month XX, 2018  
Page 2

The boardwalk has been modified in the revised master plan. The new pedestrian pathway follows along the first berm of the lo'i closest to the highway and is proposed to be slightly elevated so as not to impact the berm or any of the historic resources to preserve the natural beauty of the park, as described in the attached **Master Plan Summary**. Please find the attached **Section 2.5.1.4** from the Final EIS describing the modified Pedestrian Path.

Mahalo nui for your input and participation in the environmental review process. Your letter will be included in the Final EIS. If you would like a copy of the Final EIS or portions thereof, please let us know. Otherwise, the electronic copy of the Final EIS will be available on the Office of Environmental Quality Control website at [http://oeqc2.doh.hawaii.gov/EA\\_EIS\\_Library/2018\\_KA-FEIS-Haena-State-Park-Master-Plan.pdf](http://oeqc2.doh.hawaii.gov/EA_EIS_Library/2018_KA-FEIS-Haena-State-Park-Master-Plan.pdf) on **Month XX, 2018**.

Aloha,

Kimi Mikami Yuen, LEED AP BD+C  
Principal

Attachments: Master Plan Summary  
Parking  
Pedestrian Path  
Adaptive Management  
Visitor Limits

cc: The Honorable David Y. Ige, Governor  
Office of Environmental Quality Control  
Board of Land and Natural Resources  
Division of State Parks

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Haena State Park on Kauai - proposed changes - DSI.docx

**Nathalie Razo**

**From:** Lauren.A.Tanaka@hawaii.gov  
**Sent:** Monday, September 14, 2015 2:26 PM  
**To:** Curt.A.Cottrell@hawaii.gov; Stephen.L.Thompson@hawaii.gov;  
Russell.P.Kumabe@hawaii.gov; Alan.B.Carpenter@hawaii.gov; Kimi Yuen  
**Subject:** Fw: Haena State Park Draft EIS

----- Forwarded by Lauren A Tanaka\DLNR\State\HUS on 09/14/2015 02:25 PM -----

**From:** <poppylu@hawaii.ir.com>  
**To:** Lauren Tanaka State Parks <Lauren.A.Tanaka@hawaii.gov>  
**Date:** 09/14/2015 01:51 PM  
**Subject:** Haena State Park Draft EIS

Re: Haena State Park Draft EIS

As Residents, we are strongly opposed to the following:

- and ecologically important park! It should remain NATURAL. No artificial structures.
2. Kauai Residents should not be included in the Visitor's cap. Residents, (taxpayers), should be exempt from the cap. Therefore, reduce further your intended cap of 900 visitors to allow residents priority. Reduce visitor cap to 500 which is still excessive.
- We suggest the following:
1. Park entry fees for visitors & residents. However reduced fees for residents only. The fees to be used solely to reduce resources impacts and preserve the integrity & quality of the park.
2. Close the park periodically to allow it to REST & RECOVER from the trampling & over-use. (Mainland parks are often closed periodically to allow them to recover).
- Kauai has about 100,000 visitors per month, about 20,000 on Island all the time, plus 70,000 full time residents.
- You, DLNR, the Kauai Visitors Bureau, & the Tourism Authority, must work together to reduce the huge negative impacts occurring on this little rock that does not have the infrastructure to support so many visitors. This includes the Park. The quality of our lives has been profoundly and negatively affected with the onslaught of out-of-control tourism! We are dreadfully out-of-balance, and our environment is suffering the consequences.
- Robert & Lila Dolan  
4369 Kalaheo Dr.  
Kalaheo, HI 96741



THOMAS WITTEN, ESQ.  
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R. SEAN DUNCAN, ASLA  
President / Principal

RUSSELL Y. CHUNG, ASLA, LEED® AP BD+C  
Executive Vice President / Principal

VINCENT SHIGEKUNI

GRANT T. MURAKAMI, AIA®, LEED® AP BD+C  
Vice President / Principal

TOM SCHNELL, AICP

KIMI MURAMATSU, LEED® AP BD+C  
Principal

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RAMAN E. M. TAMM  
Cultural Sustainability Planner

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DACHUNG DONG, LEED® AP  
Senior Associate

SCOTT MURAKAMI, ASLA, LEED® AP  
Associate

MICHAEL MCHILLEN, ASLA, LEED® AP  
Associate

NATHALIE BAGO  
Associate

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Mr. and Mrs. Robert and Lila Dolan  
SUBJECT: COMMENTS ON THE HÄ'ENA STATE PARK MASTER PLAN DRAFT ENVIRONMENTAL  
IMPACT STATEMENT (EIS), HÄ'ENA, KAUA'I, HAWAII  
Month XX, 2018  
Page 2

The proposed visitor limits will also be instituted only during peak hours of park use and will allow visitors to enter before and after without being counted against the visitor limit. Therefore, access will be allowed into the park outside those peak hours and will be adjusted as appropriate based on ongoing input from the community. There will also be exemptions from the visitor limit total for permitted special user groups, such as cultural practitioners. Please see the attached Section 2.5.4.3 from the Final EIS on the revised visitor limit proposal.

We also acknowledge your suggestions for park entry fees with reduced fees for residents as well as suggested revenue generation to preserve resources within the park. While there is no distinction between residents and nonresidents in the visitor limits, the main parking lot will be separated into a fee-paying lot and non-fee-paying lot. As the State has more time to analyze user patterns, other options can be explored over time, and they are actively engaged in discussions regarding parking enforcement and increased fines along the roadway outside of the park as well. Currently, entry fees for all state parks are established by Hawai'i Administrative Rules (HAR) 13-146-6, at the rate of \$5/car or \$1/person. HAR 13-146-6 also states that Hawai'i residents are exempt from paying park entry fees if they can show a valid Hawai'i ID. Similar fees could be instituted at Hä'ena State Park. However, State Parks will continue to work on the different options with the advisory committee. More information on the proposed fee structure for parking is attached in Section 2.5.1.3 from the Final EIS.

We also recognize your concern with the overall impact of tourism on Kaua'i and suggestions for coordination between State Parks and state tourism agencies. The planning process involved, and will continue to involve, a collaborative approach to support the development of the master plan by consulting various local community groups and individuals, including a thirty-two member Master Plan Advisory Committee (MPAC) consisting of Hä'ena kūpuna and 'ohana members, cultural practitioners and scientific experts, business representatives, State and County agencies, and other North Shore community members to provide recommendations on the physical plan and park management. One of the key management recommendations is to establish a permanent Cultural Advisory Group and Community Advisory Committee. These are described in Section 1.7 and Section 2.5.4.2 of the Final EIS outlining this collaborative approach.

Mahalo nui for your input and participation in the environmental review process. Your letter will be included in the Final EIS. If you would like a copy of the Final EIS or portions thereof, please let us know. Otherwise, the electronic copy of the Final EIS will be available on the Office of Environmental Quality Control website at [http://oeq2.doh.hawaii.gov/EA\\_EIS\\_Library/2018-KA-EIS-Haena-State-Park-Master-Plan.pdf](http://oeq2.doh.hawaii.gov/EA_EIS_Library/2018-KA-EIS-Haena-State-Park-Master-Plan.pdf) on , 2018.

SUBJECT: COMMENTS ON THE HÄ'ENA STATE PARK MASTER PLAN  
DRAFT ENVIRONMENTAL IMPACT STATEMENT (EIS),  
HÄ'ENA, KAUA'I, HAWAII

Aloha Mr. and Mrs. Dolan,

Mahalo nui for your emailed comment dated September 14, 2015 regarding the Hä'ena State Park Master Plan Draft Environmental Impact Statement (EIS). We sincerely apologize for the delay in responding. Due to the feedback received on the Draft EIS, the State of Hawai'i, Department of Land and Natural Resources, Division of State Parks (State Parks) has worked on revising the master plan with a reorganized Hä'ena State Park Community Advisory Committee (HSPCAC) to address the concerns voiced by the larger community. As a result, the master plan presented in the Final EIS has been updated based on the feedback received from the public meetings, comments received, and subsequent extensive collaboration with the HSPCAC. As the planning consultant for State Parks, we offer the following responses to your comments.

We recognize your concerns with the Hä'ena State Park Master Plan from the perspective of local residents. The draft version of the master plan has been revised to reflect feedback received from the community and includes significant changes with minimal physical improvements to preserve the natural beauty of the park. Please see the Master Plan Summary from the Final EIS attached for reference with an overview of the revisions to the plan.

We also acknowledge your concern with creating "Disney Land" aspects within the park concerning the originally proposed elevated boardwalk the boardwalk has been modified in the revised master plan. The new pedestrian pathway follows along the first berm of the lo'i closest to the highway and is proposed to be slightly elevated so as not to impact the berm or any of the historic resources. Please see the attached Section 2.5.1.4 and Figure 1 from the Final EIS detailing the modified pedestrian path.

We also recognize your suggestions to exclude Kaua'i residents from the visitor limit and periodic park closure to "rest and recover". The revised master plan proposes the 900-person visitor limit as an initial number which can be adaptively managed and adjusted as appropriate, especially if there continues to be unwanted impacts at the park. If there continue to be issues, State Parks will work with the advisory committee on adjusting the number. In response to your comments on "rest" for the park, the revised master plan calls for a soft limit approach for the proposed visitor limits, with averaged visitor counts to allow for adjustments for potential park closure days. As the State has more time to analyze user patterns, other options can be explored over time, and they are actively engaged in discussions regarding parking enforcement and increased fines along the roadway outside of the park as well.

Mr. and Mrs. Robert and Lila Dolan  
SUBJECT: COMMENTS ON THE HÅ'ENA STATE PARK MASTER PLAN DRAFT ENVIRONMENTAL  
IMPACT STATEMENT (EIS), HÅ'ENA, KAUAI, HAWAII  
Month XX, 2018  
Page 3

Aloha,

Kimi Mikami Yuen, LEED AP BD+C  
Principal

Attachments: Agency and Community Group Engagement  
Master Plan Summary  
Parking  
Pedestrian Path  
Cultural and Community Advisory Group  
Visitor Limits  
Figure 1: Master Plan

cc: The Honorable David Y. Ige, Governor  
Office of Environmental Quality Control  
Board of Land and Natural Resources  
Division of State Parks

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Haena State Park Draft EIS - DS.docx

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**Nathalie Razo**

**From:** Roberta Griffith <griffthr138@yahoo.com>  
**Sent:** Saturday, August 15, 2015 8:34 PM  
**To:** Lauren.A.Tanaka@hawaii.gov; Kimi Yuen  
griffthr138@yahoo.com  
**Cc:**  
**Subject:** Hanalei end of road, park and beach

Greetings,

Limiting the number of visitors goes against the heart of open access to our beaches. This is not a solution to the issue. The island is becoming a haven for multimillionaires, disastrous traffic conditions, and huge berms along the road that limit beach vistas, not to mention free access to our beaches.

I am opposed to building a walkway and pavilion, it would further erode the area and affect the significant natural and cultural resources with unnecessary structures.

Pave the large parking lot so cars may have a decent place to park, and restrict sides of the roadway as no parking. There was great letter to the editor about all this last week in the Garden Island Newspaper. Check it out.

Make the County Council fix our roads and traffic congestion, and tell them to stop permitting more condos, hotels and housing until the infrastructure to handle the increased traffic we have right now has been dealt with.

What we really need are electoral districts for County Council Membership. The idea that this island is too small for districts is ridiculous, I lived in a town of 20,000 in upstate NY and we had 6 districts that were well represented. Better yet, a County Manager, rather than a mayor, would go a long way toward dealing with issues more effectively than they have and are being dealt with currently.

Regards,

Roberta

Roberta Griffith  
griffthr138@yahoo.com  
www.RobertaGriffith.com  
www.galerie103.com

Resident  
Princeville, Kauai, HI 96722  
(808) 826-4710



Month XX, 2018 - DRAFT

Ms. Roberta Griffith  
P.O. Box 223104  
Princeville, HI 96722

**SUBJECT: COMMENTS ON THE HĀ'ENA STATE PARK MASTER PLAN  
DRAFT ENVIRONMENTAL IMPACT STATEMENT (EIS),  
HĀ'ENA, KAUA'I, HAWAII**

Aloha Ms. Griffith,

Mahalo nui for your emailed comment dated August 15, 2015 regarding the Hā'ena State Park Master Plan Draft Environmental Impact Statement (EIS). We sincerely apologize for the delay in responding. Due to the feedback received on the Draft EIS, the State of Hawai'i, Department of Land and Natural Resources, Division of State Parks (State Parks) has worked on revising the master plan with a reorganized Hā'ena State Park Community Advisory Committee (HSPCAC) to address the concerns voiced by the larger community. As a result, the master plan presented in the Final EIS has been updated based on the feedback received from the public meetings, comments received, and subsequent extensive collaboration with the HSPCAC. As the planning consultant for State Parks, we offer the following responses to your comments.

We recognize your concerns regarding limiting the amount of visitors to the park. Recreational aspects of the park will still be on going, as it is a factor for receiving State and Federal funding. However, the amount of visitors and park users must also be balanced and mindful of the capacity and strain upon the park's natural environment and resources. A main objective of the Master Plan is to balance outdoor recreational uses with the protection and preservation of the park's natural and cultural features to enrich the Hā'ena park experience for all. The revised master plan calls for an adaptive management approach for both the parking and the proposed visitor limits, which will be adjusted based on an average number of visitors rather than a set limit per day. Please see the "Visitor Limits" attachment from Section 2.5.4.3 of the Final EIS that shows the verbatim changes from the Draft EIS.

We recognize your comments concerning walkway and pavilion construction, with potential erosion and cultural resource impact concerns. Only a few new structures are proposed, including a revised Welcome Hale that is envisioned as an open traditional Hawaiian hale and located near the improved main parking lot. A new pedestrian-only path that connects the main parking lot with Kē'e Beach through the lo'i is included in the plan. The new pedestrian path would follow along the first berm of the lo'i closest to the highway and is proposed to be slightly elevated so as not to impact the berm or any of the historic resources, but will maintain a low profile just above the berm. Please see the revised Figure 1 Master Plan graphic and the "Master Plan Summary" attachment from Section 1.9.1 of the Final EIS, which show the verbatim changes from the Draft EIS for this section.

Mahalo for your suggestion regarding paving of the parking lot. The revised master plan calls for the current overflow parking area to serve as the main parking lot and be resurfaced with permeable paving.

THOMAS WITTEN, FALA  
Chairman / Principal

R-SEAN DUNCAN, ASLA  
President / Principal

RUSSELL Y. CHUNG, FALA, LEED® AP BD+C  
Executive Vice President / Principal

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GRANT T. MURAKAMI, AICP, LEED® AP BD+C  
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TOM SCHNELL, AICP  
Principal

KIMI MIKAMI YUEN, LEED® AP BD+C  
Principal

W. FRANK BRANST FALA  
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ANN MIKAO BOKUNOGI, PhD  
Project Director

RAMAN E. M. TAMM  
Cultural Sustainability Planner

RAYMOND T. HIGA, ASLA  
Senior Associate

GATE COLLISON, AICP  
Senior Associate

MARC SHIMATSU, ASLA  
Senior Associate

DACHENG DONG, LEED® AP  
Senior Associate

SCOTT MURAKAMI, ASLA, LEED® AP  
Associate

MICHAEL MCHILLEN, ASLA, LEED® AP  
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NATHALIE BAGO  
Associate

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Ms. Roberta Griffith  
SUBJECT: COMMENTS ON THE HĀ'ENA STATE PARK MASTER PLAN DRAFT ENVIRONMENTAL  
IMPACT STATEMENT (EIS), HĀ'ENA, KAUA'I, HAWAII  
Month XX, 2018  
Page 2

We recognize your concerns regarding traffic congestion issues at the park. The Master Plan includes a combination of physical improvements and programmatic options that when applied in combination will have a positive impact on existing roadway conditions.

While the Division of State Parks does not have jurisdiction over County Council decisions, the park will continue to communicate with County agencies in order to coordinate potential traffic solutions for the area.

Mahalo nui for your input and participation in the environmental review process. Your letter will be included in the Final EIS, if you would like a copy of the Final EIS or portions thereof, please let us know. Otherwise, the electronic copy of the Final EIS will be available on the Office of Environmental Quality Control website at: [http://oeqc2.doh.hawaii.gov/EA\\_EIS\\_Library/2018-Park-Master-Plan.pdf](http://oeqc2.doh.hawaii.gov/EA_EIS_Library/2018-Park-Master-Plan.pdf) on 2018-08-15. -KA-EFIS-Haena-State

Aloha,

Kimi Mikami Yuen, LEED AP BD+C  
Principal

Attachments: Visitor Limits  
Master Plan Summary  
Figure 1: Master Plan

cc: The Honorable David Y. Ige, Governor  
Office of Environmental Quality Control  
Board of Land and Natural Resources  
Division of State Parks

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**Nathalie Razo**

**From:** Lauren.A.Tanaka@hawaii.gov  
**Sent:** Tuesday, August 18, 2015 5:51 PM  
**To:** Nathalie Razo  
**Subject:** Fw: management plan for Haena State Park

----- Forwarded by Lauren A. Tanaka<DLNRStateHUS on 08/18/2015 05:50 PM> -----

**From:** Andrew <andyontravel@yahoo.com>  
**To:** "Lauren A. Tanaka@hawaii.gov" <Lauren.A.Tanaka@hawaii.gov>  
**Date:** 08/17/2015 05:56 PM  
**Subject:** Re: management plan for Haena State Park

No you may not have my address. And the meeting doesnt do me or half of Kauai's residents any good as its too far to make it there in time after work - I'm guessing that's part of the plan to minimize opposition. How many years did it take to redo the bathrooms/shower there? Based on that debacle I'm guessing this proposal would probably run 5+ years to completion. Tell people to walk or hitch a ride, problem solved.

**From:** "Lauren A. Tanaka@hawaii.gov" <Lauren.A.Tanaka@hawaii.gov>  
**To:** Andrew <andyontravel@yahoo.com>  
**Sent:** Monday, August 17, 2015 3:52 PM  
**Subject:** Re: management plan for Haena State Park

Thank you for your comments. May I please have your mailing address as a formal response will be sent after the comment deadline of September 8, 2015.

FYI, there is a public meeting scheduled for this Wednesday from 6 to 8 p.m. at the Hanalei Elementary School Cafeteria on the master plan and draft EIS.

**From:** Andrew <andyontravel@yahoo.com>  
**To:** "Lauren A. Tanaka@hawaii.gov" <Lauren.A.Tanaka@hawaii.gov>  
**Date:** 08/17/2015 05:24 AM  
**Subject:** management plan for Haena State Park

Cant afford it, dont want it, find something else to do that doesnt involve taxpayer money. Elevated boardwalk? Absurd. Every proposal from you clowns is a thinly veiled attempt to spend a lot of TAXPAYER money solving a problem that doesnt exist. State is broke, your pension system wont exist in 20 years which is only fair given the current crimes being conducted (paving roads that are perfectly fine while ignoring ones that are in genuine need of repair, employing family and friends doing nothing, "protecting" whales and other marine life that have stable populations). You master planners need to give it a rest, or better yet get laid off and live off your actual value to society, which is probably close to zero.



Month XX, 2018 - DRAFT

Mr. Andrew  
Via Email: andytravel@yahoo.com

**SUBJECT: COMMENTS ON THE HÄ'ENA STATE PARK MASTER PLAN  
DRAFT ENVIRONMENTAL IMPACT STATEMENT (EIS),  
HÄ'ENA, KAUAI, HAWAII**

Aloha Mr. Andrew,

Mahalo nui for your emailed comment dated August 17 and August 18, 2015 regarding the Hä'ena State Park Master Plan Draft Environmental Impact Statement (EIS). We sincerely apologize for the delay in responding. Due to the feedback received on the Draft EIS, the State of Hawai'i, Department of Land and Natural Resources, Division of State Parks (State Parks) has worked on revising the master plan with a reorganized Hä'ena State Park Community Advisory Committee (HSPCAC) to address the concerns voiced by the larger community. As a result, the master plan presented in the Final EIS has been updated based on the feedback received from the public meetings, comments received, and subsequent extensive collaboration with the HSPCAC. As the planning consultant for State Parks, we offer the following responses to your comments.

We recognize your comments regarding the cost of funding the Hä'ena State Park Master Plan. The timing of implementation of the proposed Master Plan is subject to CIP budget requests submitted by State Parks and approvals granted by the State Legislature. The Master Plan itself is an effort by State Parks to improve funding of coastal recreational planning and management. Completion of the plan and Chapter 343, HRS processing will enable State Parks to move forward with capital improvement projects to improve coastal recreation at the park.

We also recognize your concerns regarding an elevated boardwalk. The boardwalk has been modified in the revised master plan. The new pedestrian pathway follows along the first berm of the lo'i closest to the highway and is proposed to be slightly elevated so as not to impact the berm or any of the historic resources. Please see the "Pedestrian Path" attachment from Section 2.5.1.4 of the Final EIS, and the revised Figure 1 Master Plan graphic, that show the verbatim changes from the Draft EIS.

Mahalo nui for your input and participation in the environmental review process. Your letter will be included in the Final EIS. If you would like a copy of the Final EIS or portions thereof, please let us know. Otherwise, the electronic copy of the Final EIS will be available on the Office of Environmental Quality Control website at [http://oeq2.doh.hawaii.gov/EA\\_EIS\\_Library/2018--KA-Haena-State-Park-Master-Plan.pdf](http://oeq2.doh.hawaii.gov/EA_EIS_Library/2018--KA-Haena-State-Park-Master-Plan.pdf) on 8/20/2018.

THOMAS WITTEN, FASLA  
Chairman / Principal

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President / Principal

RUSSELL Y. J. CHUNG, FASLA, LEED® AP BD+C  
Executive Vice President / Principal

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Aloha,

Kimi Mikami Yuen, LEED AP BD+C  
Principal

Attachments: Pedestrian Path  
Figure 1: Master Plan

cc: The Honorable David Y. Ige, Governor  
Office of Environmental Quality Control  
Board of Land and Natural Resources  
Division of State Parks

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management plan for Haena State Park - ISI.docx

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**Nathalie Razo**

**From:** Edward Dato <eddato@me.com>  
**Sent:** Thursday, September 03, 2015 1:24 PM  
**To:** Kimi Yuen  
**Subject:** Re: Haena Beach Park

Aloha, Ms. Yuen,

I decided to not try to find you after the meeting as you had more than enough to handle. First of all, congratulations on the professional way that you handled yourself during the meeting. As to be expected, there were a lot of heated opinions about what might happen at the end of the road. I suspect that a lot of people who are unfamiliar with the process that your organization has to follow, didn't understand that this was an EIS and not a clear directive to take specific action. In any event, I have been giving this matter a lot of thought. As a mediator, I believe that any outcome has the greatest chance of success if no one likes the outcome but everyone agrees they can live with it. Then people will adjust their lives and get on with living them.

I have some ideas about possible solutions and in the interest of brevity, I will number them below rather than write a narrative.

1. It seems like the problem of "too many people at any one time" trying to access the "end of the road" at the same time is the problem to solve. And the majority of the volume is from tourists, which is an important revenue stream for Kauai.
2. If there are two thousand people daily, then there must be 2,000 seats for people to sit in to get to the beach.
3. At 2 people per car that is 1,000 cars daily. Shuttles plus 100 parking places are not going to stop the stream of cars that cause wear and tear on the bridges and Kuhio highway, none of which was designed for this density of use. And then there is road and bridge rage, which we are experiencing more and more of it.
4. Fortunately, the road and bridges from the Hanalei bridge to the end of the road are protected on the national registry. Changing them is not an option, thank goodness.
5. As I live nearby on Alanihi Road and occasionally walk to the end of the road, almost 100% of the cars and people are tourists and hikers, permitted or not, who park there for the duration of their hike. Residents are not causing the volume.
6. I understand that you cannot preferentially treat residents as the land is a state park.
7. This problem has been encountered in other areas, both state and federal, and we might benefit from their operations.
8. Muir Woods, north of San Francisco, has a very small parking lot that is accessed by a winding road off of Highway 101, the main north-south corridor. There are electric signs up every weekend (we could have them operational on a daily basis) saying that the parking lot is full and to take the shuttle busses. Over time, people learn to not bother driving to Muir Woods although there is a small parking lot that is used mostly by the handicapped with appropriate handicap signage. By having a finite number of bus seats, that, by definition limits the number of bodies who can gain access to Muir Woods. It is easily scaled to meet variable demand. Alter the number of available shuttles. Also, take a look at the way Yosemite handles it. They have the same problems as we do.
9. In essence, run shuttle busses from Princeville to the drop off turnaround at Kee Beach. That is the way to get to the end of the road unless you want to walk or ride a bike. No motorized vehicles at the end of the road except authorized shuttles unless you have to provide handicap parking. Given the real problem is the number of tourists and hikers who want to go there, you can control the attendance by increasing or decreasing the number of shuttles that are run. Charge \$3 roundtrip for each shuttle seat, credit card only, and have an attendant at the loading station in Princeville. Mobile technology makes this easy. If the airlines can do it with

in flight purchases, so can we. That is a reasonable cost and will help offset the cost of operating shuttles. Parking and tipping at any valet restaurant parking is that amount or more. That small charge won't discourage anyone. There can be no more bodies on the shuttle than there are seats on the shuttle. And yes, sometimes you don't the shuttle you want at the exact time you want it. That is very typical of life in the real world. And there is a first and last shuttle start and stop time and a last shuttle going to Kee. That way you can ensure that you have enough seats to get people out. Miss the last shuttle, you walk.

11. Post a sign at the shuttle site that the trail is open or not. Many people drive to the end of the road only to be disappointed that the trail is closed. And some of them head up anyway. Control that safety risk and rescue exposure at the shuttle point in Princeville.

12. By controlling the number of shuttle seats you, by definition, control the number of visitors to the end of the road. You could consider allowing the local hotels (St. Regis and Westin) to run their own shuttles. I have seen Hanalei Colony resort shuttle people now and then. And all permitted hikers and campers must shuttle. That is their only option.

13. What about all of the road hazards caused by people parking along side of the road and walking in? Experience learned in San Francisco is useful. Each neighborhood has a multiyear parking zone designation that can only be purchased (at a very nominal cost) and issued to legal property owners in that neighborhood. No street parking is allowed in that area without a residential parking sticker. And San Francisco makes a lot of money from the +\$67 tickets that they issue. Helps pay the cost of enforcement and the city's bills. Maybe use 96714 zip code as the area. Install and enforce (current "no parking" is rarely enforced and often ignored) "no off road parking" without a residential sticker starting a Alahimi Road in Haena. If someone can find parking before Alamihi Road and wants to walk the approximate 4 miles round trip to the end of the road, more power to them. Limiting the number of cars will help maintain safety for walkers and residents which is one of your charters and interests.

14. I am not qualified regarding maintaining the environment to comment on whether the proposed additions and changes are environmentally sound and culturally sensitive. There are those who are on your committee.

Don't set up a system to make changes in the size of the parking lot based on some arguable usage figures. You will never get this problem fixed. Define the number of available shuttle seats that support the objective to be culturally and environmentally sensitive and as safe for all visitors. If you do this I believe that you will accomplish your stated goals

Mahalo for reading my ideas.

Ed Dato  
[eddato@me.com](mailto:eddato@me.com)  
please use my off island office mailing address  
8114 Forest Mesa Drive  
Austin, TX 78759

On Aug 18, 2015, at 4:48 AM, Kimi Yuen <[kyuen@pbrhawaii.com](mailto:kyuen@pbrhawaii.com)> wrote:

Mahalo, Mr. Dato. Please come talk to me at the meeting on Wednesday. There will be time after the presentation to talk. It'd be an honor to meet you.

Mahalo,  
Kimi

-----Original Message-----  
From: Edward Dato [<mailto:eddato@me.com>]  
Sent: Monday, August 17, 2015 7:29 PM  
To: Kimi Yuen <[kyuen@pbrhawaii.com](mailto:kyuen@pbrhawaii.com)>

2

Subject: Re: Haena Beach Park

While my street address is 7169 Alamihi Road Haena, I get mail as follows:

Ed Dato  
C/O Angela Fish  
4760 Waiakalua St.  
Kilauea HI 96754  
United States of America

Thank you and good luck on this project. I hope to meet you at the meeting Wednesday night.

Mahalo

Ed Dato  
[eddato@me.com](mailto:eddato@me.com)

On Aug 17, 2015, at 5:33 PM, Kimi Yuen <[kyuen@pbrhawaii.com](mailto:kyuen@pbrhawaii.com)> wrote:

Mahalo, Mr. Dato, for your comments on the Hā'ena State Park Draft Environmental Impact Statement (EIS). We appreciate time taken to submit them.

In order to comply with State law (Section 343-5(e)(3), Hawaii Revised Statutes), we must respond in writing. If you would be so kind as to forward your physical mailing address, we will respond to your comments and include them in the Final EIS.

Mahalo!  
Kimi Yuen  
PBR Hawaii & Associates, Inc.

-----Original Message-----  
From: Edward Dato [<mailto:eddato@me.com>]  
Sent: Monday, August 17, 2015 10:11 AM  
To: Lauren A. Tanaka<[hawaii.gov](mailto:hawaii.gov)>  
Cc: Kimi Yuen <[kyuen@pbrhawaii.com](mailto:kyuen@pbrhawaii.com)>  
Subject: Haena Beach Park

I own my home in Haena and like to go to the end of the road or HBP from time to time. How do intend to determine who is a local property owner and exempt from this restriction. The logistics of enforcing this proposal seem daunting. Do you have a gate? Police? In Hanalei so people don't waste their time driving to the end of the road after it is full? Where do people turn their cars around if the quota is exceeded?

While this seems on the surface to be an enforcement nightmare, I am hopeful you have details ready for the meeting.

Thank you.

3

Ed Dato  
eddato@me.com  
808-826-1696

Aloha

Edward Dato  
[eddato@me.com](mailto:eddato@me.com)



Month XX, 2018 - DRAFT

Mr. Ed Dato  
c/o Angela Fish  
4760 Waiakalua Street  
Kilauea, HI 96754

THOMAS WITTEN, FASLA  
*Chairman / Principal*

R-SEAN BUNGAN, ASLA  
*President / Principal*

RUSSELL Y. J. CHUNG, FASLA, LEED® AP BD+C  
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*Senior Associate*

DACHENG DONG, LEED® AP  
*Senior Associate*

SCOTT MURAKAMI, ASLA, LEED® AP  
*Associate*

MICAH MCMILLIN, ASLA, LEED® AP  
*Associate*

NATHALIE BAO  
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**SUBJECT: COMMENTS ON THE HĀ'ENA STATE PARK MASTER PLAN  
DRAFT ENVIRONMENTAL IMPACT STATEMENT (EIS),  
HĀ'ENA, KAUA'I, HAWAII**

Aloha Mr. Dato,

Mahalo nui for your emailed comments dated August 17 and September 3, 2015 regarding the Hā'ena State Park Master Plan Draft Environmental Impact Statement (EIS). We sincerely apologize for the delay in responding. Due to the feedback received on the Draft EIS, the State of Hawai'i, Department of Land and Natural Resources, Division of State Parks (State Parks) has worked on revising the master plan with a reorganized Hā'ena State Park Community Advisory Committee (HSPCAC) to address the concerns voiced by the larger community. As a result, the master plan presented in the Final EIS has been updated based on the feedback received from the public meetings, comments received, and subsequent extensive collaboration with the HSPCAC. As the planning consultant for State Parks, we offer the following responses to your comments.

In regards to your email on August 17, we have the following responses. For your comment regarding identification of local residents, entry fees for state parks are established by Hawai'i Administrative Rules (HAR) 13-146-6, at the rate of \$5/car or \$1/person. HAR 13-146-6 also states that Hawai'i residents are exempt from paying park entry fees if they can show a valid Hawai'i ID. Similar fees could be instituted at Hā'ena State Park; however, State Parks will continue to work on the different options with the advisory committee. A new vehicle gate is recommended to be installed at the park entry when the highway is transferred to State Parks. Only those with special access to Kē'ē, such as the lifeguards and rescue personnel, those with valid ADA parking placards or plates, park staff, the Hula Complex and other cultural practitioners, will be allowed to drive along the former highway as needed to reduce visitor exposure to the rockfall hazards. A vehicle turnaround is provided just past the park entry and provides separate accesses to and from the main parking lot, as well as the special access parking at Kē'ē, and a separate staging area that could be used for various park purposes. The turnaround is designed to include the shuttle stop and/or bus stop if/when such services become available and allow those dropping off visitors to pull over at the curb without blocking traffic. Please see the "Park Entry" attachment from Section 2.5.1.1 of the Final EIS, which shows the verbatim changes from the Draft EIS for this section.



Mahalo for your complimentary comments in response to the public meeting held on August 19, 2015. We have addressed the remainder of your comments as you have numbered them in your letter:

1, 2, 3, & 13. We recognize your comments on managing the volume of visitors seeking access to Hā'ena State Park, the resulting impact on the road infrastructure, as well as your concern that the proposed main parking lot expansion and potential shuttle service will not be sufficient. The revised master plan proposes the 900-person visitor limit as an initial number which can be adaptively managed and adjusted as appropriate, especially if there continues to be unwanted impacts at the park. If there continue to be issues, State Parks will work with the advisory committees on adjusting the number. As the State has more time to analyze user patterns, other options can be explored over time, and they are actively engaged in discussions regarding parking enforcement and increased fines along the roadway outside of the park as well. The limits will be instituted during peak hours of park use. The main parking lot is proposed to be separated into a fee-paying lot and non-fee-paying lot, which will also be adjusted daily to allow flexibility depending on future demand for parking and the potential use of the proposed shuttle. Please see the "Visitor Limits" attachment from Section 2.5.4.3 of the Final EIS, which shows the verbatim changes from the Draft EIS for this section.

The Master Plan includes a combination of physical improvements and programmatic options that when applied in combination will have a positive impact on the existing roadway conditions.

Vehicle access beyond the main parking area to Kē'e beach is proposed to be reduced from the currently unrestricted conditions to special access only (ADA, lifeguards, and cultural practitioners). Restricting general vehicular access from the main parking area to Kē'e Beach will effectively eliminate illegal parking along the highway's shoulder, reduce the wear on the historic roadway's macadam surface, and reduce the number of visitors traveling in a potential rockfall hazard area. Please see the "Roadways and Traffic" attachment from Section 4.3.1 of the Final EIS, which shows the verbatim changes from the Draft EIS for this section.

4. The road and bridges from Hanalei bridge to the end of the road are not part of the scope of the master plan. However, the park will continue to discuss coordination efforts regarding roadways and traffic with the State Department of Transportation where applicable.

5, 6, 7, 8, 9, 12. We also acknowledge your comments regarding the amount of tourists and hikers using the park, and your recognition of the inability to provide preferential access to local residents. Entry fees for state parks are established by Hawai'i Administrative Rules (HAR) 13-146-6, at the rate of \$5/car or \$1/person. HAR 13-146-6 also states that Hawai'i residents are exempt from paying park entry fees if they can show a valid Hawai'i ID. Similar fees could be instituted at Hā'ena State Park, however, State Parks will continue to work on the different options with the advisory committee. Other categories of fee exempt park users (such as registered volunteers) may be established at a later time.

We recognize your suggested examples for parking and shuttle service options. The new main parking lot improvement is intended to alleviate the strain on current parking demand along with facilities designed to support the recommended shuttle service proposed. The revised plan includes designated exemptions from park entry fees as well, and the main parking lot will be separated into a fee-paying lot and non-fee-paying lot, which will also be adjusted daily to allow flexibility depending on future demand for parking and the potential use of the proposed shuttle. The revised plan also proposes notification to be available online, including where potential ticketing is provided. As noted in your comments, access to Kē'e Beach will be restricted with exemptions for special users such as ADA permitted vehicles and the primary access for visitors is proposed for the new main parking lot.

We also acknowledge your comments suggesting shuttle service coordinated with resorts and annual parking zone passes. Parking enforcement and regulation is proposed to be managed from the park entry near the main parking lot. While we recognize your concern for a proposed flexibility in parking lot access and alternative focus on shuttle regulation, adaptive management has been proposed as a key management application to parking provisions in addition to a proposed shuttle service. The proposed third-party shuttle service has been analyzed as a part of the project's traffic impact assessment report, included in the EIS as Appendix F. The preferred scenario is to implement a third-party shuttle from the Princeville facility at the start of Phase I, minimizing the need for visitor parking in the parking lot in the park. Please see the "Parking" and "Shuttle Service" attachments from the Final EIS, which show the verbatim changes from the Draft EIS for these sections.

11. We recognize your comment regarding trail closures and safety risks at the park entry. As stated previously in the letter, a new vehicle gate is recommended to be installed at the park entry when the highway is transferred to State Parks. Only those with special access to Kē'e, such as the lifeguards and rescue personnel, those with valid ADA parking placards or plates, park staff, the Hula Complex and other cultural practitioners, will be allowed to drive along the former highway as needed to reduce visitor exposure to the rockfall hazards.

14. We recognize your comment regarding environmental and cultural sensitivity of the master plan. While there will continue to be some human impact on the environment at the park, the proposed Master Plan seeks to minimize the adverse impacts of that use by reducing the number of people who visit the park during peak visitor hours, reducing traffic and congestion along the highway, improving wastewater treatment and reducing potable water use, reducing solid waste and preventing pollution, reducing the quantity and improving the quality of surface runoff, and improving visitor education. In regards to the involvement of cultural sensitivity, one of the key management recommendations is to establish a permanent Cultural Advisory Group and Community Advisory Committee. These are described in Section 2.5.4.2 of the EIS and the verbatim description of these groups is included in the "Cultural and Community Advisory Group" attachment.

Mr. Ed Dato  
SUBJECT: COMMENTS ON THE HA'ENA STATE PARK MASTER PLAN DRAFT ENVIRONMENTAL  
IMPACT STATEMENT (EIS), HA'ENA, KAUAI, HAWAII  
Month XX, 2018  
Page 4

Mahalo nui for your input and participation in the environmental review process. Your letter will be included in the Final EIS. If you would like a copy of the Final EIS or portions thereof, please let us know. Otherwise, the electronic copy of the Final EIS will be available on the Office of Environmental Quality Control website at [http://oeq2.doh.hawaii.gov/EA\\_EIS\\_Library/2018-04-04-FEIS-Haena-State-Park-Master-Plan.pdf](http://oeq2.doh.hawaii.gov/EA_EIS_Library/2018-04-04-FEIS-Haena-State-Park-Master-Plan.pdf) on 04/04/2018.

Aloha,

Kimi Mikami Yuen, LEED AP BD+C  
Principal

Attachments: Park Entry  
Visitor Limits  
Roadways and Traffic  
Parking  
Shuttle Service  
Cultural and Community Advisory Group

cc: The Honorable David Y. Ige, Governor  
Office of Environmental Quality Control  
Board of Land and Natural Resources  
Division of State Parks

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Haena Beach Park - DS.docx

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**Nathalie Razo**

**From:** Lauren.A.Tanaka@hawaii.gov  
**Sent:** Tuesday, August 18, 2015 5:45 PM  
**To:** Kimi Yuen; Nathalie Razo; Catie Cullison  
**Subject:** Fw: allow only certain cars at a day

----- Forwarded by Lauren A Tanaka\DLNR\State\HUS on 08/18/2015 05:44 PM -----

From: Kauliady1@aol.com  
To: lauren.a.tanaka@hawaii.gov,  
Date: 08/01/2015 07:46 AM  
Subject: allow only certain cars at a day

---

only allow cars with the last number or letter K on Mondays and so on ... for visitors.  
that way at least half instead an onslaught . also parking fifteen dollar a day .  
get a grip on gridlock doesn't cost a big deal.

thanks for listening



THOMAS WITTEN, FASIA  
Chairman / Principal

R-SEAN DUNCAN, ASIA  
President / Principal

RUSSELL Y. J. CHUNG, FASIA, LEED® AP BD+C  
Executive Vice President / Principal

VINCENT SHIGEKUNI  
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GRANT T. MURAKAMI, AICP, LEED® AP BD+C  
Vice President / Principal

TOM SCHNELL, AICP  
Principal

KIMI MIKAMI YUEN, LEED® AP BD+C  
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W. FRANK BRADY, FASIA  
Chairman Emeritus

ANN MIKAO BERNHARDT, PhD  
Project Director

RAMAN E. M. TAUM  
Cultural Sustainability Planner

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Senior Associate

GATE CULLISON, AICP  
Senior Associate

MARC SHIMATSU, ASIA  
Senior Associate

DACHENG HONG, LEED® AP  
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SCOTT MURAKAMI, ASIA, LEED® AP  
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PLANNING • LANDSCAPE ARCHITECTURE • ENVIRONMENTAL STUDIES • ENTITLEMENTS / PERMITTING • GRAPHIC DESIGN

Kauilady1@aol.com

SUBJECT: COMMENTS ON THE HĀ'ENA STATE PARK MASTER PLAN DRAFT ENVIRONMENTAL  
IMPACT STATEMENT (EIS), HĀ'ENA, KAUA'I, HAWAII

Month XX, 2018

Page 2

Aloha,

Kimi Mikami Yuen, LEED AP BD+C  
Principal

Attachments: Adaptive Management  
Parking  
Visitor Limits

cc: The Honorable David Y. Ige, Governor  
Office of Environmental Quality Control  
Board of Land and Natural Resources  
Division of State Parks

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SUBJECT: COMMENTS ON THE HĀ'ENA STATE PARK MASTER PLAN  
DRAFT ENVIRONMENTAL IMPACT STATEMENT (EIS),  
HĀ'ENA, KAUA'I, HAWAII

Aloha Kauilady1@aol.com,

Mahalo nui for your emailed comment dated August 1, 2015 regarding the Hā'ena State Park Master Plan Draft Environmental Impact Statement (EIS). We sincerely apologize for the long delay in responding. Due to the feedback received on the Draft EIS, the State of Hawai'i, Department of Land and Natural Resources, Division of State Parks (State Parks) has worked on revising the master plan with a reorganized Hā'ena State Park Community Advisory Committee (HSPCAC) to address the concerns voiced by the larger community. As a result, the master plan presented in the Final EIS has been updated based on the feedback received from the public meetings, comments received, and subsequent extensive collaboration with the HSPCAC. As the planning consultant for State Parks, we offer the following responses to your comments.

We recognize your concerns regarding parking and limitations on the number of visitors accessing the park, as well as potential parking fee rates. The revised master plan calls for an adaptive management approach for both the parking and the proposed visitor limits, which will be adjusted based on an average number of visitors rather than a set limit per day. The main parking lot is proposed to be separated into a fee-paying lot and non-fee-paying lot, which will also be adjusted daily to allow flexibility depending on future demand for parking. Please see the "Adaptive Management", "Parking", and "Visitor Limits" attachments from the Final EIS which show the verbatim changes from the Draft EIS for these sections.

Mahalo nui for your input and participation in the environmental review process. Your letter will be included in the Final EIS. If you would like a copy of the Final EIS or portions thereof, please let us know. Otherwise, the electronic copy of the Final EIS will be available on the Office of Environmental Quality Control website at [http://oeqc2.doh.hawaii.gov/EA-EIS\\_Library/2018--KA-EIS-Haena-State-Park-Master-Plan.pdf](http://oeqc2.doh.hawaii.gov/EA-EIS_Library/2018--KA-EIS-Haena-State-Park-Master-Plan.pdf) on [Month XX, 2018](#).

Nathalie Razo

**From:** Love Rainbow <lrbobo@hotmail.com>  
**Sent:** Tuesday, September 08, 2015 10:50 AM  
**To:** Kimi Yuen; lauren.a.tanaka@hawaii.gov  
**Cc:** Brittany  
**Subject:** Ha'ena State Park Master Plan Comments  
**Attachments:** B&B Public Comment (Final Draft)-2.pdf

Aloha,  
Attached please find our comments regarding the Ha'ena State Park Master Plan.  
Mahalo,  
Love Bernheim

**DATE:** September 6, 2015  
**TO:** Kimi Yuen  
PBR Hawaii & Associates  
Lauren Tanaka  
Department of Land & Natural Resources  
**FROM:** Love R. Bernheim & Brittany E. Beers  
**SUBJECT:** Concerns regarding the Draft Environmental Impact State (DEIS) &  
Proposed Final Draft Ha'ena State Park Master Plan (MP)

It is apparent that extensive time, effort, and resources went into the creation of this plan, and for that we acknowledge all parties who have been involved over the years and extend our appreciation to those seeking to uphold, protect, and restore the cultural, historical, and ecological significance of Ke'e. Due to the massive size and scope of the MP, the deadline for public comment needs to be extended for a minimum of 60 days. Furthermore, negligence to include Appendix I (Background Research Report) in both the hardcopy of the MP purchased and the electronic version, contributes to the inability for a comprehensive review and comment. Concerns regarding park management, Land and Water Conservation Fund (LWCF) requirements, non-committal language, cost estimates, and the criteria and processes by which committees are established provides great potential for the implementation of a plan that is in direct opposition to what are very respectable goals and visions as laid out in Section 1.3. After extensive, but not exhaustive, review and examination of the DEIS and MP, the following is a list of specific concerns:

1. **Park Management**

"The MPAC [Master Plan Advisory Committee] is aware that they need to develop the capacity within the community to qualify in an open bid process as State Parks would release park management opportunities to the public pursuant to existing procurement requirements.... the management entity has to be financially solvent and able to prepare and execute a solid business plan (4.2)."

Submitting the management of Ha'ena State Park to an open-bid process creates the possibility for an outside management entity, potentially one not even registered or founded on Kaua'i or with little to no Ha'ena community involvement, to be placed in a position that allows and promotes the commodification of living cultural practices via tickets, recreational equipment rentals, food service operations/vendors, and a gift shop retailer.

**Suggestions/Questions:** Rather than subject management of Ha'ena State Park to an open-bid



process, have significant oversight and management occur through a partnership or lease agreement with the lineal descendants of Ha'ena. What are the existing procurement requirements?

## 2. Land and Water Conservation Fund

Creative solutions to circumvent LWCF requirements, such as volunteer and cultural practitioner exclusion in visitor caps, is problematic. The visitor industry could certainly promote "Volunteer Days" and bring vans full of "volunteer" visitors. Additionally, local community members are blended in ethnicity and cultural heritage, so defining who qualifies as a "cultural practitioner" is logistically unfeasible.

Furthermore, in regards to LWCF compliance, National Park Services (NPS) commented in correspondence with the Department of Land and Natural Resources (DLNR) that "...some changes to the park's use reflect contemporary sensitivities to cultural resources and the sensitive shoreline ecosystem..." (2.4.1.2)". This statement, however, is in direct contradiction to the MP's discussion of Community Character wherein it is "not recommending a change in the use of the Park... [and] is not anticipated to have any effect on the rural community character of the area nor impact the population characteristics (1.0)."...

**Suggestions/Questions:** Is the park's use changing or not changing? Is it accurate to claim that the rural community character of the area will remain unaffected? Many voices within the community have expressed opposition to a gate. With no gate, there will be no access limits; parking is, and will continue to be, self-limiting. Given that the Hula Complex is under Kaua'i County jurisdiction, it is unclear how the LWCF requirements impact this area, and if these same requirements apply to Wai a Kanaloa, Waiakapala'e, Lohi'au's house site, and Maniniholo given the County of Kaua'i received these parcels after John Allerton and Paul Rice filed for partition and dissolution of the Ha'ena Hui. There are also questions regarding the potential for the Pacific Tropical Botanical Garden (PTBG) to acquire County lands and specifics to the Allerton title condition and whether the condition was transferred to the County along with the title (4.1).

"The County was tasked with the maintenance and preservation of these sites for the general public. Disregard for this meant automatic transfer of the sites to the [PTBG].

Title to another parcel was given to Allerton with the condition that he maintains and preserves a five-foot wide path for public access to the heiau and hula site. Upon his death or conveyance of property, title would automatically transfer to the County (4.1)."

## 3. Non-Committal Language

"State Park acknowledges that Park access will be an ever-evolving operational issue and will *likely change* over time as new policies are implemented (1.9.1)."

"Initially, State Parks plans to assess an entry fee per person with Hawai'i residents exempt, to enter the park regardless of how they arrive at the park (4.3.5)."

"The following criteria and process are suggested as an appropriate way to select individuals who can serve effectively as cultural advisors to Ha'ena State Park but are *subject to change* (Appendix J)."

These phrases of "will likely change", "initially", and "subject to change" appear to subject the community to implicit approval of any and all future changes.

**Suggestions/Questions:** These statements speak to a larger issue within the document which uses loose language throughout and is lacking in an overall solid foundation, and thus, if several aspects of the plan will "likely change" or are "subject to change", the proposal becomes more of a work in progress than an actual plan. Moreover, should these changes be carried forth, how will these changes be communicated to the community? Are the implementation of these changes the responsibility of the committee members (whose selection process is "subject to change" as well)?

## 4. Cost Estimates

Including contingency fees and expenses for planning and design, the cost of this plan has been estimated at approximately \$10,000,000. Justifications for the implementation of this incredibly expensive plan include overcrowding, traffic congestion, rock fall hazards, and lack of visitor awareness and education.

## A. Overcrowding

Visitorship during off-season months is, at times, half of what the visitor count is during peak season (4.1.2). A 900 per day visitor limit will therefore only reduce visitor impact during the peak summer season. Rather than year-round visitor limits, a parking attendant can be employed during peak season to mitigate parking and traffic congestion.

## B. Traffic

As it stands, the nature of traffic is undeniably congested during peak season. This issue, however, is not exclusive to Ha'ena State Park. The island as a whole is experiencing a growing traffic concern that cannot and will not be solved at the end of the road.

Solutions for this traffic concern are outside the scope and duties of State Parks and to use the issue of traffic as grounds for State Parks funding is illegitimate. The MP will exasperate and subsequently burden neighboring communities as far as Princeville with the onus of overflow. There is an overwhelming consensus for a North Shore shuttle program to assist in the alleviation of traffic concerns.

## C. Rock Fall Hazard

Based on a preliminary analysis of other parks and Department of Transportation rock fall hazard studies nationwide, a 5% risk associated with rock fall is often considered acceptable and is frequently the *goal* of mitigation measures. The MP is aiming for a 0%

rock fall risk, which comes with a hefty \$557,000 price tag due to the suggestion that a 675' interpretive path be constructed (2.7 & 2.5.1.2).

The Rock Fall Hazard Assessment (Appendix B) indicates sections of the road currently in use as having Class A and Class B rock fall risks; in which case, implementation of the MP restricts this section of the road for "limited access only" (lifeguards, hula practitioners, family caretakers, and ADA vehicles 3.2.8) and will therefore still have traffic traversing this "risky" part of the road. It is to be noted that "cultural practitioner" is omitted from this section and is inconsistently integrated in the mentioning of those allowed on the limited access corridor. What then, makes it acceptable to allow these special access vehicles to travel along a rockfall hazard area and not other visitors? Signage indicating "Enter at Your Own Risk" or the implementation of "hold-harmless" liability waivers prior to park entry has the potential to eliminate litigious after-effects.

#### **D. Visitor Awareness/Education**

Cultural and ecological awareness is notably lacking amongst visitors that arrive to the island. Education prior to their arrival at Ke'e is preferred and this can be achieved through videos on planes, brochures at the airport, in hotels, and in the visitor destination area of Princeville. A 2,000sq. ft. \$1,000,000 Educational and Cultural Center (ECC) is beyond what is needed. A sustainably constructed traditional-style hale with interpretive signage is likely to be sufficient.

#### **5. Committees & Sub-Committees**

It is noted that although the formulation of a number of committees (MPAC, the Hui Maka'ainana O Makana, Cultural Advisory Group [CAG], and Selection Committee for CAG) was most likely an attempt by the State to account for cultural perspectives and maximize input, there is a high-rate of overlap between the MPAC, the Hui, and potentially the CAG. More so, the nomination and appointment of CAG members by the Selection Committee convolutes matters further, for who is it that establishes and selects the members for the Selection Committee? Lastly, the suggested criteria and process by which such individuals are selected is also "subject to change". Formulation of these committees is no guarantee that the State or County will heed all and/or any advice.

It seems pertinent to indicate that despite the establishment of these committees to potentially alleviate the burden of power, instill a system of checks and balances, and/or create a greater sense of involvement amongst the community, the State remains the ultimate governing power as they will "train CAG members on duties/responsibilities" (7.1.1) and determine "protocols for holding meetings, meeting schedules, level of commitment, and participation (7.1.1)." Provided the State's tumultuous history with the Kanaka Maoli, it would be wise of these committees to be discerning.

#### **SUMMARY**

Restoration of the land is undeniably needed and we do not stand in opposition to such, given said tasks are approved and executed by the lineal descendants of Ha'ena. With the time constraints provided, our comments do not fully address the positive aspects or possible solutions to the issues of this plan nor do they address the entirety of our concerns, but are more focused on areas of inconsistencies and contradictions, especially where these issues conflict with the implementation of the MP's stated goals and the overall way of life that sustains the community of Ha'ena.

We are particularly concerned with the negative ramifications that will result with the construction of a gate, the exorbitant project cost, the commodification of living cultural practices, development on conservation lands (interpretive path, ECC, and Caretaker's Cottage), and the rippling effect visitor limits will impose on neighboring reefs, beaches, and residential areas that are already functioning at over-capacity levels. It can be said that extension of the public comment period is necessary to allow the community to further examine this dauntingly large document and devise solutions that aspire to be consistent with the sustainable lifestyle practices perpetuated for over a thousand years. More so, it is essential that the restoration and preservation of Ke'e is carried out in such a manner that does not compromise the voice of the Kanaka Maoli.

Thank you for hearing our concerns.

Love R. Bernheim

PO Box 129

Hanalei, HI 96714

Brittany E. Beers

PO Box 635

Hanalei, HI 96714



Ms. Love R. Bernheim  
P.O. Box 129  
Hanalei, HI 96714

Ms. Brittany E. Beers  
P.O. Box 635  
Hanalei, HI 96714

**SUBJECT: COMMENTS ON THE HĀ'ENA STATE PARK MASTER PLAN  
DRAFT ENVIRONMENTAL IMPACT STATEMENT (EIS),  
HĀ'ENA, KAUA'I, HAWAII**

Aloha Ms. Bernheim and Ms. Beers,

Mahalo nui for your emailed letter dated September 6, 2015 regarding the Hā'ena State Park Master Plan Draft Environmental Impact Statement (EIS). We sincerely apologize for the delay in responding. Due to the feedback received on the Draft EIS, the State of Hawai'i, Department of Land and Natural Resources, Division of State Parks (State Parks) has worked on revising the master plan with a reorganized Hā'ena State Park Community Advisory Committee (HSPCAC) to address the concerns voiced by the larger community. As a result, the master plan presented in the Final EIS has been updated based on the feedback received from the public meetings, comments received, and subsequent extensive collaboration with the HSPCAC. As the planning consultant for State Parks, we offer the following responses to your comments.

We appreciate your kind words regarding the effort that has gone into the plan. We recognize your comment regarding the deadline for public comment for the EIS. The public comment period was extended an additional 30 days until October 8, 2015. We apologize for the missing Background Research Report. It has been uploaded to the State Parks Hā'ena State Park website: <http://dlnr.hawaii.gov/dsp/parks/kaui/haena-state-park/>. The revised master plan has been greatly simplified and the full report is also available for download at this website. We have attached a summary of the updated master plan and Figure 1 showing the master plan graphic from the Final EIS. We recognize your concerns regarding the following issues and have organized our responses to match your letter.

**1. Park Management**

We understand your concerns regarding the open bid process and potential for commodification of the park. The third-party lease of the entire park was a potential option explored by the original Master Plan Advisory Committee (MPAC) for park management. State procurement laws regarding such lease agreements are governed by Chapters 102 and 103D, Hawai'i Revised Statutes (HRS). However, one of the key management recommendations of the master plan will be to establish a Cultural Advisory Group and Community Advisory Committee to advise State Parks as they move forward with implementation of the plan and ongoing management of the park regardless of the future management structure of the park. Lineal descendants would be included in these advisory groups and therefore able to advise State Parks in the ongoing management of the park. In addition, State Parks has entered into additional curatorship agreements with Hui Maka'ānana o Makana (the "Hui") to care for additional areas of the park including expanded lo'i restoration areas and the Allerton Caretaker's Cottage. The County of Kaua'i has also entered into an agreement with the Hui to maintain their property, which contains Ka Ulu A Paoa Heiau.

**2. Land and Water Conservation Fund (LWCF)**

To clarify, the volunteer recommendations and cultural practitioner exceptions would be for the daily visitor limits and not the Land and Water Conservation Fund (LWCF) requirements. State Parks must strictly abide by the LWCF requirements. The County of Kaua'i parcel is not impacted by the LWCF requirements and is owned and managed by the County and we understand that the County has entered into an agreement with the Hui to maintain the site. The surrounding State lands including the area of Wai a Kana'oa, Waiaikapala'e, and Lohi'au's house site are subject to the LWCF requirements. The proposed park uses have been reviewed by the NPS and were found to be in compliance with LWCF requirements as set forth by U.S. Code of Federal Regulations, Title 36, Part 59, Section 6(f) as well as with the original intent of park acquisition, which included the state's commitment to develop opportunities for "swimming, fishing, picnicking, camping, and other beach-oriented recreation opportunities" (LWCF Agreement, 1972). NPS commented in their letter dated June 6, 2014 (EIS Section 11.0) that the draft Master Plan for the park shows:

*"some changes to the Park's use [that] reflect contemporary sensitivities to cultural resources and the sensitive shoreline ecosystem...The recreation opportunities include a variety of ocean recreation, walking, picnicking, nature viewing, sight-seeing, and interpretive exhibits with the potential for camping and bicycling. These provide assurance that the 'public beach park' qualities that make this a valuable LWCF park are planned for the future."*

The NPS letter also describes the restoration of the agricultural terraces as a "community gardening area." In order to remain compliant with LWCF requirements, NPS states:

*"The Master Plan draft also shows that the park will encompass a significant community gardening area with the proposed restoration of the lo'i kalo (wetlands). Although such an area is unusual within a state park and more common in local parks, such areas are not out of compliance with LWCF requirements. Community gardens are allowed in LWCF-protected parks with the understanding that they are accessible to the general public in an equitable manner and are not intended for any private or commercial use...Maintaining such a practice with an interpretive/educational component is clearly consistent with several goals within the 2008 SCORP...It is advisable to include trails and interpretive opportunities to ensure all members of the public – including visitors from afar and anyone not engaged in the community garden activities – can still understand what is happening there, the cultural significance, and generally not feel excluded from this public place...any agricultural goods harvested within the community garden areas should be generally for park programs and personal use and not part of a formal commercial or for-profit farming organization."*

The Pedestrian Path which takes visitors safely through the lo'i and the proposed community work days in the lo'i will ensure consistency with LWCF requirements. The proposed gate at the highway is envisioned to be a low, simple swing gate with an open design to maintain visual connection to Kē'e and maintain the rural feel of the area.

THOMAS WITTEN, ESQ.  
Chairman / Principal

R. SEAN DUNCAN, ASLA  
President / Principal

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RAMAN E. M. TAMM  
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GATE COLLISON, AICP  
Senior Associate

MARC SHIMATSU, ASLA  
Senior Associate

DACHUNG DONG, LEED® AP  
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SCOTT MURAKAMI, ASLA, LEED® AP  
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MICHAEL MCHILLEN, ASLA, LEED® AP  
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NATHALIE BAO  
Associate

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E-mail: [psydmln@pbrhawaii.com](mailto:psydmln@pbrhawaii.com)

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### 3. Non-Committal Language

We appreciate your comment regarding the language and phrasing used in the report. The Hä'ena State Park Master Plan is a long-term planning document for the physical improvements proposed at the park. We recognize that most of the non-committal language you reference is related to the proposed management strategies and operations at the park. This was done to allow State Parks to make changes to management policies as needed based on feedback from the community and to protect natural and cultural resources should impacts arise. One of the key management policies recommended in the revised plan is adaptive management, which will give State Parks the flexibility to change policies that are not working for the community or allowing unwanted impacts. The plan recommends that State Parks inform the community far in advance of any policy changes and to utilize electronic media (social media, the Internet, and other information technologies and news/media outlets) to disseminate information about the park to the public.

### 4. Cost Estimates

We recognize your concern for the estimated cost of the project components. As noted above, the master plan has been revised including the removal of the Education and Cultural Center (ECC) and Caretaker's Cottage and the cost estimates have been updated based on the updated master plan components and current construction cost estimates. Please see our responses to each of your concerns below.

#### a. Overcrowding

Mahalo for your recommendation of employing a parking attendant rather than instituting the visitor limit. Please note that the employment of a parking attendant would actually cost more than implementing the visitor limit, which could be implemented without cost. However, please note that the initial limit of 900 people per day is now recommended as an average daily limit to be implemented only during peak hours. This limit can be adjusted over time based on community feedback. Your note of lower counts during off-peak seasons is appreciated and State Parks will take this under consideration.

#### b. Traffic

We appreciate your comment that the issue of traffic is an island-wide and regional traffic concern that may be outside of the scope of this master plan. The master plan supports the development of a North Shore shuttle to serve the greater region as well as the park and State Parks does not see traffic as a reason to justify the cost of the master plan. The reduction in the number of visitors to the park is proposed to reduce the amount of traffic generated by the park.

#### c. Rock Fall Hazard

We recognize your concerns regarding the Rock Fall Hazard Assessment and the allowance of other user groups to access areas using the portion of the road having higher rock fall hazard risks. The master plan recommends posting signs at the gate on the highway warning all users of the limited access road of the potential for rockfall hazards. It also recommends providing the main access route outside of the projected rockfall hazard to minimize risk to the general public and encourage a safer route to Kā'ē given the known potential for rockfall hazards.

#### d. Visitor Awareness/Education

As noted, the ECC has been removed from the updated master plan. Only a few new

structures are proposed, including a Welcome Hale as you recommend that is envisioned as an open traditional Hawaiian hale and located near the improved main parking lot. Interpretive and informational signage will be posted at the hale, and all visitors will be provided with park rules and information prior to entering the park. The orientation information could be made available on the State Parks website. This is described in Section 2.5.4.5 of the EIS and is included in the "Visitor Orientation" attachment.

### 5. Committees & Subcommittees

We recognize your concerns regarding State coordination with the committees and subcommittees listed in the EIS. One of the key management recommendations is to establish a permanent Cultural Advisory Group and Community Advisory Committee. These are described in Section 2.5.4.2 of the EIS and the updated description of these groups is included in the "Cultural and Community Advisory Groups" attachment.

We appreciate your summary statements and please note that many of the participants on the advisory committees and the currently reorganized HSPCAC include lineal descendants, long-time residents, and caretakers of this wahi pana including members of the Hui who know this place best. We understand your concern with the potential for impacts to affect other locales and this is why adaptive management and the involvement of a cultural advisory group and community advisory committee are key management strategies so State Parks can involve the community and kanaka maoli throughout implementation and make adjustments should there be unwanted impacts.

Mahalo nui for your input and participation in the environmental review process. Your letter will be included in the Final EIS. If you would like a copy of the Final EIS or portions thereof, please let us know. Otherwise, the electronic copy of the Final EIS will be available on the Office of Environmental Quality Control website at: [http://oeqg2.doh.hawaii.gov/EA\\_EIS\\_Library/2018--KA-FEIS-Haena-State-Park-Master-Plan.pdf](http://oeqg2.doh.hawaii.gov/EA_EIS_Library/2018--KA-FEIS-Haena-State-Park-Master-Plan.pdf) on 11/15/2018.

Aloha,

Kimi Mikami Yuen, LEED AP BD+C  
Principal

Attachments: Master Plan Summary  
Figure 1: Master Plan  
Visitor Orientation

Cultural and Community Advisory Groups

cc: The Honorable David Y. Ige, Governor  
Office of Environmental Quality Control  
Board of Land and Natural Resources  
Division of State Parks



**Nathalie Razo**

**From:** Lauren.A.Tanaka@hawaii.gov  
**Sent:** Tuesday, August 18, 2015 5:50 PM  
**To:** Nathalie Razo  
**Subject:** Fw: Haena

----- Forwarded by Lauren A Tanaka<DLNR@StateHUS on 08/18/2015 05:49 PM> -----

**From:** James Mehling <jmboard@yahoo.com>  
**To:** "Lauren A Tanaka@hawaii.gov" <Lauren.A.Tanaka@hawaii.gov>  
**Date:** 08/17/2015 03:07 PM  
**Subject:** Haena

Hello Ms. Tanaka,  
My name is James Mehling, and I've been a Haena resident for 10 years. I'd just like to write that I am in full support of controlled entry, and a visitor cap (under a thousand seems reasonable? I don't know)  
I'm just not sure about an elevated boardwalk though. I understand the need for safety. But the whole idea is to preserve and protect? I hope to see a sketch of what's proposed at the meeting at Hanalei school. Thank you for bringing it out to the public!!  
No need to write back if you don't want to.

Aloha :-)

James Mehling

Jmboard@yahoo.com

Sent from my iPad@iPhone



Month XX, 2018 - DRAFT

Mr. James Mehling  
Via Email: jmboard@yahoo.com

**SUBJECT: COMMENTS ON THE HA'ENA STATE PARK MASTER PLAN  
DRAFT ENVIRONMENTAL IMPACT STATEMENT (EIS),  
HA'ENA, KAUAI, HAWAII**

Aloha Mr. Mehling,

Mahalo nui for your comment dated August 17, 2015 regarding the Ha'ena State Park Master Plan Draft Environmental Impact Statement (EIS). We sincerely apologize for the delay in responding. Due to the feedback received on the Draft EIS, the State of Hawaii, Department of Land and Natural Resources, Division of State Parks (State Parks) has worked on revising the master plan with a reorganized Ha'ena State Park Community Advisory Committee (HSPCAC) to address the concerns voiced by the larger community. As a result, the master plan presented in the Final EIS has been updated based on the feedback received from the public meetings, comments received, and subsequent extensive collaboration with the HSPCAC. As the planning consultant for State Parks, we offer the following responses to your comments.

Mahalo for your support of the controlled entry and visitor limit aspects of the master plan. The revised master plan proposes the 900-person visitor limit as an initial number which can be adaptively managed and adjusted as appropriate, especially if there continues to be unwanted impacts at the park. If there continue to be issues, State Parks will work with the advisory committees on adjusting the number. As the State has more time to analyze user patterns, other options can be explored over time, and they are actively engaged in discussions regarding parking enforcement and increased fines along the roadway outside of the park as well. Please find the attached sections on **Visitor Limits** from the Final EIS with more details concerning these aspects of the plan.

We recognize your concerns with the originally proposed elevated boardwalk. The boardwalk has been modified in the revised master plan. The new pedestrian pathway follows along the first berm of the lo'i closest to the highway and is proposed to be slightly elevated so as not to impact the berm or any of the historic resources. Please see the attached **Section 2.5.1.4** and **Figure 1** from the Final EIS detailing the new pedestrian path.

Mahalo nui for your input and participation in the environmental review process. Your letter will be included in the Final EIS. If you would like a copy of the Final EIS or portions thereof, please let us know. Otherwise, the electronic copy of the Final EIS will be available on the Office of Environmental Quality Control website at [http://oeqc2.doh.hawaii.gov/EA\\_EIS\\_Library/2018-08-18-KA-FEIS-Haena-State-Park-Master-Plan.pdf](http://oeqc2.doh.hawaii.gov/EA_EIS_Library/2018-08-18-KA-FEIS-Haena-State-Park-Master-Plan.pdf) on 08/18/2018.

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Aloha,

Kimi Mikami Yuen, LEED AP BD+C  
Principal

Attachments: Pedestrian Path  
Visitor Limits  
Figure 1: Master Plan

cc: The Honorable David Y. Ige, Governor  
Office of Environmental Quality Control  
Board of Land and Natural Resources  
Division of State Parks

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**Nathalie Razo**

**From:** Matt Morelock <matt@morelockmusic.com>  
**Sent:** Monday, August 17, 2015 8:30 AM  
**To:** Lauren.A.Tanaka@hawaii.gov  
**Cc:** Kimi Yuen  
**Subject:** Support for Haena State Park Plan and one question

ALOHA!!!

Thank you for your attention to this issue. We look forward to your solution, whatever it may be. It sure is a mess up there!

my only question is;

WHY ARENT DLNR AND THE KAUAI POLICE DEPARTMENT ENFORCING EXISTING PARKING RESTRICIONS AT THE PARK???

1. There are 'No Parking' signs all along the road and lines of rental cars blatantly ignoring them.
2. Talk about a handy revenue stream! I could've ticketed at least 100 rental cars in violation on my last failed attempt to visit the park. Disobey our laws and fund our municipality....I like it.

all the best. Thank you again.

Matt Morelock  
Kilauea, HI



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Mr. Matt Morelock  
SUBJECT: COMMENTS ON THE HĀ'ENA STATE PARK MASTER PLAN DRAFT ENVIRONMENTAL  
IMPACT STATEMENT (EIS), HĀ'ENA, KAUA'I, HAWAII  
Month XX, 2018  
Page 2

Attachments: Parking

cc: The Honorable David Y. Ige, Governor  
Office of Environmental Quality Control  
Board of Land and Natural Resources  
Division of State Parks

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Support for Haena State Park Plan and one question -DSI.docx

SUBJECT: COMMENTS ON THE HĀ'ENA STATE PARK MASTER PLAN  
DRAFT ENVIRONMENTAL IMPACT STATEMENT (EIS),  
HĀ'ENA, KAUA'I, HAWAII

Aloha Mr. Morelock,

Mahalo nui for your comment dated September 17, 2015 the Hā'ena State Park Master Plan Draft Environmental Impact Statement (EIS). We sincerely apologize for the long delay in responding. Due to the feedback received on the Draft EIS, the State of Hawai'i, Department of Land and Natural Resources, Division of State Parks (State Parks) has worked on revising the master plan with a reorganized Hā'ena State Park Community Advisory Committee (HSPCAC) to address the concerns voiced by the larger community. As a result, the master plan presented in the Final EIS has been updated based on the feedback received from the public meetings, comments received, and subsequent extensive collaboration with the HSPCAC. As the planning consultant for State Parks, we offer the following responses to your comments.

Mahalo for your support of the master plan. We recognize your concern over parking enforcement and also acknowledge your comments on revenue potential through enforcement with parking tickets. As an alternative to your suggested parking enforcement through citations, access is proposed to be managed through a park entry fee structure, and the main parking lot is proposed to be separated into a fee-paying lot and non-fee-paying lot. As the State has more time to analyze user patterns, other options can be explored over time and State Parks will continue to work with the advisory committee on options, and they are actively engaged in discussions regarding parking enforcement and increased fines along the roadway outside of the park as well. Please see the attached Section 2.5.1.2 from the Final EIS related to parking.

Mahalo nui for your input and participation in the environmental review process. Your letter will be included in the Final EIS. If you would like a copy of the Final EIS or portions thereof, please let us know. Otherwise, the electronic copy of the Final EIS will be available on the Office of Environmental Quality Control website at [http://oeqc2.doh.hawaii.gov/EA\\_EIS\\_Library/2018--KA-FEIS-Haena-State-Park-Master-Plan.pdf](http://oeqc2.doh.hawaii.gov/EA_EIS_Library/2018--KA-FEIS-Haena-State-Park-Master-Plan.pdf) on 2018.

Aloha,

Kimi Mikami Yuen, LEED AP BD+C  
Principal

**Nathalie Razo**

**From:** Scott Weeks <surfer@mauigateway.com>  
**Sent:** Monday, August 17, 2015 2:36 PM  
**To:** Lauren.A.Tanaka@hawaii.gov; Kimi Yuen  
**Subject:** Haena State Park management plan

Aloha,

I can not attend the meeting at the Hanalei Elementary School cafeteria this Wednesday.

I am writing about the proposed 900-person daily visitor cap part of the Haena State Park management plan. Is it only capping the number of folks that do not live on this island, or does the word "visitor" include everyone that visits Haena State Park?

If the term "visitor" includes folks that live on Kauai, then the folks who live here will not be able to go after work. The cap would unfairly benefit the tourists and be a detriment to the working folks as we'd never be able to get there before the 900-person was reached.

If the term "visitor" includes folks that live on Kauai and visit Haena State Park, I request that the person limit be made smaller and then allow folks that live here to go any time upon showing an ID.

Mahalo,  
Scott Weeks



Month XX, 2018 - DRAFT

Mr. Scott Weeks  
P.O. Box 981  
Kalaheo, HI 96741

**SUBJECT: COMMENTS ON THE HA'ENA STATE PARK MASTER PLAN  
DRAFT ENVIRONMENTAL IMPACT STATEMENT (EIS),  
HA'ENA, KAUAI, HAWAII**

Aloha Mr. Weeks,

Mahalo nui for your emailed comment dated August 17, 2015 regarding the Ha'ena State Park Master Plan Draft Environmental Impact Statement (EIS). We sincerely apologize for the delay in responding. Due to the feedback received on the Draft EIS, the State of Hawaii's Department of Land and Natural Resources, Division of State Parks (State Parks) has worked on revising the master plan with a reorganized Ha'ena State Park Community Advisory Committee (HSPCAC) to address the concerns voiced by the larger community. As a result, the master plan presented in the Final EIS has been updated based on the feedback received from the public meetings, comments received, and subsequent extensive collaboration with the HSPCAC. As the planning consultant for State Parks, we offer the following responses to your comments.

We recognize your comment regarding potential visitor limits at the park. The revised master plan calls for an adaptive management approach for both the parking and the proposed visitor limits, which will be adjusted based on an average number of visitors rather than a set limit per day. The limits will also be instituted only during peak hours of park use and will allow visitors to enter before 7:30am and after 5:30pm without being counted against the visitor limit. Also, entry fees for state parks are established by Hawaii's Administrative Rules (HAR) 13-146-6, which states that Hawaii's residents are exempt from paying park entry fees if they can show a valid Hawaii ID. Please see the "Adaptive Management" and "Visitor Limits" attachments from the Final EIS which show the verbatim changes from the Draft EIS for these sections.

Mahalo nui for your input and participation in the environmental review process. Your letter will be included in the Final EIS. If you would like a copy of the Final EIS or portions thereof, please let us know. Otherwise, the electronic copy of the Final EIS will be available on the Office of Environmental Quality Control website at <http://oeqc2.doh.hawaii.gov/EA-EIS-Library/2018-KA-FEIS-Haena-State-Park-Master-Plan.pdf> on 11/15/2018.

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Mr. Scott Weeks  
SUBJECT: COMMENTS ON THE HÅ'ENA STATE PARK MASTER PLAN DRAFT ENVIRONMENTAL  
IMPACT STATEMENT (EIS), HÅ'ENA, KAUAI, HAWAII  
Month XX, 2018  
Page 2

Aloha,

Kimi Mikami Yuen, LEED AP BD+C  
Principal

Attachments: Adaptive Management  
Visitor Limits

cc: The Honorable David Y. Ige, Governor  
Office of Environmental Quality Control  
Board of Land and Natural Resources  
Division of State Parks

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Haena State Park management plan - JSI.docx

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**Nathalie Razo**

**From:** Lauren.A.Tanaka@hawaii.gov  
**Sent:** Wednesday, August 19, 2015 10:14 AM  
**To:** Nathalie Razo  
**Subject:** Fw: Hanalei State Park

----- Forwarded by Lauren A Tanaka\DLNR\State\HUS on 08/19/2015 10:13 AM -----

From: Terry DeVries <tdv1051@hotmail.com>  
To: "Lauren.A.Tanaka@hawaii.gov" <Lauren.A.Tanaka@hawaii.gov>,  
Date: 08/17/2015 05:01 PM  
Subject: Re: Hanalei State Park

Terry K. DeVries  
4635 100th St se  
Caledonia Mi.  
49316  
Sent from my iPad

On Aug 17, 2015, at 9:44 PM, [Lauren.A.Tanaka@hawaii.gov](mailto:Lauren.A.Tanaka@hawaii.gov) wrote:

Thank you for your comments. It will be noted in the final EIS.

May I please have your mailing address as a formal response will be sent to you after the comment deadline of September 8, 2015. FYI, a public meeting on the draft EIS and proposed Master Plan for the park will be held on Wednesday, August 19, 2015 from 6 to 8 p.m., at the Hanalei Elementary School Cafeteria.

---

From: Terry DeVries <tdv1051@hotmail.com>  
To: "Lauren.A.Tanaka@hawaii.gov" <Lauren.A.Tanaka@hawaii.gov>,  
Date: 08/17/2015 03:33 PM  
Subject: Hanalei State Park

As a long time visitor to Kauai, 2016 will be 15 years, we have seen this park slowly turn into mess. One thing that I'm sure you've looked at, is the trail hikers that show up at daylight and take all of the closest spots, and then leave them for 24hrs. or longer.

Having them shuttle down with special buses for them and their gear, would be mandatory, for anyone staying longer than 8 hrs. most beach goers average 3-5 hrs by our experience, and then leave. As a former employee of a local city park and rec.department, with low budgets and personnel shortages, I know how difficult it is to make any one group happy, but to me 30 to 50 trail hikers come in third place for parking, compared to 300 to 500 beach users. Are regular group loves to come every year, and visit your state, and the friends we have made over the years, and love that park, try to get there at least a couple times, and know first hand how hard it has gotten. Good luck in finding a solution.

Terry & Terri DeVries



Month XX, 2018 - DRAFT

Terry K. DeVries  
4635 100th Street SE  
Caledonia, MI 49316

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*President / Principal*

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*Project Director*

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NATHALIE BAGO  
*Associate*

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SUBJECT: COMMENTS ON THE HĀ'ENA STATE PARK MASTER PLAN  
DRAFT ENVIRONMENTAL IMPACT STATEMENT (EIS),  
HĀ'ENA, KAUAI, HAWAII

Aloha Mr. and Ms. DeVries,

Mahalo nui for your emailed comment dated August 17, 2015 regarding the Hā'ena State Park Master Plan Draft Environmental Impact Statement (EIS). We sincerely apologize for the delay in responding. Due to the feedback received on the Draft EIS, the State of Hawai'i, Department of Land and Natural Resources, Division of State Parks (State Parks) has worked on revising the master plan with a reorganized Hā'ena State Park Community Advisory Committee (HSPCAC) to address the concerns voiced by the larger community. As a result, the master plan presented in the Final EIS has been updated based on the feedback received from the public meetings, comments received, and subsequent extensive collaboration with the HSPCAC. As the planning consultant for State Parks, we offer the following responses to your comments.

We recognize your comments regarding parking concerns and availability at the park based on different types of park user groups. The revised master plan calls for an adaptive management approach for both the parking and the proposed visitor limits, which will be adjusted based on an average number of visitors rather than a set limit per day. The main parking lot is proposed to be separated into a fee-paying lot and non-fee-paying lot, which will also be adjusted daily to allow flexibility depending on future demand for parking and the potential use of a proposed shuttle. Please see the "Adaptive Management" and "Visitor Limits" attachments from the Final EIS that show the verbatim changes from the Draft EIS.

Mahalo nui for your input and participation in the environmental review process. Your letter will be included in the Final EIS. If you would like a copy of the Final EIS or portions thereof, please let us know. Otherwise, the electronic copy of the Final EIS will be available on the Office of Environmental Quality Control website at

[http://oeq2.doh.hawaii.gov/EA\\_EIS\\_Library/2018-KA-FEIS-Haena-State-Park-Master-Plan.pdf](http://oeq2.doh.hawaii.gov/EA_EIS_Library/2018-KA-FEIS-Haena-State-Park-Master-Plan.pdf) on , 2018

Mr. and Ms. Terry & Terri DeVries  
SUBJECT: COMMENTS ON THE HÅ'ENA STATE PARK MASTER PLAN DRAFT ENVIRONMENTAL  
IMPACT STATEMENT (EIS), HÅ'ENA, KAUAI, HAWAII  
Month XX, 2018  
Page 2

Aloha,

Kimi Mikami Yuen, LEED AP BD+C  
Principal

Attachments: Adaptive Management  
Visitor Limits

cc: The Honorable David Y. Ige, Governor  
Office of Environmental Quality Control  
Board of Land and Natural Resources  
Division of State Parks

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Haena State Park - JSI.docx

**Nathalie Razo**

**From:** tom tonks <tommy0116@yahoo.com>  
**Sent:** Monday, August 17, 2015 11:00 AM  
**To:** Kimi Yuen  
**Subject:** Haena state park  
**Attachments:** i am from the UK.docx

i am from the UK, I have visited the area many times over the past 10 years and i do agree that the parking has got worse and the number of people has increased, yes it is a wonderful place and that's why visitors to the island go there to relax and enjoy there vacation , visitors who are on short breaks could miss out seeing this wonderful place. i agree with the boardwalk idea and i think you should look at better parking areas, the end of the road does get congested because there is no-one to marshal the traffic , i also agree that some kind of entry fee would be okay but not too excessive,

Tom  
UK.



Month XX, 2018 - DRAFT

Mr. Tom Tonks  
8 Netherfield Road  
Anstey  
Leicester  
LE7 7ES  
England

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**SUBJECT: COMMENTS ON THE HĀ'ENA STATE PARK MASTER PLAN  
DRAFT ENVIRONMENTAL IMPACT STATEMENT (EIS),  
HĀ'ENA, KAUAI, HAWAII**

Aloha Mr. Tonks,

Mahalo nui for your emailed comment dated August 17, 2015 regarding the Hā'ena State Park Master Plan Draft Environmental Impact Statement (EIS). We sincerely apologize for the delay in responding. Due to the feedback received on the Draft EIS, the State of Hawai'i, Department of Land and Natural Resources, Division of State Parks (State Parks) has worked on revising the master plan with a reorganized Hā'ena State Park Community Advisory Committee (HSPCAC) to address the concerns voiced by the larger community. As a result, the master plan presented in the Final EIS has been updated based on the feedback received from the public meetings, comments received, and subsequent extensive collaboration with the HSPCAC. As the planning consultant for State Parks, we offer the following responses to your comments.

We recognize your comments regarding parking and increased park visitor concerns. The revised master plan calls for an adaptive management approach for both the parking and the proposed visitor limits, which will be adjusted based on an average number of visitors rather than a set limit per day. The main parking lot is proposed to be separated into a fee-paying lot and non-fee-paying lot, which will also be adjusted daily to allow flexibility depending on future demand for parking and the potential use of the proposed shuttle. Please see the "Adaptive Management" and "Parking" attachments from the Final EIS which show the verbatim changes from the Draft EIS for these sections.

We recognize your comment referring to the previously proposed boardwalk. The boardwalk has been modified in the revised master plan. The new pedestrian pathway follows along the first berm of the lo'i closest to the highway and is proposed to be slightly elevated so as not to impact the berm or any of the historic resources. Please see the "Pedestrian Path" attachment from Section 2.5.1.4 of the Final EIS which shows the verbatim changes from the Draft EIS for this section.

We also recognize your comment regarding the park's entry fee. Entry fees for state parks are established by Hawai'i Administrative Rules (HAR) 13-146-6, at the rate of \$5/car or \$1/person.



Mr. Tom Tonks  
SUBJECT: COMMENTS ON THE HÅ'ENA STATE PARK MASTER PLAN DRAFT ENVIRONMENTAL  
IMPACT STATEMENT (EIS), HÅ'ENA, KAUAI, HAWAII  
Month XX, 2018  
Page 2

Mahalo nui for your input and participation in the environmental review process. Your letter will be included in the Final EIS. If you would like a copy of the Final EIS or portions thereof, please let us know. Otherwise, the electronic copy of the Final EIS will be available on the Office of Environmental Quality Control website at [http://oeqc2.doh.hawaii.gov/EA\\_EIS\\_Library/2018-04-04-FEIS-Haena-State-Park-Master-Plan.pdf](http://oeqc2.doh.hawaii.gov/EA_EIS_Library/2018-04-04-FEIS-Haena-State-Park-Master-Plan.pdf) on 04/04/2018.

Aloha,

Kimi Mikami Yuen, LEED AP BD+C  
Principal

Attachments: Adaptive Management  
Parking  
Visitor Limits  
Pedestrian Path

cc: The Honorable David Y. Ige, Governor  
Office of Environmental Quality Control  
Board of Land and Natural Resources  
Division of State Parks

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## Nathalie Razo

**From:** Mike Fallis <quattro44@hotmail.com>  
**Sent:** Tuesday, August 18, 2015 9:10 AM  
**To:** lauren.a.tanaka@hawaii.gov; Kimi Yuen  
**Subject:** Haena Beach Revisions

Aloha,

A brief back ground on myself.....

My father came to Kauai in 1937 as a Canadian Merchant Marine cadet. His love of the islands and the orient were instilled in me from an early age. My first trip to the islands was in 1970 and my first time on Kauai was in 1972. I have returned over fifteen times to Kauai since and will be on the island this September and again next June.

I don't own real estate nor a business I simply fell in love with this island before it was developed for how pristine and unspoiled it was.

Now, some forty plus years later the entire island has changed. This was inevitable and predictable but it seems that only now the people of Kauai are looking to change the way it is to something about the way it was. I wish you the greatest of good fortune in your endeavors to fix it but I simply don't see how you can come up with a win-win solution.

The world has become too connected so there really probably isn't an "undiscovered" paradise anymore on the planet.

So how do you monitor and control the influx of tourists and "locals?" Build a bigger port, airport, wider highways, more houses/condos/shopping centers.....where does it stop ?

I feel that I contributed to this as I was always so excited to share my experiences on Kauai with anyone who would listen and encouraged them to go visit...I wish I had kept my mouth shut!

Heena and the Na Pali or only symptomatic of the great issues facing Kauai. Monsanto on the west shore, some "people" messing with stream flows above Secret Falls and the upper Hanalei River. The reefs around the island are dying (dead?) You have the Oahu developer who wants to forever change Hanalei Ridge with mega homes. The new owners of those homes will become "locals" and then they too will complain about tourists etc. Coco Palms...finally the eye sore is getting torn down and it will rebuilt but all the debris has to get shipped off to Oahu. The expansion of the Princeville Center.

I have great misgivings about our trip next summer but it is a family reunion so I will, no doubt, be going but it will be my (sadly) last trip to Kauai.

I know thta you are focusing on the "end-of-the-road" and all I can say is "The best of luck" as I don't see where there is any way to control access out there as it is a public road and only the beach / coast / parking lot is part of the park. Maybe you could put a toll booth someplace out past Hanalei ?

Sad....so sad !

Mahalo nui loa  
Mike Fallis  
4820 Squadron Ct  
Fair Oaks, Ca 95628  
(916) 208-0986 cell



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NATHALIE BAO  
*Associate*

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Month XX, 2018 - DRAFT

Mr. Mike Fallis  
4820 Squadron Court  
Fair Oaks, CA 95628

SUBJECT: COMMENTS ON THE HĀ'ENA STATE PARK MASTER PLAN  
DRAFT ENVIRONMENTAL IMPACT STATEMENT (EIS),  
HĀ'ENA, KAUA'I, HAWAII

Aloha Mr. Fallis,

Mahalo nui for your emailed comment dated August 18, 2015 regarding the Hā'ena State Park Master Plan Draft Environmental Impact Statement (EIS). We sincerely apologize for the delay in responding. Due to the feedback received on the Draft EIS, the State of Hawai'i, Department of Land and Natural Resources, Division of State Parks (State Parks) has worked on revising the master plan with a reorganized Hā'ena State Park Community Advisory Committee (HSPCAC) to address the concerns voiced by the larger community. As a result, the master plan presented in the Final EIS has been updated based on the feedback received from the public meetings, comments received, and subsequent extensive collaboration with the HSPCAC. As the planning consultant for State Parks, we offer the following responses to your comments.

We recognize your concerns regarding development, access, and parking at Hā'ena State Park. The revised master plan calls for an adaptive management approach for both the parking and the proposed visitor limits, which will be adjusted based on an average number of visitors rather than a set limit per day. The main parking lot is proposed to be separated into a fee-paying lot and non-fee-paying lot, which will also be adjusted daily to allow flexibility depending on future demand for parking and the potential use of a proposed shuttle. Please see the "Adaptive Management", "Parking", and "Visitor Limits" attachments from the Final EIS which show the verbatim changes from the Draft EIS for these sections.

Mahalo nui for your input and participation in the environmental review process. Your letter will be included in the Final EIS. If you would like a copy of the Final EIS or portions thereof, please let us know. Otherwise, the electronic copy of the Final EIS will be available on the Office of Environmental Quality Control website at [http://oeq2.doh.hawaii.gov/EA\\_EIS\\_Library/2018--KA-EIS-Haena-State-Park-Master-Plan.pdf](http://oeq2.doh.hawaii.gov/EA_EIS_Library/2018--KA-EIS-Haena-State-Park-Master-Plan.pdf) on 2018.

Aloha,

Kimi Mikami Yuen, LEED AP BD+C  
Principal

Attachments: Adaptive Management  
Parking  
Visitor Limits

cc: The Honorable David Y. Ige, Governor  
Office of Environmental Quality Control  
Board of Land and Natural Resources  
Division of State Parks

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Bench Revisions - JSI.docx

808 - 755-5806  
Anne Punohu  
no mailing address

Too short timeline to respond - no name given

Hatau - don't get a free pass; cannot gather at  
will and take place as much as they  
want

- Religious practice is separate from hula  
and customs

Auntie Anne Punohu Kahua  
w/pala sila nui

No Ha'au's own keep  
All Kumu must respect  
Ha'ena tradition

They are not  
allowed to touch any  
At all plants (uluweliwehi)  
from HAWAII - KEE.

Wai Kapalo No 'New age practitioners  
are to be considered as  
"Cultural religious practitioners"

UNIKI ceremonies must be  
individual's standing alone not  
as a group the chant Kahua must  
be heard on the 'one (sawo)  
this is the true way at Kede  
No other way is



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Month XX, 2018 - DRAFT

Ms. Anne Ponohu  
808-755-5806

SUBJECT: COMMENTS ON THE HÄ'ENA STATE PARK MASTER PLAN  
DRAFT ENVIRONMENTAL IMPACT STATEMENT (EIS),  
HÄ'ENA, KAUA'I, HAWAII

Aloha Ms. Ponohu,

Mahalo nui for your comment card from the community meeting held on August 19, 2015 regarding the Hä'ena State Park Master Plan Draft Environmental Impact Statement (EIS). We sincerely apologize for the delay in responding. Due to the feedback received on the Draft EIS, the State of Hawai'i, Department of Land and Natural Resources, Division of State Parks (State Parks) has worked on revising the master plan with a reorganized Hä'ena State Park Community Advisory Committee (HSPCAC) to address the concerns voiced by the larger community. As a result, the master plan presented in the Final EIS has been updated based on the feedback received from the public meetings, comments received, and subsequent extensive collaboration with the HSPCAC. As the planning consultant for State Parks, we offer the following responses to your comments.

We recognize your comments regarding cultural preservation in the park master plan. The master plan recommends a Cultural Advisory Group (CAG) be established to advise State Parks on ongoing improvements, educational and interpretive materials, and cultural matters regarding the park. These are described in Section 2.5.4.2 of the EIS and the verbatim description of these groups is included in the "Cultural and Community Advisory Group" attachment.

Mahalo nui for your input and participation in the environmental review process. Your letter will be included in the Final EIS. If you would like a copy of the Final EIS or portions thereof, please let us know. Otherwise, the electronic copy of the Final EIS will be available on the Office of Environmental Quality Control website at [http://oeq2.doh.hawaii.gov/EA\\_EIS\\_Library/2018--KA-FEIS-Haena-State-Park-Master-Plan.pdf](http://oeq2.doh.hawaii.gov/EA_EIS_Library/2018--KA-FEIS-Haena-State-Park-Master-Plan.pdf) on 2018.

Aloha,

Kimi Mikami Yuen, LEED AP BD+C  
Principal

Attachment: Cultural and Community Advisory Group

cc: The Honorable David Y. Ige, Governor  
Office of Environmental Quality Control  
Board of Land and Natural Resources  
Division of State Parks

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Something definitely has to be done. As a member of the Makalā'āina O Nākeā, I see the extreme number of cars + people and the damage to the trail (talalay) in the Ocean. I am interested in support of the Green Master Plan for the park. [thyswan@yahoo.com](mailto:thyswan@yahoo.com)

it can be "fine tuned" later,





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Ms Colleen Wann  
SUBJECT: COMMENTS ON THE HĀ'ENA STATE PARK MASTER PLAN DRAFT ENVIRONMENTAL  
IMPACT STATEMENT (EIS), HĀ'ENA, KAUA'I, HAWAII  
Month XX, 2018  
Page 2

cc: The Honorable David Y. Ige, Governor  
Office of Environmental Quality Control  
Board of Land and Natural Resources  
Division of State Parks

O:\026\02627\01 DLNR-Haena State Park Master Plan\EIS\DEIS Responses\Mail Merge\2015-08-19 Colleen Wann -  
DS1.docx

Ms. Colleen Wann  
Via Email: [thswann@yahoo.com](mailto:thswann@yahoo.com)  
SUBJECT: COMMENTS ON THE HĀ'ENA STATE PARK MASTER PLAN  
DRAFT ENVIRONMENTAL IMPACT STATEMENT (EIS),  
HĀ'ENA, KAUA'I, HAWAII

Aloha Ms. Wann,

Mahalo nui for your comment card received at the public meeting held on August 19, 2015 regarding the Hā'ena State Park Master Plan Draft Environmental Impact Statement (EIS). We sincerely apologize for the delay in responding. Due to the feedback received on the Draft EIS, the State of Hawai'i, Department of Land and Natural Resources, Division of State Parks (State Parks) has worked on revising the master plan with a reorganized Hā'ena State Park Community Advisory Committee (HSPCAC) to address the concerns voiced by the larger community. As a result, the master plan presented in the Final EIS has been updated based on the feedback received from the public meetings, comments received, and subsequent extensive collaboration with the HSPCAC. As the planning consultant for State Parks, we offer the following responses to your comments.

Mahalo for your support of the Hā'ena State Park Master Plan. We acknowledge your concern with the volume of cars and people accessing the park and the resulting impact on the Kālālau Trail and the ocean. These concerns have been reflected in the revised master plan and can be found in [Section 2.5.1.2](#) and [Section 2.5.4.3](#) of the Final EIS, which are attached for reference. The visitor limits will only be instituted over the peak visitor hours at the park. Therefore, access will be allowed into the park and parking lot outside those peak hours and will be adjusted as appropriate based on ongoing input from the community. As the State has more time to analyze user patterns, other options can be explored over time, and they are actively engaged in discussions regarding parking enforcement and increased fines along the roadway outside of the park as well.

Mahalo nui for your input and participation in the environmental review process. Your letter will be included in the Final EIS. If you would like a copy of the Final EIS or portions thereof, please let us know. Otherwise, the electronic copy of the Final EIS will be available on the Office of Environmental Quality Control website at [http://oese2.doh.hawaii.gov/EA\\_EIS\\_Library/2018-06-01-EIS-Haena-State-Park-Master-Plan.pdf](http://oese2.doh.hawaii.gov/EA_EIS_Library/2018-06-01-EIS-Haena-State-Park-Master-Plan.pdf) on 06/01/2018.

Aloha,

Kimi Mikami Yuen, LEED AP BD+C  
Principal

Attachments: Parking  
Visitor Limits

Please share your comments on the Hā'ena State Park Master Plan Draft EIS.  
(If you would like a written response letter, please include your mailing address.)

I DO NOT support the  
Plan.

Donna Hamyref.



PBR HAWAII & Associates  
Attn: Kimi Yuen  
1001 Bishop Street, Suite 650  
Honolulu, HI 96813



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Month XX, 2018 - DRAFT

Ms. Denise Ham Young  
(no address)

SUBJECT: COMMENTS ON THE HĀ'ENA STATE PARK MASTER PLAN  
DRAFT ENVIRONMENTAL IMPACT STATEMENT (EIS),  
HĀ'ENA, KAUAI, HAWAII

Aloha Ms. Ham Young,

Mahalo nui for your comment card received at the public meeting held on August 19, 2015 regarding the Hā'ena State Park Master Plan Draft Environmental Impact Statement (EIS). We sincerely apologize for the delay in responding. Due to the feedback received on the Draft EIS, the State of Hawai'i, Department of Land and Natural Resources, Division of State Parks (State Parks) has worked on revising the master plan with a reorganized Hā'ena State Park Community Advisory Committee (HSPCAC) to address the concerns voiced by the larger community. As a result, the master plan presented in the Final EIS has been updated based on the feedback received from the public meetings, comments received, and subsequent extensive collaboration with the HSPCAC. As the planning consultant for State Parks, we offer the following responses to your comments.

We acknowledge your concerns with the Hā'ena State Park Master Plan Draft. There have been significant revisions to the master plan in the Final EIS. The draft version of the Master Plan has been revised to reflect feedback received from the community. Please see the attached [Master Plan Summary](#) from the Final EIS for reference to review the revisions to the plan.

Mahalo nui for your input and participation in the environmental review process. Your letter will be included in the Final EIS. If you would like a copy of the Final EIS or portions thereof, please let us know. Otherwise, the electronic copy of the Final EIS will be available on the Office of Environmental Quality Control website at [http://oeqc2.doh.hawaii.gov/EA\\_EIS\\_Library/2018\\_KA-FEIS-Haena-State-Park-Master-Plan.pdf](http://oeqc2.doh.hawaii.gov/EA_EIS_Library/2018_KA-FEIS-Haena-State-Park-Master-Plan.pdf) on XX, 2018.

Aloha,

Kimi Mikami Yuen, LEED AP BD+C  
Principal

Attachments: Master Plan Summary

cc: The Honorable David Y. Ige, Governor  
Office of Environmental Quality Control  
Board of Land and Natural Resources  
Division of State Parks

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Hā'ena State Park Master Plan / Draft EIS Community Meeting / August 19, 2015

Please share your comments on the Hā'ena State Park Master Plan Draft EIS.  
(If you would like a written response letter, please include your mailing address.)

Aloha,

- ① Limit parking and force shuttle rides that are paid rides. (\$50)
- ② Biking by permit only. \$15.00 day pass and a \$20.00 annual pass. Anyone can buy a day pass or annual pass but requiring a pass with help from the visitor industry will limit traffic and encourage use of shuttle. More locals will buy annual pass.
- ③ 50 open stalls that do not require permit and 50 stalls that require permit.
- ④ Need a master plan from princeville to Kēe or cars will just back up to Makua Beach and the Hā'ena beach park.
- ⑤ Walkers and Bikers should not be carted and get in free.





Month XX, 2018 - DRAFT

Mr. Elijah Frank  
P.O. Box 1462  
Hanalei, HI 96714

**SUBJECT: COMMENTS ON THE HĀ'ENA STATE PARK MASTER PLAN  
DRAFT ENVIRONMENTAL IMPACT STATEMENT (EIS),  
HĀ'ENA, KAUA'I, HAWAII**

Aloha Mr. Frank,

Mahalo nui for your comment card received at the public meeting held on August 19, 2015 regarding the Hā'ena State Park Master Plan Draft Environmental Impact Statement (EIS). We sincerely apologize for the delay in responding. Due to the feedback received on the Draft EIS, the State of Hawai'i, Department of Land and Natural Resources, Division of State Parks (State Parks) has worked on revising the master plan with a reorganized Hā'ena State Park Community Advisory Committee (HSPCAC) to address the concerns voiced by the larger community. As a result, the master plan presented in the Final EIS has been updated based on the feedback received from the public meetings, comments received, and subsequent extensive collaboration with the HSPCAC. As the planning consultant for State Parks, we offer the following responses to your comments.

We recognize your comments and suggestions regarding parking, parking fee structure and the proposed shuttle service. The new main parking lot improvements described in **Section 2.5.1.2** are intended to alleviate the strain on current parking demand and includes proposed park entry fees for access, which may incentivize use of the proposed shuttle service. We also recognize your suggestion for coordinating with the visitor industry to encourage shuttle service. The proposed facilities in the revised plan have been designed to support the potential shuttle service recommended.

In response to your suggestions on parking permits, day passes and designated exemption parking areas, the revised plan includes similar designated exemptions from park entry fees as well. The main parking lot is proposed to be separated into a fee-paying lot and non-fee-paying lot, which will also be adjusted daily to allow flexibility depending on future demand for parking and the potential use of the proposed shuttle. As the State has more time to analyze user patterns, other options can be explored over time, and they are actively engaged in discussions regarding parking enforcement and increased fines along the roadway outside of the park as well. Currently, entry fees for all state parks are established by Hawai'i Administrative Rules (HAR) 13-146-6, at the rate of \$5/car or \$1/person. HAR 13-146-6 also states that Hawai'i residents are exempt from paying park entry fees if they can show a valid Hawai'i ID. Similar fees could be instituted at Hā'ena State Park. However, State Parks will continue to work on the different options with the advisory committee and could include a variety of options as long as they do not violate the federal Land and Water Conservation Fund rules, which allow charging different fees for residents and nonresidents as long as they are comparable to current fee differences between the two. Please review the sections on **Parking** from the Final EIS for more details.

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Chairman / Principal

R-SEAN BUNGAN, ASLA  
President / Principal

RUSSELL Y. J. CHUNG, FASLA, LEED® AP BD+C  
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Elijah Frank  
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We also acknowledge your comments suggesting a master plan to extend to Princeville for managing traffic congestion. The County of Kauai is in the process of updating the general plan and regional development plans. While the suggestion is beyond the scope of the Hä'ena State Park Master Plan, the revised plan aligns with the corresponding aspects within the existing county plans. Please review the attached [Section 5.4.1](#) and [Section 5.4.2](#) from the Final EIS for more information on the County plans.

We recognize your concerns with the inclusion of pedestrian and bicyclists in the proposed visitor limits as well. The revised master plan proposes the 900-person visitor limit as an initial number which can be adaptively managed and adjusted as appropriate, especially if there continues to be unwanted impacts at the park. If there continue to be issues, State Parks will work with the advisory committees on adjusting the number. The limits will also be instituted only during peak hours of park use and will allow visitors to enter before and after without being counted against the visitor limit. Therefore, access will be allowed into the park and parking lot both before and after those hours and will be adjusted as appropriate based on ongoing input from the community. Please reference the attached sections from the Final EIS on [Visitor Limits](#) for a description of these aspects within the revised master plan.

Mahalo nui for your input and participation in the environmental review process. Your letter will be included in the Final EIS. If you would like a copy of the Final EIS or portions thereof, please let us know. Otherwise, the electronic copy of the Final EIS will be available on the Office of Environmental Quality Control website at [http://oeqc2.doh.hawaii.gov/EA\\_EIS\\_Library/2018\\_KA-FEIS-Haena-State-Park-Master-Plan.pdf](http://oeqc2.doh.hawaii.gov/EA_EIS_Library/2018_KA-FEIS-Haena-State-Park-Master-Plan.pdf) on [Month XX, 2018](#).

Aloha,

Kimi Mikami Yuen, LEED AP BD+C  
Principal

Attachments: Park Entry  
Parking  
Visitor Limits  
Kauai's General Plan  
North Shore Development Plan

cc: The Honorable David Y. Ige, Governor  
Office of Environmental Quality Control  
Board of Land and Natural Resources  
Division of State Parks

Please share your comments on the Hä'ena State Park Master Plan Draft EIS.  
(If you would like a written response letter, please include your mailing address.)

I feel that there is a problem, and we need a solution. However I do not feel that this is the right solution. As of right now I do not support this plan.





Month XX, 2018 - DRAFT

Ms. Eurielle Blair  
P.O. Box 421  
Hanalei, HI 96714

**SUBJECT: COMMENTS ON THE HÄ'ENA STATE PARK MASTER PLAN  
DRAFT ENVIRONMENTAL IMPACT STATEMENT (EIS),  
HÄ'ENA, KAUA'I, HAWAII**

Aloha Ms. Blair,

Mahalo nui for your comment card received at the public meeting held on August 19, 2015 regarding the Hä'ena State Park Master Plan Draft Environmental Impact Statement (EIS). We sincerely apologize for the delay in responding. Due to the feedback received on the Draft EIS, the State of Hawai'i, Department of Land and Natural Resources, Division of State Parks (State Parks) has worked on revising the master plan with a reorganized Hä'ena State Park Community Advisory Committee (HSPCAC) to address the concerns voiced by the larger community. As a result, the master plan presented in the Final EIS has been updated based on the feedback received from the public meetings, comments received, and subsequent extensive collaboration with the HSPCAC. As the planning consultant for State Parks, we offer the following responses to your comments.

We acknowledge your concerns with the Hä'ena State Park Master Plan and appreciate your recognition and concern for the existing conditions in the park. The draft version of the Master Plan has been revised to reflect feedback received from the community. Please see the attached **Master Plan Summary** from the Final EIS for reference to review the revisions to the plan.

Mahalo nui for your input and participation in the environmental review process. Your letter will be included in the Final EIS. If you would like a copy of the Final EIS or portions thereof, please let us know. Otherwise, the electronic copy of the Final EIS will be available on the Office of Environmental Quality Control website at [http://oeq2.doh.hawaii.gov/EA\\_EIS\\_Library/2018-04/FEIS-Haena-State-Park-Master-Plan.pdf](http://oeq2.doh.hawaii.gov/EA_EIS_Library/2018-04/FEIS-Haena-State-Park-Master-Plan.pdf) on 04/18/2018.

Aloha,

Kimi Mikami Yuen, LEED AP BD+C  
Principal

Attachments: Master Plan Summary

cc: The Honorable David Y. Ige, Governor  
Office of Environmental Quality Control  
Board of Land and Natural Resources  
Division of State Parks

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*Please share your comments on the Hā'ena State Park Master Plan Draft EIS.  
(If you would like a written response letter, please include your mailing address.)*

My basic reaction is one of acceptance to the plan. This is in large part because it is the clear desire of the Hawaiian community in the area. If the whole area ends up looking like Limahuli Gardens, the future is lucky. I think the "Volunteer" provision is really important to the vitality ~~and~~ of the project and the acceptance of the plan. The need for management is evident. The concern about shifting the impact to Nakuia is important.





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Month XX, 2018 - DRAFT

Ms. Felicia Cowden  
4191 Kilauea Road  
Kilauea, HI 96754

SUBJECT: COMMENTS ON THE HĀ'ENA STATE PARK MASTER PLAN  
DRAFT ENVIRONMENTAL IMPACT STATEMENT (EIS),  
HĀ'ENA, KAUA'I, HAWAII

Aloha Ms. Cowden,

Mahalo nui for your comment card from the community meeting held on August 19, 2015 regarding the Hā'ena State Park Master Plan Draft Environmental Impact Statement (EIS). We sincerely apologize for the delay in responding. Due to the feedback received on the Draft EIS, the State of Hawai'i, Department of Land and Natural Resources, Division of State Parks (State Parks) has worked on revising the master plan with a reorganized Hā'ena State Park Community Advisory Committee (HSPCAC) to address the concerns voiced by the larger community. As a result, the master plan presented in the Final EIS has been updated based on the feedback received from the public meetings, comments received, and subsequent extensive collaboration with the HSPCAC. As the planning consultant for State Parks, we offer the following responses to your comments.

Mahalo for your support of the Hā'ena State Park Master Plan. We appreciate your support of volunteer efforts and organizations to help improve and maintain the park and its facilities. We appreciate your comments regarding the need for management and understand your concern about potentially shifting the impact to Makua. One of the key management recommendations is to employ adaptive management particularly with regards to visitor limits, parking, and access policies. If impacts to Makua and other areas arise, State Parks can adjust and change their policies to help reduce those impacts.

Mahalo nui for your input and participation in the environmental review process. Your letter will be included in the Final EIS. If you would like a copy of the Final EIS or portions thereof, please let us know. Otherwise, the electronic copy of the Final EIS will be available on the Office of Environmental Quality Control website at [http://oeqc2.doh.hawaii.gov/EA\\_EIS\\_Library/2018\\_KA-FEIS-Haena-State-Park-Master-Plan.pdf](http://oeqc2.doh.hawaii.gov/EA_EIS_Library/2018_KA-FEIS-Haena-State-Park-Master-Plan.pdf) on , 2018.

Aloha,

Kimi Mikami Yuen, LEED AP BD+C  
Principal

cc: The Honorable David Y. Ige, Governor  
Office of Environmental Quality Control  
Board of Land and Natural Resources  
Division of State Parks



---

**Nathalie Razo**

**From:** Felicia Alongi Cowden <akamaimom@gmail.com>  
**Sent:** Sunday, September 06, 2015 10:12 PM  
**To:** Kimi Yuen; Lauren Tanaka; Alan Carpenter  
**Cc:** Presley Wann; Ron Kouchi; Rep. Derek Kawakami; Chipper Wichman; Sue Kanoho  
**Subject:** Concerns on the proposed final draft Haena State Park Management Plan

September 5, 2015  
To: PBR, Kimi Yuen, Lauren Tanaka  
From: Felicia Cowden, Kilauea, Kauai  
Re: Concerns on the proposed final draft Haena State Park Management Plan

**Please extend the deadline for comments and feedback by at least 60 days.** The plan and the appendices are inches thick and hard to obtain. Providing less than one month for public commentary is unfair and allows for very important challenges to go unnoticed. The community presentation by the PBR consulting team for the Haena State Park Management Plan on 8/19/15 at Hanalei Elementary School outlined a warm vision that had many elements that were pleasing. However, a surface examination of the actual documents lays out the potential and likelihood for a very different outcome. My concern is that Kauai and the Haena community might be saddled with a park that is the exact opposite of what they are expecting as a cultural preservation area. This natural and cultural resource, which is a key poster image of Hawaii for the tourism industry, could be harnessed in the spirit of the defeated Public Land Development Corporation's goal to use conservation land to "exploit for revenue" for the general benefit of the State of Hawaii.

**Strengths of the proposal:**

- The Ke'e Beach area of Haena at the trailhead of the Na Pali Coast is overwhelmed with cars and impacts. There is value in the effort to lower the carrying capacity and particularly the cars that congest the narrow road way.
- The plan allows for the possibility of stewardship by the lineal descendants of the Hawaiian (Kanaka ma'oli) people to care for the land in a manner which is authentic to the continuance of traditional Hawaiian cultural practices and honors the historical significance of the wahipana that define the area.
- There is beauty in the concept of having the whole area from up in Limahuli valley out to the he'au and surrounding area have the authentic landscaping and application of traditional Hawaiian cultural use. This park plan is an opportunity to preempt possible future development of the area that would simply be something like a state camping ground and parking lot which would level the historical significance, as had been suggested in the past. It may reverse the overuse of the area that is currently happening.

**Concerns:**

- Item 4.2 Park Management states the curator agreement with the Hul (o Maka ainana o Makana) has been successful, but they must develop the capacity to qualify in the public open bid process pursuant to existing procurement requirements. The management entity must be financially solvent and able to prepare and execute a solid business plan. The best elements of this plan and partnership are consistently outlined with the words "MAY BE", which experience has shown to our Hawaii community does not mean much. Under the best of circumstances, the Hul O Maka ainana O Makana cannot demonstrate a history of managing a \$10,000,000 budget. Perhaps the National Tropical Botanical Gardens could demonstrate such capacity where Limahuli Gardens can effectively wrap around as a park. This contract could easily go to a provider that is not from this area. OUR beach might then become something like the living history museum at Captain Cook area of Hawaii Island or the Kilauea Point Lighthouse area which is closed off to the community and available essentially to the visitor industry during limited hours. The visitor might find they are paying more than \$50 per carload to enjoy the Ke'e area. The gated environment might feel like an exploited area with food service and beach rentals with merely a genuflection to the culture in a landscape maintained by people of another area working to present a Hawaiian cultural theme.
- The plan provides potential for too much development in the area with a solid structure visitor center, concession and gates. The impact is too high in changing the character of the area as well as the cost of the development. The higher the cost of operation, the greater the requirement for revenue generation on an annual basis.
- The limiting of capacity for this area will force the overflow onto the beaches and bathrooms in close proximity such as Makua, Lualaba and into Hanalei, all of which are also operating in over-capacity in peak seasons. The HSPMP should not be finalized before the Kauai Transportation Plan and the Kauai General Plan. Integration with the other plans is critical.
- Shutting the residents out of the park in favor of the visitors. There is value in having a subset of cultural volunteers that welcome in an uncounted capacity, however that can be exploited. Vacation properties can create volunteer programs that offer a morning cultural experience of participation followed by a "cool-off in the lagoon" that can circumvent the number counts in peak season. Who guards the gate? Who determines who is a cultural practitioner? Is it a bloodline element? Are people carded for being light-skinned with heavier discernment than dark-skin? Do people have to carry cards that say they are more important than the next? etc.
- It should be guaranteed that a walk-through gate is always open. People will be coming off the trail. Access to the beach is supposed to be a public right. It does not take much for the government to declare they have changed the rules and the gate is closed. In Kilauea, they have closed off the crater and the lighthouse point. There is an effort to close the access to the beach

outside of their federal hours of operation. Mission-creep is standard in the control of the land. My fear is a best-case scenario would be the area would be one big NTBG park, worst case Kilauea Point. Limahuli Garden is great and controlled; limited and available for free a few days a month. The valley was not really ever open to everyone whereas we all feel able to be at Ke'e, at least in this lifetime.

**This is not the limit of my concerns** but a reflection of the most striking elements that I have seen in the glancing through of an immense document with referenced appendices that I have been unsuccessful at locating in this short window of time for public review.

#### Suggestions:

- Define a co-stewardship agreement with specific entities from the Haena area and not place the management out to public bid; suggested would be a collaborative partnership between the NTBG Limahuli Gardens team and the Hui O Maka'ana O Makana but one which can expand to emerging efforts that demonstrate criteria to help in alignment with the area vision such as a halau. I include Limahuli Gardens in my suggestion because they have demonstrated the financial capacity to manage this level of cultural restoration with integrity.
- Place reflector sticks along the existing roadway that simply do not allow cars to park in the no-parking areas within the park. Still allow the roadway to be used. The 5% falling rock designation is a questionable limitation based on other park areas in the US.
- Improve the current grass, overflow parking to be level and safe with a gravel or semi-permeable surface. The turn-around roadway access can be created to emphasize this parking area to be the primary choice. Parking to occur only in the grass/gravel parking lot and limit the front lot near the life guard to handicap access and other specified parking such as volume vans, cultural practitioners and encouraged local users, particularly in peak season. Half of the parking lot would be set aside for paid permitted parking. A park staff person would manage this area. Paid daily permits are available on-line in a manner associated with an individual party name to prohibit vacation properties from reserving a block of spaces on a regular basis. Residents who have a planned commitment to be at Ke'e would be wise to pay for a permitted space. The parking permit money goes to the State and the fee amount is determined by the state. Perhaps all non-resident vehicles pay a parking fee whether reserved or not. Concierges at visitor locations can assist this process with their individual guests.
- Put a web-cam on the parking areas, so residents as well as visitor service providers can make responsible choices about driving out to the area. A phone app could be utilized to show if parking is full. Allowing people to know the area is full before attempting to come to the area will help alleviate frustrated overflow into the surrounding areas.
- Work with the visitor industry state-wide to invest in quality short videos that educate visitors on the conservation nature of sacred spaces and help them to understand the necessity of utilizing group transportation, etc. and play the film on the planes. Make a specific video for Ke'e and Haena State Park that comes up high on the search engines that informs visitors of the limited capacity for parking at the end of the road. This film should be placed on the state website and be of a quality that it is on the visitor channel, Hoike and circulated in other ways to the public.
- A traditional hale similar to what is at Limahuli Gardens is built instead of a solid visitor center at the grass or grass-crete parking lot, as well as another bathroom comfort station in the area. Interpretive signage and information is in this area.
- No need for a fence or a gate; the parking would be self-limiting.
- No concession area to add a commercial nature to the park.
- No caretaker cottage that adds cost to the management of the park.
- The cultural management team could determine if they want a boardwalk or path along the embankment of the lot they maintain.
- The cultural management team that is the co-steward of the park with the State can determine a fundraising element for the area. That may come in the form of Hawaii State Tourism Authority Grants, Natural Resources Preservation Maintenance Stewardship grants, planks in the boardwalk with an engraved name, enlisting donations from the wealth of the homeowners of the area or other benefactors, hotel associations, charitable dinners, etc. This private charitable fundraising efforts would be able to utilize the monies solely for the use in the park rather than having the monies go to a general fund of the state coffers. It is the responsibility of the management team to utilize the funds for restoring the cultural elements of the park with their own staff and volunteers. NTBG has demonstrated success in this capacity that can be mentored to other curatorship partners. Group transportation is key. It is too early to give up on the North Shore Shuttle. The importance of a larger transportation plan needs to be emphasized for collaboration with this Haena State Park Master Plan when the area is so heavily utilized by the Hawaii visitor industry as an image to draw people to the state.
- Finalization of regional or specific plans such as this and the Black Pot Park plan in Hanalei will create unintended impacts on other areas of the island, especially when there are no limits on the number of rental cars. We have three proposed hotel sites designated on the east corridor to go under development in the next ten years without corresponding infrastructure improvements. When we protect the areas from over-parking in the most highly advertised areas for the visitor industry we push the visitor overflow and frustration into other areas. A visitor, like any person, gets grumpy and poorly behaved when they feel exploited or disrespected. We need to cultivate happy visitors who continue as welcome guests. When they know in advance they will be coming to these areas in the simplicity of a shuttle bus, they will welcome the opportunity with grace rather than grumbles.

**The assurance that it is the descendants of the Hawaiian Haena community that are given cultural management of the area with the intention to share it with others is central to my support of this plan. Entry to the Na Pali Coast should not be exploited as a commodity for revenue.**





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Ms. Felicia Cowden  
SUBJECT: COMMENTS ON THE HĀ'ENA STATE PARK MASTER PLAN DRAFT ENVIRONMENTAL  
IMPACT STATEMENT (EIS), HĀ'ENA, KAUA'I, HAWAII  
Month XX, 2018  
Page 2

- Mahalo for your comment regarding too much development and gates and the concern for having to generate more income to maintain operations. Please note there were no concessions proposed in the plan. Also, the plan has been revised to delete the Education and Cultural Center as well as the Caretaker's Cottage and now recommends a much simpler Welcome Hale at the entrance with restrooms for men and women. Please see the attached **Master Plan Summary and Figure 1** which shows the revised master plan graphic, from the Final EIS. The revised master plan includes significant changes and minimal physical improvements to preserve the natural beauty of the park. The gate at the highway is also envisioned to be a simple swing gate that is low with an open design to maintain views towards Kē'ē.
- We acknowledge your concerns that the potential limitations on the number of visitors could possibly impact neighboring communities and beaches. One of the key management recommendations is to adopt adaptive management to allow for changes in order to make improvements on management policies. Should impacts to Makua and other areas along the North Shore occur, State Parks can adjust visitor limits, parking, and access policies to see if they help reduce those impacts. The Kaua'i General Plan was recently adopted in March and State Parks continues to work with the County on potential North Shore transportation solutions as most recognize the traffic is a regional issue and not due to any one use in isolation.
- We recognize your comments on preferential access for tourists over local residents and the potential for volunteer programs to be exploited. However, volunteers are not included in the proposed visitor limits and so would not exclude anyone whether tourist or resident from entering the park. We also acknowledge your questions regarding determination of exempted cultural practitioners and how access at the gate entry will be managed. State Parks cannot prohibit protected cultural practitioners from accessing the parks, which is why they are exempted from the proposed visitor limits. However, revisions to the way the visitor limits are proposed to be managed include applying the visitor limits only to peak hours of park use and averaging the counts over longer periods so the limit is not a hard limit of 900 visitors per day. Please see the revised text from Section 2.5.4.3 of the EIS in the **Visitor Limits** attachment describing the changes in more detail.
- We understand your concerns and fear of not being able to access Kē'ē. As noted above, the visitor limits are now proposed to take effect only during peak park hours of use to help manage the impacts of having hundreds of people at the park at once. The park is proposed to remain open without visitor limits in the early morning and late afternoon hours. People will be allowed to exit the park without limit.

Mahalo nui for your suggestions. We offer the following responses:

- As noted above, State Parks has expanded curatorship agreements with the Hui and the County has also entered into a similar agreement to help maintain and manage their parcel, which contains the heiau.
- The plan recommends closing the highway to general visitor traffic due to the rockfall hazard and will post warning signs at the gate to advise anyone who chooses to traverse that section of the highway of the potential risks. Rocks have fallen and the plan recommends providing the alternative route outside of the modeled rockfall hazard areas for the general public and anyone who prefers to avoid those hazards.

Ms. Felicia Cowden  
4191 Kilauea Road  
Kilauea, HI 96754

**SUBJECT: COMMENTS ON THE HĀ'ENA STATE PARK MASTER PLAN  
DRAFT ENVIRONMENTAL IMPACT STATEMENT (EIS),  
HĀ'ENA, KAUA'I, HAWAII**

Aloha Ms. Cowden,

Mahalo nui for your emailed comments dated September 6, 2015 regarding the Hā'ena State Park Master Plan Draft Environmental Impact Statement (EIS). As noted in our other response to your comment card received at the August 19, 2015 meeting, the State of Hawai'i, Department of Land and Natural Resources, Division of State Parks (State Parks) has worked on revising the master plan with a reorganized Hā'ena State Park Community Advisory Committee (HSPCAC) to address the concerns voiced by the larger community. As a result, the master plan presented in the Final EIS has been updated based on the feedback received from the public meetings, comments received, and subsequent extensive collaboration with the HSPCAC. As the planning consultant for State Parks, we offer the following responses to your comments.

We acknowledge your concern with the public comment period and request for extended time, as well as your overall concern that the implementation of the master plan may not match the expectation to preserve the cultural resources in the park. The public comment period was extended an additional thirty days until October 8, 2015 and all comments received up until November 4, 2015 were taken into consideration and have been incorporated into the Final EIS.

Mahalo for your comments on the strengths of the master plan and support for the aspects of the plan regarding visitor limits and the removal of cars that congest the narrow highway, provisions to support traditional Hawaiian land stewardship, preservation of authentic landscaping, and incorporation of cultural uses. We also appreciate your support for mitigating overuse of the park through restoration of the park from Limahuli Stream to the heiau.

We offer the following responses to your bulleted concerns:

- We recognize your concern that the public open bidding process may award management of the park to an outside entity, and potentially result in unintended development, fees, commercialization, commodification, exploitation, and closure of the park. Please note that the third-party lease option was just one management alternative suggested by the original Master Plan Advisory Committee during the development of the master plan. Since then, State Parks has expanded its curatorship agreement with Hui Maka'ānana O Makana (the "Hui") to restore more areas of the lo'i as well as the Allerton Caretaker's Cottage. They also recently resurfaced the main parking lot although unfortunately, that work was lost in the recent heavy rainfall events. The County of Kauai also similarly entered into an agreement with the Hui to maintain their property which contains Ka Ulu A Paoh Heiau and Kē Ahu A Laka.

- Mahalo for your recommendations on parking management. The main parking lot is proposed to be paved with permeable materials and the special access parking lot at Kē'e will accommodate cultural practitioners and ADA vehicles. State Parks appreciates your recommendations on paid permitted parking, proposed fees, staffing, and concierge service.
- Mahalo also for your recommendation to put a webcam up at the park so that real-time parking availability can be checked by potential visitors. This is a good idea, which could also help with security issues. However, reliable Internet and cellular network access is required to transmit the videos so State Parks will revisit this once established. Real-time information distribution via electronic means, such as text, email, and the Internet, however, are recommendations made in the master plan to help keep the public up-to-date on park access and safety issues.
- State Parks appreciates the recommendations to work with the visitor industry on informational videos and transportation options to help inform tourists. These are all very good ideas.
- The Education and Cultural Center has been removed from the master plan and a simple Welcome Hale with interpretive displays and additional restrooms have been placed at the entry as you recommend. Please see the attached revised Master Plan Summary and Figure 1.
- Mahalo for your recommendation that a gate is not needed. The gate is proposed to limit unauthorized parking, to mitigate the rockfall hazard along that road section, and help deter the late-night parties and activities that have damaged the park. As noted, the gate is envisioned to have an open design and the park will be open for early morning and late afternoon and evening use.
- No concession areas are or were proposed for the park.
- The Caretaker's Cottage has been removed from the plan.
- Members of the Hui were the ones who recommended the path be moved to the first berm of the lo'i so that the main visitor path would be out of the modeled rockfall hazard area.
- Mahalo nui for your recommendations for the various fundraising efforts that could be entertained by the advisory groups. This can be taken into consideration at a future time as desired by the groups.
- The proposed plan and State Parks support all shuttle options to provide access to and from the park. State Parks has been participating in discussions with the County about the North Shore shuttle and is hopeful something can be done.
- Mahalo for sharing your concerns about other area developments. While they are outside of the control of State Parks, we appreciate your concern for impacts to visitors and the community.
- One of the other key recommendations is to establish a Cultural Advisory Group for the park, which will include cultural experts as well as representatives from the Hā'ena families and those who have worked and cared for the land within the park boundaries as described in Section 2.5.4.2 of the Draft EIS. We appreciate your support for their involvement in future management of the park and understand your concern for potential commodification of the park.

Mahalo nui for your input and participation in the environmental review process. Your letter will be included in the Final EIS. If you would like a copy of the Final EIS or portions thereof, please let us know. Otherwise, the electronic copy of the Final EIS will be available

on the Office of Environmental Quality Control website at  
<http://oeq2.doh.hawaii.gov/EA-EIS-Library/2018--KA-FEIS-Haena-State-Park-Master-Plan.pdf> on 10/10/2018.

Aloha,

Kimi Mikami Yuen, LEED AP BD+C  
Principal

Attachments: Master Plan Summary  
Figure 1: Master Plan  
Visitor Limits

cc: The Honorable David Y. Ige, Governor  
Office of Environmental Quality Control  
Board of Land and Natural Resources  
Division of State Parks

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Please share your comments on the Hā'ena State Park Master Plan Draft EIS.  
(If you would like a written response letter, please include your mailing address.)

We do not support this plan. I know good intentions were there but limiting local access is not helping the problem stand from the amount of people coming to Kauai. This is the end of the problem - start at the beginning. Where will all the excess go? Hanalei is already over run.

It was a good intentioned idea but with part is not supported by the North Shore community. If somehow just that could be limited it would be better supported. EIS should have more time... not 2 weeks.



H. Anahalea  
Box 743  
Hanalei HI 96714

PBR HAWAII & Associates  
Attn: Kimi Yuen  
1001 Bishop Street, Suite 650  
Honolulu, HI 96813



H. Anakalia  
SUBJECT: COMMENTS ON THE HÅ'ENA STATE PARK MASTER PLAN DRAFT ENVIRONMENTAL  
IMPACT STATEMENT (EIS), HÅ'ENA, KAUA'I, HAWAII  
Month XX, 2018  
Page 2

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Aloha,

Kimi Mikami Yuen, LEED AP BD+C  
Principal

Attachments: Visitor Limits

cc: The Honorable David Y. Ige, Governor  
Office of Environmental Quality Control  
Board of Land and Natural Resources  
Division of State Parks

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JS 1.docx

SUBJECT: COMMENTS ON THE HÅ'ENA STATE PARK MASTER PLAN  
DRAFT ENVIRONMENTAL IMPACT STATEMENT (EIS),  
HÅ'ENA, KAUA'I, HAWAII

Aloha H. Anakalia,

Mahalo nui for your comment card from the community meeting on August 19, 2015 regarding the Hå'ena State Park Master Plan Draft Environmental Impact Statement (EIS). We sincerely apologize for the delay in responding. Due to the feedback received on the Draft EIS, the State of Hawai'i, Department of Land and Natural Resources, Division of State Parks (State Parks) has worked on revising the master plan with a reorganized Hå'ena State Park Community Advisory Committee (HSPCAC) to address the concerns voiced by the larger community. As a result, the master plan presented in the Final EIS has been updated based on the feedback received from the public meetings, comments received, and subsequent extensive collaboration with the HSPCAC. As the planning consultant for State Parks, we offer the following responses to your comments.

We recognize your comment regarding potentially limiting the number of visitors to the park. The main parking lot is proposed to be separated into a fee-paying lot and non-fee-paying lot, which will also be adjusted daily to allow flexibility depending on future demand for parking and the potential use of the proposed shuttle. Entry fees for state parks are established by Hawai'i Administrative Rules (HAR) 13-146-6, which states that Hawai'i residents are exempt from paying park entry fees if they can show a valid Hawai'i ID. Other categories of fee exempt park users (such as registered volunteers) may be established at a later time. Please see the "Visitor Limits" attachment from Section 2.5.4.3 of the Final EIS which shows the verbatim changes from the Draft EIS for this section.

Mahalo nui for your input and participation in the environmental review process. Your letter will be included in the Final EIS. If you would like a copy of the Final EIS or portions thereof, please let us know. Otherwise, the electronic copy of the Final EIS will be available on the Office of Environmental Quality Control website at [http://oeqc2.doh.hawaii.gov/EA\\_EIS\\_Library/2018\\_HA-EIS-Haena-State-Park-Master-Plan.pdf](http://oeqc2.doh.hawaii.gov/EA_EIS_Library/2018_HA-EIS-Haena-State-Park-Master-Plan.pdf) on Month XX, 2018.

Please share your comments on the Hā'ena State Park Master Plan Draft EIS.

(If you would like a written response letter, please include your mailing address.)

Absolutley no gates, ~~no~~ more bridges!

Absolutley nothing to keep the local people out. We don't want nothing of yours.

JUST LOCK THE  
WHITE PEOPLE

OUT!



PO Box 984

Hanalei, HI

Hawaiki Oliver

PBR HAWAII & Associates

Attn: Kimi Yuen

1001 Bishop Street, Suite 650

Honolulu, HI 96813



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Mr. Hawaiki Oliver  
SUBJECT: COMMENTS ON THE HĀ'ENA STATE PARK MASTER PLAN DRAFT ENVIRONMENTAL  
IMPACT STATEMENT (EIS), HĀ'ENA, KAUA'I, HAWAII  
Month XX, 2018  
Page 2

Aloha,

Kimi Mikami Yuen, LEED AP BD+C  
Principal

Attachments: Master Plan Summary  
Figure 1: Master Plan

cc: The Honorable David Y. Ige, Governor  
Office of Environmental Quality Control  
Board of Land and Natural Resources  
Division of State Parks

O:\Jad26\262701 D\NR-Haena State Park Master Plan EIS\DEIS Responses\Mail Merge\2015-08-19 Hawaiki Oliver -  
JS1.docx

SUBJECT: COMMENTS ON THE HĀ'ENA STATE PARK MASTER PLAN  
DRAFT ENVIRONMENTAL IMPACT STATEMENT (EIS),  
HĀ'ENA, KAUA'I, HAWAII

Aloha Mr. Oliver,

Mahalo nui for your comment card from the community meeting held on August 19, 2015 regarding the Hā'ena State Park Master Plan Draft Environmental Impact Statement (EIS). We sincerely apologize for the delay in responding. Due to the feedback received on the Draft EIS, the State of Hawai'i, Department of Land and Natural Resources, Division of State Parks (State Parks) has worked on revising the master plan with a reorganized Hā'ena State Park Community Advisory Committee (HSPCAC) to address the concerns voiced by the larger community. As a result, the master plan presented in the Final EIS has been updated based on the feedback received from the public meetings, comments received, and subsequent extensive collaboration with the HSPCAC. As the planning consultant for State Parks, we offer the following responses to your comments.

We recognize your comment regarding gates and bridges in the master plan. The revised master plan has less proposed development than previously designed in the draft EIS. Only a few new structures are proposed, including a Welcome Hale that is envisioned as an open traditional Hawaiian hale and located near the improved main parking lot. Please see the revised Figure 1 Master Plan graphic and the "Master Plan Summary" attachment from Section 1.9.1 of the Final EIS, which show the verbatim changes from the Draft EIS for this section.

We also recognize your comment regarding limiting visitor access to the park. The park is a part of the State of Hawai'i Department of Land and Natural Resources, Parks Division. As an agency of the State of Hawai'i, the park will not discriminate or violate civil rights. State Parks will continue to work on the different options with the advisory committee and could include a variety of options as long as they do not violate the federal Land and Water Conservation Fund rules, which allow charging different fees for residents and nonresidents as long as they are comparable to current fee differences between the two.

Mahalo nui for your input and participation in the environmental review process. Your letter will be included in the Final EIS. If you would like a copy of the Final EIS or portions thereof, please let us know. Otherwise, the electronic copy of the Final EIS will be available on the Office of Environmental Quality Control website at [http://oeq2.doh.hawaii.gov/EA\\_EIS\\_Library/2018--KA-FEIS-Haena-State-Park-Master-Plan.pdf](http://oeq2.doh.hawaii.gov/EA_EIS_Library/2018--KA-FEIS-Haena-State-Park-Master-Plan.pdf) on 11/15/2018.

- ① I like the integration of:
- natural hazard avoidance, reduced threats by locating boardwalk outside of rock fall area
  - cultural practices
  - preservation of important historic & cultural sites
  - encouraging revitalization of local sites
  - outdoor recreation - advisory committee
  - education
- ② Scaled-down outdoor recreation impacts and footprint (hopefully)

- ③ Defined the limits of acceptable change (do not use the term "carrying capacity")

J. Souza  
P.O. Box 3390  
Lihue, Hawaii 96766



Month XX, 2018 - DRAFT

J. Souza  
P.O. Box 3390  
Lihue, HI 96766

**SUBJECT: COMMENTS ON THE HÄENA STATE PARK MASTER PLAN DRAFT ENVIRONMENTAL IMPACT STATEMENT (EIS), HÄ'ENA, KAUA'I, HAWAII**

Aloha J. Souza,

Mahalo nui for your comment card from the community meeting held on August 19, 2015 regarding the Hä'ena State Park Master Plan Draft Environmental Impact Statement (EIS). We sincerely apologize for the delay in responding. Due to the feedback received on the Draft EIS, the State of Hawai'i, Department of Land and Natural Resources, Division of State Parks (State Parks) has worked on revising the master plan with a reorganized Hä'ena State Park Community Advisory Committee (HSPCAC) to address the concerns voiced by the larger community. As a result, the master plan presented in the Final EIS has been updated based on the feedback received from the public meetings, comments received, and subsequent extensive collaboration with the HSPCAC. As the planning consultant for State Parks, we offer the following responses to your comments.

Mahalo for your support for the Hä'ena State Park Master Plan. We appreciate your support of the master plan's natural hazard mitigation, cultural practices, cultural and historic preservation, outdoor recreation and education, advisory committee, and reduced mitigation and impacts.

Mahalo nui for your input and participation in the environmental review process. Your letter will be included in the Final EIS. If you would like a copy of the Final EIS or portions thereof, please let us know. Otherwise, the electronic copy of the Final EIS will be available on the Office of Environmental Quality Control website at [http://oeqc2.doh.hawaii.gov/EA\\_EIS\\_Library/2018\\_KA-FEIS-Haena-State-Park-Master-Plan.pdf](http://oeqc2.doh.hawaii.gov/EA_EIS_Library/2018_KA-FEIS-Haena-State-Park-Master-Plan.pdf) on , 2018.

Aloha,

Kimi Mikami Yuen, LEED AP BD+C  
Principal

cc: The Honorable David Y. Ige, Governor  
Office of Environmental Quality Control  
Board of Land and Natural Resources  
Division of State Parks

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Please share your comments on the Hā'ena State Park Master Plan Draft EIS.

(If you would like a written response letter, please include your mailing address.)

- \* Unlimited access to locals (verification by license)
- \* No permanent structures built @ all
- \* 500 hundred limit to tourists
- \* No Federal involvement @t all!
- \* Restore all damage done already
- even "disturbed" areas - renew-replant

Jacobs Keli'i Holomalu Aiona  
P.O. Box 1251 Kilauea  
HI, 96754

PBR HAWAII & Associates

Attn: Kimi Yuen

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Honolulu, HI 96813





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PLANNING • LANDSCAPE ARCHITECTURE • ENVIRONMENTAL STUDIES • ENTITLEMENTS • PERMITTING • GRAPHIC DESIGN

Mr. Jacob Kelii Hoomalu Aiona  
SUBJECT: COMMENTS ON THE HĀ'ENA STATE PARK MASTER PLAN DRAFT ENVIRONMENTAL  
IMPACT STATEMENT (EIS), HĀ'ENA, KAUA'I, HAWAII  
Month XX, 2018  
Page 2

We acknowledge your comments on restoring the natural features of the park and concerns with the originally proposed "permanent" buildings and structures. The revised master plan includes significant changes and minimal physical improvements to preserve the natural beauty of the park, as described in the attached **Master Plan Summary** from the Final EIS. Most of the proposed buildings, including the visitor center, and caretaker's cottage, have been removed in the revised master plan. In response to your comments regarding restoration of "disturbed" areas, the revised master plan includes many aspects for restoring and maintaining the natural environment within the park.

We also recognize your comments on limiting federal involvement. The planning process involved a collaborative approach to support the government agencies involved in developing the master plan by consulting various local community groups and individuals, including a thirty-two member Master Plan Advisory Committee (MPAC) consisting of Hā'ena Kūpuna and 'ohana members, cultural practitioners and scientific experts, business representatives, State and County agencies, and other North Shore community members to provide recommendations on the physical plan and park management. Please see the attached **Section 1.7** from the Final EIS describing the **Agency and Community Group Engagement**.

Mahalo nui for your input and participation in the environmental review process. Your letter will be included in the Final EIS. If you would like a copy of the Final EIS or portions thereof, please let us know. Otherwise, the electronic copy of the Final EIS will be available on the Office of Environmental Quality Control website at [http://oeqc2.doh.hawaii.gov/EA\\_EIS\\_Library/2018--KA-FEIS-Haena-State-Park-Master-Plan.pdf](http://oeqc2.doh.hawaii.gov/EA_EIS_Library/2018--KA-FEIS-Haena-State-Park-Master-Plan.pdf) on **Month XX, 2018**.

Aloha,

Kimi Mikami Yuen, LEED AP BD+C  
Principal

Attachments: Master Plan Summary  
Adaptive Management  
Visitor Limits  
Agency and Community Group Engagement

cc: The Honorable David Y. Ige, Governor  
Office of Environmental Quality Control  
Board of Land and Natural Resources  
Division of State Parks

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Mr. Jacob Kelii Hoomalu Aiona  
P.O. Box 1251  
Kilauea, HI 96754

SUBJECT: COMMENTS ON THE HĀ'ENA STATE PARK MASTER PLAN  
DRAFT ENVIRONMENTAL IMPACT STATEMENT (EIS),  
HĀ'ENA, KAUA'I, HAWAII

Aloha Mr. Aiona,

Mahalo nui for your comment card received at the public meeting held on August 19, 2015 regarding the Hā'ena State Park Master Plan Draft Environmental Impact Statement (EIS). We sincerely apologize for the delay in responding. Due to the feedback received on the Draft EIS, the State of Hawai'i, Department of Land and Natural Resources, Division of State Parks (State Parks) has worked on revising the master plan with a reorganized Hā'ena State Park Community Advisory Committee (HSPCAC) to address the concerns voiced by the larger community. As a result, the master plan presented in the Final EIS has been updated based on the feedback received from the public meetings, comments received, and subsequent extensive collaboration with the HSPCAC. As the planning consultant for State Parks, we offer the following responses to your comments.

We recognize your concerns regarding local resident access, potential limitations on the number of visitors and the originally proposed structures in the Draft EIS. We acknowledge your suggestion for unlimited access for locals and a 500 person limit for tourists. While the proposed visitor limits do not distinguish between residents and nonresidents, the revised master plan calls for an adaptive management approach for the proposed visitor limits, which will be adjusted based on an average number of visitors rather than a set limit per day. However, there will be exemptions from the visitor limit total for special user groups from the community. The limits will also be instituted only during peak hours of park use and will allow visitors to enter before and after without being counted against the visitor limit. Therefore, access will be allowed into the park and parking lot outside those peak hours and will be adjusted as appropriate based on ongoing input from the community. Please reference the attached sections from the Final EIS on **Visitor Limits** and **Adaptive Management**.

As the State has more time to analyze user patterns, other options can be explored over time, and they are actively engaged in discussions regarding parking enforcement and increased fines along the roadway outside of the park as well. Currently, entry fees for all state parks are established by Hawai'i Administrative Rules (HAR) 13-146-6, at the rate of \$5/car or \$1/person. HAR 13-146-6 also states that Hawai'i residents are exempt from paying park entry fees if they can show a valid Hawai'i ID. Similar fees could be instituted at Hā'ena State Park. However, State Parks will continue to work on the different options with the advisory committee and could include a variety of options as long as they do not violate the federal Land and Water Conservation Fund rules, which allow charging different fees for residents and nonresidents as long as they are comparable to current fee differences between the two.

Please share your comments on the Hā'ena State Park Master Plan Draft EIS.  
(If you would like a written response letter, please include your mailing address.)

Fishing at nite -  
Beach to walk on at all hours of  
Day for all the people -  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_



*[Handwritten signature]*  
\_\_\_\_\_  
PO Box 1193  
Honolulu, HI 96814

PBR HAWAII & Associates  
Attn: Kimi Yuen  
1001 Bishop Street, Suite 650  
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TOM SCHNILL, AICP  
Principal

KIMI MIKAMI YUEN, LEED® AP BD+C  
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Ms. Judith Ellent  
SUBJECT: COMMENTS ON THE HĀ'ENA STATE PARK MASTER PLAN DRAFT ENVIRONMENTAL  
IMPACT STATEMENT (EIS), HĀ'ENA, KAUA'I, HAWAII  
Month XX, 2018  
Page 2

cc: The Honorable David Y. Ige, Governor  
Office of Environmental Quality Control  
Board of Land and Natural Resources  
Division of State Parks

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SUBJECT: COMMENTS ON THE HĀ'ENA STATE PARK MASTER PLAN  
DRAFT ENVIRONMENTAL IMPACT STATEMENT (EIS),  
HĀ'ENA, KAUA'I, HAWAII

Aloha Ms. Ellent,

Mahalo nui for your comment card received at the public meeting held on August 19, 2015 regarding the Hā'ena State Park Master Plan Draft Environmental Impact Statement (EIS). We sincerely apologize for the delay in responding. Due to the feedback received on the Draft EIS, the State of Hawai'i, Department of Land and Natural Resources, Division of State Parks (State Parks) has worked on revising the master plan with a reorganized Hā'ena State Park Community Advisory Committee (HSPCAC) to address the concerns voiced by the larger community. As a result, the master plan presented in the Final EIS has been updated based on the feedback received from the public meetings, comments received, and subsequent extensive collaboration with the HSPCAC. As the planning consultant for State Parks, we offer the following responses to your comments.

We recognize your concerns regarding access to the beach during the day and potential limitations. The revised master plan calls for proposed visitor limits to be instituted only during peak hours of park use and will allow visitors to enter before and after without being counted against the visitor limit. Therefore, access will be allowed into the park outside those peak hours and will be adjusted as appropriate based on ongoing input from the community. Your comment regarding fishing at night is also not expected to be affected by the revised visitor limits since peak hours are unlikely to extend into night hours. State Parks will continue to work on different options with the advisory committee regarding proposed exemptions for special user groups during the day as well. Please reference the attached sections from the Final EIS on [Visitor Limits](#).

Mahalo nui for your input and participation in the environmental review process. Your letter will be included in the Final EIS. If you would like a copy of the Final EIS or portions thereof, please let us know. Otherwise, the electronic copy of the Final EIS will be available on the Office of Environmental Quality Control website at [http://oeqc2.doh.hawaii.gov/EA\\_EIS\\_Library/2018--KA-FEIS-Haena-State-Park-Master-Plan.pdf](http://oeqc2.doh.hawaii.gov/EA_EIS_Library/2018--KA-FEIS-Haena-State-Park-Master-Plan.pdf) on [Month XX, 2018](#).

Aloha,

Kimi Mikami Yuen, LEED AP BD+C  
Principal

Attachments: Visitor Limits

Please share your comments on the Hā'ena State Park Master Plan Draft EIS.  
(If you would like a written response letter, please include your mailing address.)

- ① Require Permits (Limited) for Tourists
- ② Unlimited Access for Locals & Hikers
- ③ CONSULT w/ LAWFUL HAWAIIAN GOVT.  
(PACIFIC MINISTER - HENRY NOA (808-741-7257))



JIM Q. YUEN  
PO BOX 321 KILUEA HI  
96754

PBR HAWAII & Associates  
Attn: Kimi Yuen  
1001 Bishop Street, Suite 650  
Honolulu, HI 96813





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RAMAN E. M. TAUM  
Cultural Sustainability Planner

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Senior Associate

MARC SHIMAZU, ASLA  
Senior Associate

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Mr. Jim Quinn  
SUBJECT: COMMENTS ON THE HĀ'ENA STATE PARK MASTER PLAN DRAFT ENVIRONMENTAL  
IMPACT STATEMENT (EIS), HĀ'ENA, KAUA'I, HAWAII  
Month XX, 2018  
Page 2

Aloha,

Kimi Mikami Yuen, LEED AP BD+C  
Principal

Attachments: Cultural and Community Advisory Groups

cc: The Honorable David Y. Ige, Governor  
Office of Environmental Quality Control  
Board of Land and Natural Resources  
Division of State Parks

O:\Job26\262701 DLNR-Haena State Park Master Plan\EIS\EIS Responses\Mail Merge\2015-08-19 Jim Quinn -  
JS 1.docx

SUBJECT: COMMENTS ON THE HĀ'ENA STATE PARK MASTER PLAN  
DRAFT ENVIRONMENTAL IMPACT STATEMENT (EIS),  
HĀ'ENA, KAUA'I, HAWAII

Aloha Mr. Quinn,

Mahalo nui for your comment card from the community meeting held on August 19, 2015 regarding the Hā'ena State Park Master Plan Draft Environmental Impact Statement (EIS). We sincerely apologize for the delay in responding. Due to the feedback received on the Draft EIS, the State of Hawai'i, Department of Land and Natural Resources, Division of State Parks (State Parks) has worked on revising the master plan with a reorganized Hā'ena State Park Community Advisory Committee (HSPCAC) to address the concerns voiced by the larger community. As a result, the master plan presented in the Final EIS has been updated based on the feedback received from the public meetings, comments received, and subsequent extensive collaboration with the HSPCAC. As the planning consultant for State Parks, we offer the following responses to your comments, numbered per your letter:

1. & 2. We recognize your concerns regarding the number of visitors to the park. The revised master plan proposes the 900-person visitor limit as an initial number which can be adaptively managed and adjusted as appropriate, especially if there continues to be unwanted impacts at the park. If there continue to be issues, State Parks will work with the advisory committees on adjusting the number. Currently, entry fees for all state parks are established by Hawai'i Administrative Rules (HAR) 13-146-6, at the rate of \$5/car or \$1/person. HAR 13-146-6 also states that Hawai'i residents are exempt from paying park entry fees if they can show a valid Hawai'i ID. Similar fees could be instituted at Hā'ena State Park. However, State Parks will continue to work on the different options with the advisory committee and could include a variety of options as long as they do not violate the federal Land and Water Conservation Fund rules, which allow charging different fees for residents and nonresidents as long as they are comparable to current fee differences between the two.

3. We recognize your comment regarding consultation with local community groups and government. One of the key management recommendations is to establish a permanent Cultural Advisory Group and Community Advisory Committee. These are described in Section 2.5.4.2 of the EIS and the verbatim description of these groups is included in the "Cultural and Community Advisory Groups" attachment.

Mahalo nui for your input and participation in the environmental review process. Your letter will be included in the Final EIS. If you would like a copy of the Final EIS or portions thereof, please let us know. Otherwise, the electronic copy of the Final EIS will be available on the Office of Environmental Quality Control website at [http://osqe2.doh.hawaii.gov/EA\\_EIS\\_Library/2018--KA-HEIS-Haena-State-Park-Master-Plan.pdf](http://osqe2.doh.hawaii.gov/EA_EIS_Library/2018--KA-HEIS-Haena-State-Park-Master-Plan.pdf) on 2018

Please share your comments on the Hā'ena State Park Master Plan Draft EIS.

(If you would like a written response letter, please include your mailing address.)

I am interested in Volentenna  
For the most part I like the plan

Josephine Bonaparte 652-0808  
joi@hawaii.nv.com



Josephine Bonaparte  
Po Box 628  
Oahuola HI 96703

PBR HAWAII & Associates  
Attn: Kimi Yuen  
1001 Bishop Street, Suite 650  
Honolulu, HI 96813



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TOM SCHNELL, AICP

Principal

KIMI MIKAMI YUEN, LEED® AP BD+C

Principal

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Chairman Emeritus

ANN MIKAKO BERNHARDT, PhD

Project Director

RAMAN R. M. TAJUM

Cultural Sustainability Planner

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GATE CULLISON, AICP

Senior Associate

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Ms. Josephine Bonaparte  
SUBJECT: COMMENTS ON THE HĀ'ENA STATE PARK MASTER PLAN DRAFT ENVIRONMENTAL  
IMPACT STATEMENT (EIS), HĀ'ENA, KAUA'I, HAWAII  
Month XX, 2018  
Page 2

Bonaparte - DSI.docx

Ms. Josephine Bonaparte  
P.O. Box 628  
Anahola, HI 96703

SUBJECT: COMMENTS ON THE HĀ'ENA STATE PARK MASTER PLAN  
DRAFT ENVIRONMENTAL IMPACT STATEMENT (EIS),  
HĀ'ENA, KAUA'I, HAWAII

Aloha Ms. Bonaparte,

Mahalo nui for your comment card received at the public meeting held on August 19, 2015 regarding the Hā'ena State Park Master Plan Draft Environmental Impact Statement (EIS). We sincerely apologize for the delay in responding. Due to the feedback received on the Draft EIS, the State of Hawai'i, Department of Land and Natural Resources, Division of State Parks (State Parks) has worked on revising the master plan with a reorganized Hā'ena State Park Community Advisory Committee (HSPCAC) to address the concerns voiced by the larger community. As a result, the master plan presented in the Final EIS has been updated based on the feedback received from the public meetings, comments received, and subsequent extensive collaboration with the HSPCAC. As the planning consultant for State Parks, we offer the following responses to your comments.

Mahalo for your support of the Hā'ena State Park Master Plan. We also appreciate your interest in volunteering as well. The draft version of the Master Plan has been revised to reflect feedback received from the community. Please see the attached Master Plan Summary from the Final EIS for reference to review the revisions to the plan.

Mahalo nui for your input and participation in the environmental review process. Your letter will be included in the Final EIS. If you would like a copy of the Final EIS or portions thereof, please let us know. Otherwise, the electronic copy of the Final EIS will be available on the Office of Environmental Quality Control website at [http://oeqc2.doh.hawaii.gov/EA\\_EIS\\_Library/2018\\_KA-FEIS-Haena-State-Park-Master-Plan.pdf](http://oeqc2.doh.hawaii.gov/EA_EIS_Library/2018_KA-FEIS-Haena-State-Park-Master-Plan.pdf) on , 2018.

Aloha,

Kimi Mikami Yuen, LEED AP BD+C  
Principal

Attachments: Master Plan Summary

cc: The Honorable David Y. Ige, Governor  
Office of Environmental Quality Control  
Board of Land and Natural Resources  
Division of State Parks

O:\job26\2627\01 D\NR-Haena State Park Master Plan\EIS\Responses\Mail Merge\2015-08-19 Josephine

Please share your comments on the Hā'ena State Park Master Plan Draft EIS.

(If you would like a written response letter, please include your mailing address.)

My family has been living in  
Hā'ena for hundreds of years.  
I do not approve of this  
plans.

Kaisen Carrillo

PBR HAWAII & Associates  
Attn: Kimi Yuen  
1001 Bishop Street, Suite 650  
Honolulu, HI 96813





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Mr. Kaisen Carrillo  
SUBJECT: COMMENTS ON THE HĀ'ENA STATE PARK MASTER PLAN DRAFT ENVIRONMENTAL  
IMPACT STATEMENT (EIS), HĀ'ENA, KAUA'I, HAWAII  
Month XX, 2018  
Page 2

Aloha,

Kimi Mikami Yuen, LEED AP BD+C  
Principal

Attachments: Master Plan Summary  
Figure 1: Master Plan

cc: The Honorable David Y. Ige, Governor  
Office of Environmental Quality Control  
Board of Land and Natural Resources  
Division of State Parks

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address - JSI.docx

Mr. Kaisen Carrillo  
(no address)  
SUBJECT: COMMENTS ON THE HĀ'ENA STATE PARK MASTER PLAN  
DRAFT ENVIRONMENTAL IMPACT STATEMENT (EIS),  
HĀ'ENA, KAUA'I, HAWAII

Aloha Mr. Carrillo,

Mahalo nui for your comment card from the community meeting held on August 19, 2015 regarding the Hā'ena State Park Master Plan Draft Environmental Impact Statement (EIS). We sincerely apologize for the delay in responding. Due to the feedback received on the Draft EIS, the State of Hawai'i, Department of Land and Natural Resources, Division of State Parks (State Parks) has worked on revising the master plan with a reorganized Hā'ena State Park Community Advisory Committee (HSPCAC) to address the concerns voiced by the larger community. As a result, the master plan presented in the Final EIS has been updated based on the feedback received from the public meetings, comments received, and subsequent extensive collaboration with the HSPCAC. As the planning consultant for State Parks, we offer the following responses to your comments.

We recognize your comment regarding your family's history in Hanalei and your opposition to the previous master plan. The revised master plan has taken community outreach and revised different aspects of the previous plan based on that input. For example, only a few new structures are proposed, including a Welcome Hale that is envisioned as an open traditional Hawaiian hale and located near the improved main parking lot. Interpretive and informational signage will be posted at the hale and two small comfort stations to the side of the main parking lot will provide a second set of facilities to reduce wastewater flows at the existing Kē'e comfort station. The current overflow parking area will serve as the main parking lot and be resurfaced with permeable paving. In addition, a new entry turnaround and shuttle stop, and a new pedestrian-only path that connects the main parking lot with Kē'e Beach through the lo'i are included in the plan. The new pedestrian path would follow along the first berm of the lo'i closest to the highway and is proposed to be slightly elevated so as not to impact the berm or any of the historic resources, but will maintain a low profile just above the berm. Please see the revised Figure 1 Master Plan graphic and the "Master Plan Summary" attachment from Section 1.9.1 of the Final EIS, which show the verbatim changes from the Draft EIS for this section.

Mahalo nui for your input and participation in the environmental review process. Your letter will be included in the Final EIS. If you would like a copy of the Final EIS or portions thereof, please let us know. Otherwise, the electronic copy of the Final EIS will be available on the Office of Environmental Quality Control website at [http://oeq2.doh.hawaii.gov/EA\\_EIS\\_Library/2018--KA-FEIS-Haena-State-Parks-Master-Plan.pdf](http://oeq2.doh.hawaii.gov/EA_EIS_Library/2018--KA-FEIS-Haena-State-Parks-Master-Plan.pdf) on 2018.



Please share your comments on the Hā'ena State Park Master Plan Draft EIS.  
(If you would like a written response letter, please include your mailing address.)

This is not a reasonable idea. To make any changes in Hā'ena the entire area must be considered. Where do you think the 500 cars that are turned away will go? TUNNELS. Hā'ena will become UNNAVAGAT-IONABLE!  
You need to support the residents & control ALL tourist traffic to Hā'ena PERIOD.



Karen Sherwood & Michael Olanoff  
PO Box 1553  
Hanalei HI 96714

PBR HAWAII & Associates  
Attn: Kimi Yuen  
1001 Bishop Street, Suite 650  
Honolulu, HI 96813



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Ms. Karen Sherwood and Mr. Michael Olanolan  
SUBJECT: COMMENTS ON THE HĀ'ENA STATE PARK MASTER PLAN DRAFT ENVIRONMENTAL  
IMPACT STATEMENT (EIS), HĀ'ENA, KAUA'I, HAWAII  
Month XX, 2018  
Page 2

We recognize negative effects of the master plan may include the distribution of recreational demand to other facilities on the North Shore and island-wide, especially the nearby Hā'ena Beach Park. State Parks should monitor use of Hā'ena County Park to judge if the recreational demand is shifted from one facility to the other. If so, an adjustment to the number of visitors allowed per day to Hā'ena State Park might be considered as a mitigating measure. If a shuttle is employed, a mitigation measure may be to include a stop at Hā'ena Beach Park to alleviate traffic and congestion at the County park as well.

Mahalo nui for your input and participation in the environmental review process. Your letter will be included in the Final EIS. If you would like a copy of the Final EIS or portions thereof, please let us know. Otherwise, the electronic copy of the Final EIS will be available on the Office of Environmental Quality Control website at [http://oeq2.doh.hawaii.gov/EA\\_EIS\\_Library/2018-1KA-FEIS-Haena-State-Park-Master-Plan.pdf](http://oeq2.doh.hawaii.gov/EA_EIS_Library/2018-1KA-FEIS-Haena-State-Park-Master-Plan.pdf) on 2018.

Aloha,

Kimi Mikami Yuen, LEED AP BD+C  
Principal

Attachments: Roadways and Traffic

cc: The Honorable David Y. Ige, Governor  
Office of Environmental Quality Control  
Board of Land and Natural Resources  
Division of State Parks

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Ms. Karen Sherwood and Mr. Michael Olanolan  
P.O. Box 1553  
Hanalei, HI 96714

SUBJECT: COMMENTS ON THE HĀ'ENA STATE PARK MASTER PLAN  
DRAFT ENVIRONMENTAL IMPACT STATEMENT (EIS),  
HĀ'ENA, KAUA'I, HAWAII

Aloha Ms. Sherwood and Mr. Olanolan,

Mahalo nui for your comment card from the community meeting held on August 19, 2015 regarding the Hā'ena State Park Master Plan Draft Environmental Impact Statement (EIS). We sincerely apologize for the delay in responding. Due to the feedback received on the Draft EIS, the State of Hawai'i, Department of Land and Natural Resources, Division of State Parks (State Parks) has worked on revising the master plan with a reorganized Hā'ena State Park Community Advisory Committee (HSPCAC) to address the concerns voiced by the larger community. As a result, the master plan presented in the Final EIS has been updated based on the feedback received from the public meetings, comments received, and subsequent extensive collaboration with the HSPCAC. As the planning consultant for State Parks, we offer the following responses to your comments.

We recognize your concerns for parking and traffic impacts in the master plan regarding the entire north shore region of Kaua'i. Austin, Tsutsumi and Associates, Inc. (ATA) prepared a Traffic Impact Analysis Report (TIAR) for the Master Plan, which is attached in the EIS as Appendix F. Because of the unique nature of the traffic congestion and circulation issues at the park, ATA took an innovative approach to the TIAR. ATA provided analyses of engineering considerations and potential traffic impacts as well as five example shuttle service scenarios to help inform the direction and design of the preferred Master Plan. They also considered varying amounts of parking spaces at the park and estimated the potential costs and break even requirements for the shuttle.

The preferred scenario is to implement a third party shuttle from the Princeville facility at the start of Phase I, minimizing the need for visitor parking in the parking lot in the park. However, the Master Plan includes space to accommodate a parking lot for up to 100 vehicles if needed. The design and materials of the parking lot would allow its size to be adjusted as the Master Plan is implemented. It could be reduced to accommodate as few as zero vehicles if the shuttle service is fully implemented and meets all needs, or expanded to accommodate up to 100 vehicles to address the possibility that the shuttle service might not be implemented on schedule or to accommodate special needs that could only be met by additional on-site parking (for example, the need for after-hours on-site parking, or additional parking for cultural practitioners, kūpuna, or visitors requiring ADA accessibility). This scenario should significantly reduce traffic in the park and surrounding neighborhoods. By providing visitors an alternative means to get to the park at the outset of the improvements, this will also reduce the potential for "spillover" parking issues in the surrounding neighborhoods that could happen if parking is limited without providing an alternative for visitors to access the park. Please see the "Roadways and Traffic" attachment from Section 4.3.1 of the Final EIS that shows the verbatim changes from the Draft EIS.

Please share your comments on the Hā'ena State Park Master Plan Draft EIS.  
(If you would like a written response letter, please include your mailing address.)

*Helema - To whom it may concern -*

*I beg + plead that we absolutely do not do any  
type of buildings at Kēē - Development is a temporary  
answer ~~but~~ a permanent problem.*

*NO permanent structure's  
NO Pavement at all*

*NO new Bathrooms*

*NO Development at Kēē*

*Hence the place please Not the tourist!*

*Educate them before the reach Lūnahā'i*

*PO Box 1142  
Hanalei HI  
96714*

*Nahalo Rai*

*XOXO Koral McCarthy*



*Koral McCarthy  
PO Box 1142  
Hanalei HI 96714*

PBR HAWAII & Associates

Attn: Kimi Yuen

1001 Bishop Street, Suite 650

Honolulu, HI 96813



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RUSSELL Y. J. CHUNG, FASLA, LEED® AP BD+C  
Executive Vice President / Principal

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Vice President / Principal

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TOM SCHNELL, AICP  
Principal

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ANN MIKAO KOSHIKOGI, PhD  
Project Director

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Cultural Sustainability Planner

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Koral McCarthy  
SUBJECT: COMMENTS ON THE HĀ'ENA STATE PARK MASTER PLAN DRAFT ENVIRONMENTAL  
IMPACT STATEMENT (EIS), HĀ'ENA, KAUA'I, HAWAII  
Month XX, 2018  
Page 2

Master-Plan.pdf on \_\_\_\_\_, 2018.

Aloha,

Kimi Mikami Yuen, LEED AP BD+C  
Principal

Attachments: Master Plan Summary  
Welcome Hale  
Parking  
Visitor Orientation  
Ground and Surface Water

cc: The Honorable David Y. Ige, Governor  
Office of Environmental Quality Control  
Board of Land and Natural Resources  
Division of State Parks

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SUBJECT: COMMENTS ON THE HĀ'ENA STATE PARK MASTER PLAN  
DRAFT ENVIRONMENTAL IMPACT STATEMENT (EIS),  
HĀ'ENA, KAUA'I, HAWAII

Aloha McCarthy,

Mahalo nui for your comment card received at the public meeting held on August 19, 2015 regarding the Hā'ena State Park Master Plan Draft Environmental Impact Statement (EIS). We sincerely apologize for the delay in responding. Due to the feedback received on the Draft EIS, the State of Hawai'i, Department of Land and Natural Resources, Division of State Parks (State Parks) has worked on revising the master plan with a reorganized Hā'ena State Park Community Advisory Committee (HSPCAC) to address the concerns voiced by the larger community. As a result, the master plan presented in the Final EIS has been updated based on the feedback received from the public meetings, comments received, and subsequent extensive collaboration with the HSPCAC. As the planning consultant for State Parks, we offer the following responses to your comments.

We recognize your concerns regarding development of buildings at Ke'e and educating tourists prior to arrival. The revised master plan includes significant changes with minimal physical improvements to preserve the natural beauty of the park as described in the attached **Master Plan Summary** from the Final EIS. Most of the proposed buildings, including the visitor center, and caretaker's cottage, have been removed in the revised master plan. The original Educational and Cultural Center (ECC) has been eliminated from the master plan, and only shows a simple, traditional hale at the entrance. The Welcome Hale is envisioned as an "open pavilion without walls", which will provide educational information to the public. Please find the attached **Section 2.5.1.3** from the Final EIS describing the Welcome Hale.

We acknowledge your concern with constructing new bathrooms, however the proposed facilities are designed with the intention of reducing any impact on the sensitive areas at Ke'e with advanced wastewater treatment systems. More information is attached in **Section 3.4** from the Final EIS. In response to your concern with pavement at the site, the revised master plan includes proposals for permeable pavement or structural grass for the parking lot and pedestrian path as described in the attached **Section 1.9.1** and **Section 2.5.1.2** from the Final EIS. The revised plan also includes proposals to provide information to all visitors prior to entry as well as availability online, including notices and educational material as suggested in your comments. Please see the attached section from the Final EIS on **Visitor Orientation** for more details.

Mahalo nui for your input and participation in the environmental review process. Your letter will be included in the Final EIS. If you would like a copy of the Final EIS or portions thereof, please let us know. Otherwise, the electronic copy of the Final EIS will be available on the Office of Environmental Quality Control website at [http://oeqc2.doh.hawaii.gov/EA\\_EIS\\_Library/2018-\\_\\_\\_\\_KA-FEIS-Haena-State-Park-](http://oeqc2.doh.hawaii.gov/EA_EIS_Library/2018-____KA-FEIS-Haena-State-Park-)

Maryjoaustin@hotmail.com  
Much planning should go into the shuttle aspect of it & the communication & networking with the resorts. This is critical. Pamphlet for all riding the shuttle en route - explaining the cultural significance & environmental sensitivities. Subsidized shuttle. Mary Jo Austin 96714.



PBR HAWAII  
& ASSOCIATES, INC.

Month XX, 2018 - DRAFT

Ms. Mary Jo Austin  
96714  
Via Email: maryjoaustin@hotmail.com

SUBJECT: COMMENTS ON THE HA'ENA STATE PARK MASTER PLAN  
DRAFT ENVIRONMENTAL IMPACT STATEMENT (EIS),  
HA'ENA, KAUAI, HAWAII

Aloha Ms. Austin,

Mahalo nui for your comment card received at the public meeting held on August 19, 2015 regarding the Ha'ena State Park Master Plan Draft Environmental Impact Statement (EIS). We sincerely apologize for the delay in responding. Due to the feedback received on the Draft EIS, the State of Hawaii, Department of Land and Natural Resources, Division of State Parks (State Parks) has worked on revising the master plan with a reorganized Ha'ena State Park Community Advisory Committee (HSPCAC) to address the concerns voiced by the larger community. As a result, the master plan presented in the Final EIS has been updated based on the feedback received from the public meetings, comments received, and subsequent extensive collaboration with the HSPCAC. As the planning consultant for State Parks, we offer the following responses to your comments.

We acknowledge your comments regarding the need to emphasize a proposal for shuttle service. While the potential shuttle service is not proposed to be administered by State Parks in the revised master plan, it does include specific elements to support effective implementation with infrastructure design for the proposed park entry and main parking lot to support a recommended shuttle service with shuttle stop structures, as described in Section 2.5.1.1 and Section 2.5.1.2 from the Final EIS. Proposed facilities are designed to allow flexibility depending on future demand and the potential use of the proposed shuttle.

Mahalo nui for your input and participation in the environmental review process. Your letter will be included in the Final EIS. If you would like a copy of the Final EIS or portions thereof, please let us know. Otherwise, the electronic copy of the Final EIS will be available on the Office of Environmental Quality Control website at [http://oeqc2.doh.hawaii.gov/EA\\_EIS\\_Library/2018\\_KA-FEIS-Haena-State-Park-Master-Plan.pdf](http://oeqc2.doh.hawaii.gov/EA_EIS_Library/2018_KA-FEIS-Haena-State-Park-Master-Plan.pdf) on 11/15/2018.

Aloha,

Kimi Mikami Yuen, LEED AP BD+C  
Principal

Attachments: Park Entry  
Parking

cc: The Honorable David Y. Ige, Governor  
Office of Environmental Quality Control

THOMAS WITTEN, FASLA  
Chairman / Principal

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President / Principal

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RAMONA E. M. TAIUM  
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Board of Land and Natural Resources  
Division of State Parks

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Please share your comments on the Hā'ena State Park Master Plan Draft EIS.  
(If you would like a written response letter, please include your mailing address.)

No Gates No Development No Structures  
No fences No Boardwalk No Selling Out  
Build a visitor center in Princeville  
Shuttle and permit access for tourists only  
Exact same public access available to  
public as is now - no rules for kamaeina.  
SOP Tourists Limit  
No Federal Employees or Control.





Month XX, 2018 - DRAFT

Ms. Melani Aiona  
P.O. Box 1251  
Kilauea, HI 96754

**SUBJECT: COMMENTS ON THE HĀ'ENA STATE PARK MASTER PLAN  
DRAFT ENVIRONMENTAL IMPACT STATEMENT (EIS),  
HĀ'ENA, KAUA'I, HAWAII**

Aloha Ms. Aiona,

Mahalo nui for your comment card from the community meeting held on August 19, 2015 regarding the Hā'ena State Park Master Plan Draft Environmental Impact Statement (EIS). We sincerely apologize for the delay in responding. Due to the feedback received on the Draft EIS, the State of Hawai'i, Department of Land and Natural Resources, Division of State Parks (State Parks) has worked on revising the master plan with a reorganized Hā'ena State Park Community Advisory Committee (HSPCAC) to address the concerns voiced by the larger community. As a result, the master plan presented in the Final EIS has been updated based on the feedback received from the public meetings, comments received, and subsequent extensive collaboration with the HSPCAC. As the planning consultant for State Parks, we offer the following responses to your comments.

We recognize your comments regarding gates, fences, structures, elevated boardwalk, and overall development concerns for Hā'ena State Park. Rather than using fences or walls, landscaping and the use of native and Polynesian-introduced plants will be considered as more natural buffers for the area. The boardwalk has been modified in the revised master plan. The new pedestrian pathway follows along the first berm of the lo'i closest to the highway and is proposed to be slightly elevated so as not to impact the berm or any of the historic resources. Please see the revised Figure 1 Master Plan graphic and the "Master Plan Summary" attachment from Section 1.9.1 of the Final EIS, which show the verbatim changes from the Draft EIS in this section.

The construction of a visitor center in Princeville is not in the scope of this State Park Master Plan. However, a shuttle from Princeville is one of the traffic mitigation solutions proposed in the EIS.

The revised master plan calls for an adaptive management approach for both the parking and the proposed visitor limits, which will be adjusted based on an average number of visitors rather than a set limit per day. As the State has more time to analyze user patterns, other options can be explored over time, and they are actively engaged in discussions regarding parking enforcement and increased fines along the roadway outside of the park as well. Please see the "Visitor Limits" attachment from Section 2.5.4.3 of the Final EIS, which shows the verbatim changes from the Draft EIS for this section.

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PBR HAWAII & Associates  
Attn: Kimi Yuen  
1001 Bishop Street, Suite 650  
Honolulu, HI 96813

Melani Aiona  
POB 1251  
Kilauea HI 96754

Mahalo nui for your input and participation in the environmental review process. Your letter will be included in the Final EIS. If you would like a copy of the Final EIS or portions thereof, please let us know. Otherwise, the electronic copy of the Final EIS will be available on the Office of Environmental Quality Control website at [http://oeqc2.doh.hawaii.gov/EA-EIS\\_Library/2018-KA-FEIS-Haena-State-Park-Master-Plan.pdf](http://oeqc2.doh.hawaii.gov/EA-EIS_Library/2018-KA-FEIS-Haena-State-Park-Master-Plan.pdf) on \_\_\_\_\_, 2018.

Aloha,

Kimi Mikami Yuen, LEED AP BD+C  
Principal

Attachment: Master Plan Summary  
Figure 1: Master Plan  
Visitor Limits

cc: The Honorable David Y. Ige, Governor  
Office of Environmental Quality Control  
Board of Land and Natural Resources  
Division of State Parks

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Please share your comments on the Hä'ena State Park Master Plan Draft EIS.  
(If you would like a written response letter, please include your mailing address.)

im not sure that this plan will work. I currently live across  
tunnels beach and the parking down there is ridiculous.  
one solution is more police just activity patrolling and problem  
will be solved.



mohala bond  
PO Box 23  
Honalei HI 96714

Please share your comments on the Hā'ena State Park Master Plan Draft EIS.  
(If you would like a written response letter, please include your mailing address.)

You need to get with all the HAENA families and get their response and ideas there was both positives and negatives on this plan

PBR HAWAII & Associates  
Attn: Kimi Yuen  
1001 Bishop Street, Suite 650  
Honolulu, HI 96813





Month XX, 2018 - DRAFT

Ms. Mahala Bond  
P.O. Box 23  
Hanalei, HI 96714

**SUBJECT: COMMENTS ON THE HĀENA STATE PARK MASTER PLAN  
DRAFT ENVIRONMENTAL IMPACT STATEMENT (EIS),  
HĀENA, KAUAI, HAWAII**

Aloha Ms. Bond,

Mahalo nui for your comment cards received at the public meeting held on August 19, 2015 regarding the Hāena State Park Master Plan Draft Environmental Impact Statement (EIS). We sincerely apologize for the delay in responding. Due to the feedback received on the Draft EIS, the State of Hawai'i, Department of Land and Natural Resources, Division of State Parks (State Parks) has worked on revising the master plan with a reorganized Hāena State Park Community Advisory Committee (HSPCAC) to address the concerns voiced by the larger community. As a result, the master plan presented in the Final EIS has been updated based on the feedback received from the public meetings, comments received, and subsequent extensive collaboration with the HSPCAC. As the planning consultant for State Parks, we offer the following responses to your comments.

In response to your first comment card, we recognize your concerns regarding parking enforcement and the potential impact on neighboring communities and beaches. The parking improvements, as described in **Section 2.5.1.2**, are intended to alleviate the strain on current parking demand and include regulation through gate installation and a park entry fee structure, rather than police patrols.

In response to your second comment card, we recognize your suggestions for consultation with the Hāena community. The planning process involved a collaborative approach to developing the master plan by consulting various local community groups and individuals, including a thirty-two member Master Plan Advisory Committee (MPAC) consisting of Hāena Kūpuna and 'ohana members, cultural practitioners and scientific experts, business representatives, State and County agencies, and other North Shore community members to provide recommendations on the physical plan and park management. The environmental review process has also included opportunities for public comment throughout the process. In addition, State Parks held a public meeting on August 19, 2015 to gather more input and extended the Draft EIS public comment period to allow more time for feedback from the community before revising the master plan. State Parks will continue to work with the advisory committee to gather more input as the master plan is implemented. Please see the attached **Section 1.6** and **Section 1.7** from the Final EIS describing the environmental review process and engagement with the community.

Mahalo nui for your input and participation in the environmental review process. Your letter will be included in the Final EIS. If you would like a copy of the Final EIS or portions thereof, please let us know. Otherwise, the electronic copy of the Final EIS will be available on the Office of Environmental Quality Control website at [http://oeqc2.doh.hawaii.gov/EA\\_EIS\\_Library/2018--KA-FEIS-Haena-State-Park-Master-Plan.pdf](http://oeqc2.doh.hawaii.gov/EA_EIS_Library/2018--KA-FEIS-Haena-State-Park-Master-Plan.pdf) on **XX, 2018**.

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President / Principal

RUSSELL Y. J. CHUNG, FASLA, LEED® AP BD+C  
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PBR HAWAII & Associates

Attn: Kimi Yuen

1001 Bishop Street, Suite 650

Honolulu, HI 96813



Aloha,

Kimi Mikami Yuen, LEED AP BD+C  
Principal

Attachments: Environmental Review Law  
Agency and Community Group Engagement  
Parking

cc: The Honorable David Y. Ige, Governor  
Office of Environmental Quality Control  
Board of Land and Natural Resources  
Division of State Parks

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Nicola Barea  
6540 Oloheua Rd.  
Kapaa, HI 96746 although my current address is in the East  
Side, I have lived on the North Shore <sup>almost</sup> my life.

I support the majority of this plan. ~~And~~ Especially the  
cultural aspects and the rehabilitation/restoration of the lō'i.  
My only place of concern is about parking and whether people and  
cars will be limited. However, I applaud the proposed  
exception of fishermen + hunters. And I think it is a good start.  
I like how there is options. And how it is Adaptive.  
Aloha, Nicola Barea.



Month XX, 2018 - DRAFT

Mr. Nicolai Barca  
6540 Olohana Road  
Wapaa, HI 96745

**SUBJECT: COMMENTS ON THE HĀ'ENA STATE PARK MASTER PLAN  
DRAFT ENVIRONMENTAL IMPACT STATEMENT (EIS),  
HĀ'ENA, KAUA'I, HAWAII**

Aloha Mr. Barca,

Mahalo nui for your comment card received at the public meeting held on August 19, 2015 regarding the Hā'ena State Park Master Plan Draft Environmental Impact Statement (EIS). We sincerely apologize for the delay in responding. Due to the feedback received on the Draft EIS, the State of Hawai'i, Department of Land and Natural Resources, Division of State Parks (State Parks) has worked on revising the master plan with a reorganized Hā'ena State Park Community Advisory Committee (HSPCAC) to address the concerns voiced by the larger community. As a result, the master plan presented in the Final EIS has been updated based on the feedback received from the public meetings, comments received, and subsequent extensive collaboration with the HSPCAC. As the planning consultant for State Parks, we offer the following responses to your comments.

Mahalo for your support of the cultural aspects of the master plan including the rehabilitation and restoration of the lo'i and other culturally significant aspects of the park as well as the adaptive nature of the proposed management of the park and the options included in the plan. The attached [Section 2.5.1.15](#) from the Final EIS describes the revisions to the master plan pertaining to restoration of the lo'i.

We recognize your concerns regarding parking and potential limitations on the number of visitors. As you noted in your comments, the revised master plan calls for an adaptive management approach for the proposed visitor limits, which will be adjusted based on an average number of visitors rather than a set limit per day. The limits will also be instituted only during peak hours of park use and will allow visitors to enter before and after without being counted against the visitor limit. Therefore, access will be allowed into the park outside those peak hours and will be adjusted as appropriate based on ongoing input from the community. State Parks will continue to work with the advisory committee to review options over time. As you note in your comments, there will also be exemptions for permitted hunters and or special user groups. Please reference the attached sections from the Final EIS on [Visitor Limits](#) and [Adaptive Management](#) for a description of these aspects within the revised master plan.

Mahalo nui for your input and participation in the environmental review process. Your letter will be included in the Final EIS. If you would like a copy of the Final EIS or portions thereof, please let us know. Otherwise, the electronic copy of the Final EIS will be available on the Office of Environmental Quality Control website at [http://oeqc2.doh.hawaii.gov/EA\\_EIS\\_Library/2018\\_KA-EIS-Haena-State-Park-Master-Plan.pdf](http://oeqc2.doh.hawaii.gov/EA_EIS_Library/2018_KA-EIS-Haena-State-Park-Master-Plan.pdf) on [Month XX, 2018](#).

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Principal

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Project Director

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Cultural Sustainability Planner

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Aloha,

Kimi Mikami Yuen, LEED AP BD+C  
Principal

Attachments: Agricultural Complex  
Adaptive Management  
Visitor Limits

cc: The Honorable David Y. Ige, Governor  
Office of Environmental Quality Control  
Board of Land and Natural Resources  
Division of State Parks

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IN SUPPORT

Hā'ena State Park Master Plan | Draft EIS Community Meeting | August 16, 2019

Please share your comments on the Hā'ena State Park Master Plan Draft EIS.

(If you would like a written-response letter, please include your mailing address.)

Thank you for your presentation. It was great!  
I am in support of this plan including the educational structure. I hope this will allow me more access to the park as I don't go as often as I used to due to parking constraints. I would like to see an online ticketing/permit/entry access with a set number for visitors and a set number for residents.

Mahalo!

TollyPhillips

PO Box 771

Hanalei HI 96714

PBR HAWAII & Associates

Attn: Kimi Yuen

1001 Bishop Street, Suite 650

Honolulu, HI 96813





Ms. Polly Phillips  
SUBJECT: COMMENTS ON THE HĀ'ENA STATE PARK MASTER PLAN DRAFT ENVIRONMENTAL  
IMPACT STATEMENT (EIS), HĀ'ENA, KAUA'I, HAWAII  
Month XX, 2018  
Page 2

Ms. Polly Phillips  
P.O. Box 71  
Hanalei, HI 96714

**SUBJECT: COMMENTS ON THE HĀ'ENA STATE PARK MASTER PLAN  
DRAFT ENVIRONMENTAL IMPACT STATEMENT (EIS),  
HĀ'ENA, KAUA'I, HAWAII**

Aloha Ms. Phillips,

Mahalo nui for your comment card received at the public meeting held on August 19, 2015 regarding the Hā'ena State Park Master Plan Draft Environmental Impact Statement (EIS). We sincerely apologize for the delay in responding. Due to the feedback received on the Draft EIS, the State of Hawai'i, Department of Land and Natural Resources, Division of State Parks (State Parks) has worked on revising the master plan with a reorganized Hā'ena State Park Community Advisory Committee (HSPCAC) to address the concerns voiced by the larger community. As a result, the master plan presented in the Final EIS has been updated based on the feedback received from the public meetings, comments received, and subsequent extensive collaboration with the HSPCAC. As the planning consultant for State Parks, we offer the following responses to your comments.

Mahalo for your support of the Hā'ena State Park Master Plan, including the educational structure you referenced. However, please note that the "educational structure" has been eliminated from the master plan and a traditional hale, referred to as the "Welcome Hale" in the FEIS, will now provide educational information to the public. The attached **Section 2.5.1.3** from the Final EIS provides a full description of the Welcome Hale.

We recognize your comments favoring the plan for the potential to offer more access with the proposed parking improvements and acknowledge your comments on proposing an online system for managing entry access as well as designated visitor limits distinguishing between residents and tourists. While the visitor limits will not be distinguished between residents and tourists, the revised plan does include proposed online notices for ticket availability, as described in the attached section from the Final EIS on **Visitor Limits**. State Parks will continue to work with the advisory committee and review input from the community on improvements to address parking constraints and assess visitor limits over time.

Mahalo nui for your input and participation in the environmental review process. Your letter will be included in the Final EIS. If you would like a copy of the Final EIS or portions thereof, please let us know. Otherwise, the electronic copy of the Final EIS will be available on the Office of Environmental Quality Control website at [http://oeqc2.doh.hawaii.gov/EA\\_EIS\\_Library/2018--KA-FEIS-Haena-State-Parks-Master-Plan.pdf](http://oeqc2.doh.hawaii.gov/EA_EIS_Library/2018--KA-FEIS-Haena-State-Parks-Master-Plan.pdf) on **Month XX, 2018**.

Aloha,

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Project Director

RAMAN R. M. TAJUM  
Cultural Sustainability Planner

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Senior Associate

MARC SHIMATSU, ASLA  
Senior Associate

DACHENG DONG, LEED® AP  
Senior Associate

SCOTT MURAKAMI, ASLA, LEED® AP  
Associate

MICHAEL MCHILLEN, ASLA, LEED® AP  
Associate

NATHALIE BAGO  
Associate

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Nalani K Kaauwai Brun

August 13, 2015

Program Administrator Officer, Office of Economic Development

County of Kauai

4444 Rice Street, Lihue, HI 9676

RECEIVED

AUG 19 2015

County of Kauai  
Office of Economic Development

CC to Mayor Carvahlo

Aloha Kaula e Nalani,

Congratulations are in order to all the fishermen from Haena who worked long and hard to finally have success in the implementation of sustainable fisheries. I understand there is one more hurdle to jump. Hulo! Thank you for opening that door. We too have been working for a long time! What starts out simply, quickly becomes complicated, and the "community" larger.

Thank you for sending me the copy of the "Draft of Haena State Park final Master Plan which includes some of my suggestions. It looks good, but still antiquated for the 21<sup>st</sup> century. There are a few comments and suggestions I feel should be made. But first, I have reviewed some of the newspaper articles and the DLNR, Division of State Parks, Haena State Park Master Plan prepared by The Keith Companies Hawaii, Inc in 1994. Patterns keep repeating themselves and for the wrong reasons. Talk about timing!

The data given in section 2-75, Table 3, "Summary Table of daily visitors" survey taken in 1993 (twice) and again in 1998 is meaningless data. Kauai was recovering from Hurricane Iniki!

You must locate a copy of now retired, Dr. Luciano Minerbi's proposal of Hawaiian Sanctuary Places (or something like that). It includes Haena. That was done in the 80's during former Governor John Waihee's term, when he organized Hawaii 2020 State wide Conference. Unfortunately, both of my papers/documents were loaned out and haven't yet found their way home.

Dr Minerbi lives on Oahu. He is a USA citizen and is a registered Hawaii voter, revealed when he appeared on Hawaii Public Television "Island Issues Program" in July 2015. That program discussed land use, development, natural resources, population, and especially water and space.

There are several things to remember:

1. The sacred Historic Sites cannot be owned by one entity. Those sites belong to the Universe. We can only care for them.
2. All government compliance stuff is tedious and repetitious. It can be easy or difficult dependent upon the intention (power, oppression, and control).
3. Mr. Allerton wanted and believed that the people of Kauai can and would take care of their sacred and historical sites (mauka-makai). That is why he gave the sites to Kauai. He did not want the state to have it because "the state cannot and does not take care of its sites". I too am of that sentiment. There is a need to have people of good character, Akamai with the numbers, science, spiritual humanity, motivation, managerial skills, and all the nuances of the sites/places for their good sustainability. Whoever accepts the guardianship and the maintenance of the integrity of the ancestors and Ke Akua ma must do it with quiet pride and inspirational joy with the International scope of our Mana. It is our time!
4. Never forget the two great Olelo Noeau of na Kupuna.

A. "Not all knowledge is found in one Halau"

B. "In the word there is life/encouragement; in the word there is death/discouragement". Be very aware!

5. The Halau Waa, hula, loi, fishing, and all other cultural customs that will present themselves must take place in the "park" to make it a living "park" rather than a superficial, touristic, recreational park. With Mr. Allerton's house rebuilt, it can be used for a Kahu's residence combined as a museum, story telling, educational reaching out place with a creative, sensitive and skilled team. This must include the Kokua of all of Kauai's people filled with the Aloha and dignity of na Kupuna. One person cannot do it all.

6. It seems as though my work is finished on Kauai. I have given you everything I have learned. The lessons I've had to learn, have been learned. To you, avoid misunderstandings, jealousies, manipulations, lies, and ego out of control. Rejoice in your blessings, gifts, opportunities, challenges, and na Kupuna with Ke Akua ma. Life is good! God is good! They are good!

I have not sent this to the state. Should you want to use any part of this letter, it is O.K. I know it is rather personal.

Mau Kealoha,

*Roselee Flanagan Delichonipua Lindsey Darling*



ADDENDUM TO MY COMMENTS RE: MASTER PLAN FOR HAENA STATE PARK 15 August, 2015

From: Roselle K. Bailey

To: Anyone concerned

The attached is a copy of a Management Plan for Ke'e, Ha'ena we submitted in 1989 to the various people/agencies listed. You will see that it is quite similar to the current Plan prepared for the DLNR by PBR Hawaii. We were disappointed that the DLNR didn't have the courtesy to even respond to our proposal. Two people supported us: JoAnn Yukimura and Bertha Kawakami, however, it was eventually shelved and forgotten.

Eventually, the representatives of DLNR attempted to remove us by appointing a "committee of (off island) Hula Kupuna to oversee the site, none of whom had ever reactivated a sacred temple. We withdrew participation in cleaning, etc. since "they" were going to maintain the site. This plan quickly proved unsuccessful so we resumed our normal volunteering. Another attempt to discredit us was a television production called "The Hawaiians" where it was said, "the people who clean this temple, clean it too clean. The Kia'i has left."

Another attempt to organize hula people to maintain the site involved my asking all Kauai Halau to meet to hui their interest. All recognized the need to respond-even willingly accepting different months for each Halau to malama KeAhuLaka. By the third month, only one Halau continued support. The rest failed to even attend another meeting. Words are easy but action of integrity is not.

My failure to generate any county or state support was not because I didn't try. Our loyal halau/supporters have continued with periodic maintenance and it is used by many Hula "practitioners" from all of Hawaii plus international connections. In the last 4 decades we have volunteered nearly 20,000 hours there. We fulfilled all of Mr. Allerton's wishes, transforming the living jungle to a living place for its original intention.

The goals set in the new management plan are attainable. Only money and time plus a search for qualified participants, knowledgeable in Hawaiian culture, protocol, maintenance skills and not restricted by Kapu's. The "time line" seems ambitious. The state moves slowly-DLNR is short on money. Who will maintain the site in the interim?

*Respectfully,*

*Roselle Flora Keli'ihonipua Lindsey Bailey*

## MANAGEMENT PLAN FOR KĒ'Ē, HĀ'ENA, KAUA'I

*SUBMITTED FOR APPROVAL TO:*

The Board of Land & Natural Resources  
State of Hawai'i

Mayor JoAnn Yukimura  
and  
County Council Members  
County of Kaua'i

*SUBMITTED FOR REVIEW TO:*

Governor John Waihee  
State of Hawai'i

State Legislators of Kaua'i

Office of Hawaiian Affairs Trustees

Kaua'i Historic Preservation Review Commissioners

*SUBMITTED BY:*

Roselle Keli'ihonipua Bailey, President  
KA 'IMI NA'AUAO O HAWAII NEI  
P.O. Box 218  
Kaumakani, Hawai'i 96747  
Phone: 808-335-3628

April 15, 1989

## STATEMENT OF PURPOSE

KA 'IMI NA'AUAO O HAWAI'I NEI is presenting a management plan developed for the preservation and perpetuation of the former Allerton estate and the Hawaiian historical site complex located at Kē'ē, Hā'ena, Kaua'i. This management plan contains the following details;

- I. DESCRIPTION OF ORGANIZATION
- II. DESCRIPTION OF AREA
- III. MAINTENANCE PROGRAM
- IV. INTERPRETIVE PROGRAM
- V. FUNDING PLAN

KA 'IMI NA'AUAO O HAWAI'I NEI is requesting the *kahu* (curatorship) status from the State of Hawai'i and the County of Kaua'i for the specific areas described therein presently under their jurisdiction. KA 'IMI NA'AUAO O HAWAI'I NEI is also requesting a lease agreement with the State of Hawai'i for the existing buildings and appurtenant ground areas of the former Allerton estate for the purpose of establishing a Kē'ē Living Cultural Resource Center in order to successfully implement this management plan.

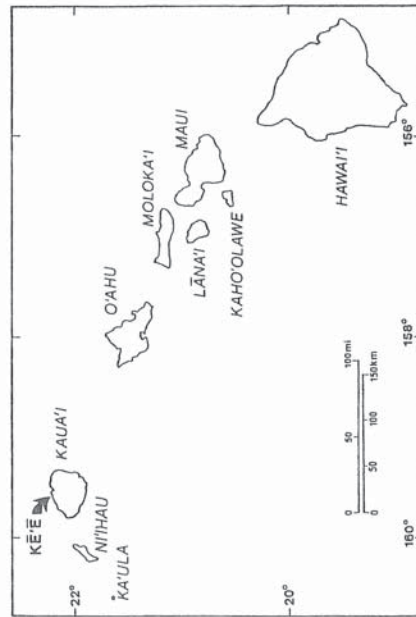


Fig. 1. MAP OF THE HAWAIIAN ISLANDS. The location of the Kē'ē area is indicated on the island of Kaua'i, beyond Hanalei Bay.

## I. DESCRIPTION OF ORGANIZATION

KA 'IMI NA'AUAO O HAWAI'I NEI, initially established in 1971 as Kahiko Halapa'i Hula Alapa'i, was granted a nonprofit status in 1977 for the purpose of searching for the truth of the Hawaiian culture; of restoring the Hawaiian culture to its original dignity; of educating the populace for its understanding, enjoyment, and appreciation of the medicine, art, language, crafts, philosophy, history, and religion of the Hawaiian people through the *hula*.

KA 'IMI NA'AUAO O HAWAI'I NEI's previous and existing involvement of the area consists of the following:

1. In 1972-73, visitations to the site complex revealed walls and structures being damaged by extensive growth of Chinese banyan, Java plum, guava, hala, and coconut trees. Infestation of other types of exotic vegetation also contributed to extremely poor visibility of sites. These conditions were the result of neglect for over twenty years.
2. In 1974, John Greg Allerton (former property owner) granted Kahiko Halapa'i Hula Alapa'i permission "to return the place to its original and intended use" with the following conditions: to clean and maintain the area, to have a resident archaeologist for consultation, to avoid burning the rubbish on the sites, and to have an *Uniki* (*hula* graduation) ceremony at the Keahualaka site.
3. Since 1974, a workforce of volunteers of this organization have been doing maintenance work at the Keahualaka, Kaulapa'oa, and Lohi'au sites every 5-6 weeks. Records kept since 1975 to February 1987 show 7,429 man-power hours and 6,046 transit-time hours for a total of 13,477 volunteer hours. Maintenance expenses included costs for supplies, transportation, and equipment. There has also been periodical assistance over the years from other organizations and individuals. As a result of the scheduled maintenance work, there is now visibility and accessibility to the sites. Also, native Hawaiian plant growth has returned to the area.
4. Since 1974, *hula* observances, educational tours and programs, and workshops have been conducted on-site resulting in an awareness and appreciation of the sites and their environs.
5. Since 1983, there has been an annual public *hula* observance and ceremony at the Keahualaka site with participation of *hula* from throughout the State.



## II. DESCRIPTION OF AREA

This management plan concerns the complex of historical and cultural sites and structures in the land division of Kē'ē, within the area known as Hā'ena on the island of Kaua'i. [See Map A]

Situated within the Hā'ena State Park under the jurisdiction of the State of Hawai'i is Lohi'au's house platform and the former Allerton estate [TMK: 5-9-07:12] which includes a guest cottage and residence surrounded by gardens, pathways, and retaining walls of former *auwai* (irrigation ditches) and *lo'i kalo* (taro terraces). Adjacent to this parcel is the property [TMK: 5-9-07:13] dedicated to the County of Kaua'i through the probate of John Greg Allerton. Included on this property are these additional Hawaiian historical and cultural sites of the Kē'ē complex: the *pōhaku piko* of Kilioe, Kauluapā'oa heiau, and the Keahualeka *huia* platform and altar area. [See Maps B & C]

Based upon genealogies and oral traditions recorded, use of these Hawaiian sites and structures of the Kē'ē complex date at least back to the late 12th and early 13th Centuries during the extensive migrations and frequent voyages between the Hawaiian Islands and the South Pacific Islands.

The historical houses and facilities now present on the former Allerton estate were once used by J.G. Allerton as a retreat while the guest cottage was used as a residence by the caretakers of the premises.

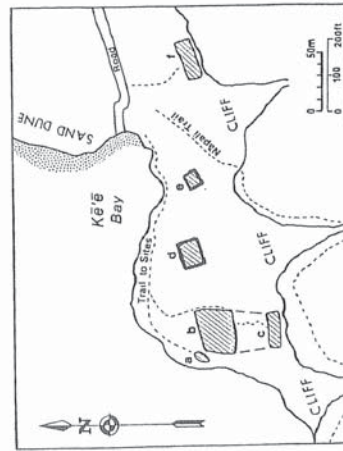


Fig. 2. MAP SHOWING THE APPROXIMATE RELATIVE POSITIONS OF SITES AT Kē'ē BAY.  
a. Kilioe (*pōhaku piko*); b. Ka-ulu-a-Pā'oa Heiau; c. Ke-ahu-a-Laka (*huia*).

## III. MAINTENANCE PROGRAM

The maintenance program of this management plan consists of the following four phases:

### 1) PHASE 1: [Time Frame: Continuous]

- \* Cleaning, weeding, and grass cutting of the Keahualeka site and periodic vegetation removal from the Kauluapā'oa and Lohi'au sites through the time, labor, and supplies of the volunteers of KA'IMI NA'AUAO O HAWAII' I NEI.

### 2) PHASE 2: [Time Frame: Within one (1) year of the commencement of Kahu status]

- \* New roofing, termite treatment, repairs, and renovations of the buildings and facilities of the former Allerton estate with the time and funds for labor and material costs provided by KA'IMI NA'AUAO O HAWAII' I NEI.
- \* Construction of a new walkway over the existing path along the makai end of the estate from the road's culdesac to the Kauluapā'oa site by the State of Hawai'i. The present condition of this pathway is considered hazardous due to heavy rains and lack of up-keep since Allerton's death.
- \* Restoration of pathways leading from the Kauluapā'oa site to the Keahualeka and Kilioe sites by the County of Kaua'i.
- \* Reside a caretaker in the guest cottage as a security and preventive measure to vandalism, to administer the Kē'ē Living Cultural Resource Center, to manage the physical and spiritual maintenance of the historical and cultural sites of the Kē'ē complex, and to disseminate information regarding the area to visitors with the salaries and cost paid for by KA'IMI NA'AUAO O HAWAII' I NEI.
- \* Landscaping and caretaking of the pathways and garden area immediately surrounding the premises of the residences through the time, labor, and supplies of the volunteers of KA'IMI NA'AUAO O HAWAII' I NEI.
- \* Installation of electric and telephone lines to the buildings and facilities by the State of Hawai'i.
- \* Start archaeological research and survey of the Kē'ē complex.

- 3) PHASE 3: [Time Frame: Within five (5) years of the commencement of *kahu* status]
- \* Reestablishing of native Hawaiian plants of the area and restoring the *auwai* (irrigation ditches) and *lo'i kalo* (taro terraces) directly *mauka* of the estate through the time, labor, and supplies of volunteers of KA'IMI NA'AUAO O HAWAII'NEI with the assistance of other organizations and governmental agencies.
  - \* The removal and hauling of large debris such as overgrowth of vegetation and exotic trees/brush by the State of Hawaii and/or County of Kauai.
  - \* Installation of watering irrigation lines throughout the garden area from the existing water system on the premises by the State of Hawaii.

- 4) PHASE 4: [Time Frame: Within ten (10) years of the commencement of *kahu* status]
- \* Complete an extensive archaeological study of the Kē'ē site complex under the supervision of an archaeologist to include, but not limited to the following: remapping of sites in present condition, test pits, datings, etc. Then restoration work, stabilization, and reconstruction of sites can proceed where deemed appropriate and necessary.

#### IV. INTERPRETIVE PROGRAM

The interpretive program of this management plan will be done in the following methods:

1. Passive interpretation through the use of signage and/or displays at the various sites.
2. Active interpretation through the dissemination of information by a staff person on the premises during visiting hours. Also, provide guided tours by trained docents with advanced scheduling.
3. Maintain and administer the Kē'ē Living Cultural Resource Center for the purpose of; stimulating and encouraging historical, cultural, and educational interest of the Hā'ena and Nā Pali areas; promoting the preservation and cultural significance of the sites and structures of Kē'ē; perpetuating the Hawaiian protocol, oral, and *hula* traditions associated with area. Exhibits, programs, demonstrations, and/or other activities will be established for the aforementioned purposes.
4. Distribute publications, brochures, and/or pamphlets of the Hā'ena and Nā Pali areas at the Center.

## SUMMARY

KA 'IMI NA'AUAO O HAWAI'I NEI has demonstrated its ability to preserve the historical and cultural sites within the Kē'ē complex through its on-site maintenance work done there since 1974, totaling more than 13,500 volunteer hours. KA 'IMI NA'AUAO O HAWAI'I NEI has also demonstrated its commitment to perpetuate the Hawaiian traditional uses and cultural significance of these Kē'ē sites and environs through its educational activities and hula observances presented there also since 1974.

KA 'IMI NA'AUAO O HAWAI'I NEI has demonstrated its qualifications to be appointed the kahu (curatorship) status by the County of Kaua'i and the State of Hawai'i for the Kē'ē complex. Precedents for appointed curatorships have been established with other nonprofit groups such as Na Kahu Hikinakala at Wailua, Kaua'i.

KA 'IMI NA'AUAO O HAWAI'I NEI has also demonstrated through this management plan that the lease of the existing buildings and facilities on the premises of the former Allerton estate by the State of Hawai'i to this nonprofit organization for the Kē'ē Living Cultural Resource Center would address the maintenance, interpretive, and funding needs for the preservation and perpetuation of the sites and structures within the Kē'ē complex. Examples of similar arrangements have been made between governmental agencies in Hawai'i and other nonprofit groups such as Hui o Lāka at Kōke'e Museum, Kilauea Point Natural History Association at Kilauea Point National Wildlife Refuge, and Volcano Art Center at Volcano National Park.

## V. FUNDING PLAN

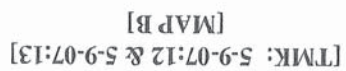
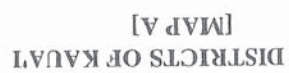
Sources of funding for this management plan will be secured and maintained by KA 'IMI NA'AUAO O HAWAI'I NEI as described below. As a result, costs to the County of Kaua'i and the State of Hawai'i for the preservation and perpetuation of the Kē'ē site complex are very minimal being that KA 'IMI NA'AUAO O HAWAI'I NEI will be providing the major portion of the services and finances for this plan.

1. Donations:
  - A donation box will be posted with a sign in the Kē'ē Living Cultural Resource Center informing visitors that the Center is operated in a nonprofit basis and that donations are welcome.
2. Mercantile:
  - The Center will have a small shop which sells an inventory of carefully selected items reflecting the purposes previously established for this Center.
3. Other:
  - KA 'IMI NA'AUAO O HAWAI'I NEI will submit grant applications to several governmental and private foundations to help with operating capital, renovations, and special projects. Also, fund raising projects and activities are an on-going part of the organization.
4. Special Conditions:
  - Exempt from property tax and minimal lease rent.

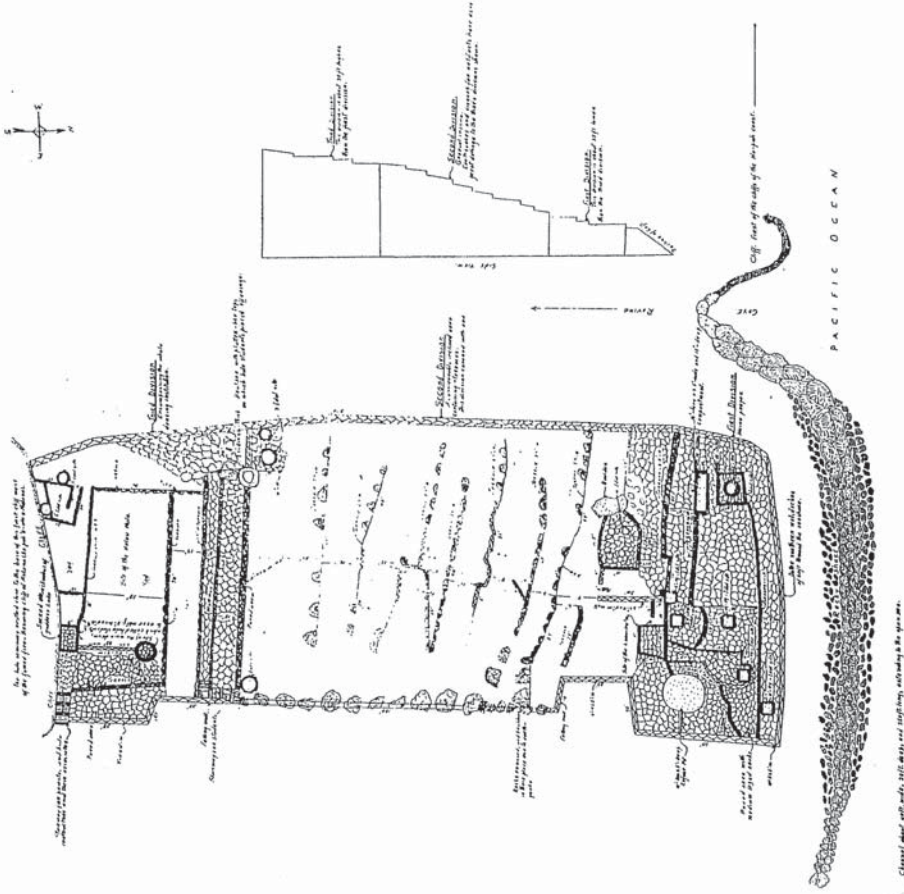
KA 'IMI NA'AUAO O HAWAI'I NEI has the available income and assets to presently finance the start-up costs to implement this management plan [Financial Income Statement of this organization is available upon request].



[MAP B]



[TMK: 5-9-07:13]  
[MAP C]




KA-UIU-A-PĀ'OA HEIAU AND HĀLAU HULA. Drawing by Henry K. Kekahuna,  
Oct. 4, 1959, for the Kaula'i Historical Society.

[MAP C]

**From:** Nalani Brun  
**To:** Kimi Yuen  
**Subject:** RE: Haena Master Plan  
**Date:** Wednesday, November 04, 2015 5:10:38 PM


Mahalo!  
Nalani K. Kaauiwai Brun  
Program Administration Officer  
Office of Economic Development  
County of Kauai  
4444 Rice St. Suite 200  
Lihue, HI 96766  
(808) 241-4952 (phone)  
(808) 241-6399 (fax)  
nbrun@kauai.gov

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**From:** Kimi Yuen [mailto:kyuen@pbhawaii.com]  
**Sent:** Wednesday, November 04, 2015 5:10 PM  
**To:** Nalani Brun  
**Subject:** RE: Haena Master Plan  
Great! just wanted to make sure. ☺ Mahalo nui!

**From:** Nalani Brun [mailto:nbrun@kauai.gov]  
**Sent:** Wednesday, November 04, 2015 5:05 PM  
**To:** Kimi Yuen <kyuen@pbhawaii.com>  
**Subject:** RE: Haena Master Plan

I think her Mana'o is important so I think that would be a yes.  
Nalani K. Kaauiwai Brun  
Program Administration Officer  
Office of Economic Development  
County of Kauai  
4444 Rice St. Suite 200  
Lihue, HI 96766  
(808) 241-4952 (phone)  
(808) 241-6399 (fax)  
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Month XX, 2018 - DRAFT

Kumu Roselle Bailey  
c/o Ms. Nalani Brun  
Office of Economic Development  
County of Kaua'i  
4444 Rice Street, Suite 200  
Lihue, HI 96766

THOMAS WITTEN, FASLA  
Chairman / Principal

R-SEAN BUSCAN, ASLA  
President / Principal

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MARC SHIMATSU, ASLA  
Senior Associate

DACHENG DONG, LEED® AP  
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SCOTT MURAKAMI, ASLA, LEED® AP  
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**From:** Kimi Yuen [<mailto:kxuen@pbrhawaii.com>]

**Sent:** Wednesday, November 04, 2015 4:16 PM

**To:** Nalani Brun <[nbrun@kauai.gov](mailto:nbrun@kauai.gov)>

**Cc:** Sue Kanoho <[skanoho@hvcb.org](mailto:skanoho@hvcb.org)>

**Subject:** RE: Haena Master Plan

Mahalo for sharing, Nalani! We will for sure take this into consideration. Do you know if Kumu Bailey would want this in the EIS or not...? Either way, we will at the very least share this with the project team and incorporate into the revisions. Our work is a bit on hold as our advisory committee regroup and regenerates so there is still time to share this.

Mahalo nui,

Kimi

**From:** Nalani Brun [<mailto:nbrun@kauai.gov>]

**Sent:** Wednesday, November 04, 2015 3:46 PM

**To:** Kimi Yuen <[kxuen@pbrhawaii.com](mailto:kxuen@pbrhawaii.com)>

**Cc:** Sue Kanoho <[skanoho@hvcb.org](mailto:skanoho@hvcb.org)>

**Subject:** Haena Master Plan

Hi Kimi,

Comment period may be pau already but I wanted to make sure you got this. I'm not sure if any of her halau had made any comments. This document is from Kumu Roselle Bailey who, with her halau, has cared for Ke Ahu A Laka. I saw her and sent her a copy of the plan as she was asking about what is going on. She reviewed it and send this. I think it's important to at least receive it as she has done so much for the area.

Mahalo! Nalani

Nalani K. Kaauwai Brun

Program Administration Officer

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**SUBJECT: COMMENTS ON THE HĀ'ENA STATE PARK MASTER PLAN  
DRAFT ENVIRONMENTAL IMPACT STATEMENT (EIS),  
HĀ'ENA, KAUAI, HAWAII**

Aloha Kumu Bailey and Ms. Brun,

Mahalo nui, Kumu Bailey, for your comment letter dated August 13, 2015 regarding the Hā'ena State Park Master Plan Draft Environmental Impact Statement (EIS). Ms. Brun kindly forwarded it to us on November 4, 2015 via email. We sincerely apologize for the delay in responding. Due to the feedback received on the Draft EIS, the State of Hawai'i, Department of Land and Natural Resources, Division of State Parks (State Parks) has worked on revising the master plan with a reorganized Hā'ena State Park Community Advisory Committee (HSPCAC) to address the concerns voiced by the larger community. As a result, the master plan presented in the Final EIS has been updated based on the feedback received from the public meetings, comments received, and subsequent extensive collaboration with the HSPCAC. As the planning consultant for State Parks, we offer the following responses to your comments related to the Draft EIS for Hā'ena State Park.

Mahalo for your concern regarding the visitor numbers presented in Table 3, "Summary Table of Daily Visitor Counts," found in Section 2.0. Please note that the table includes visitor counts beyond just 1993 and 1998, including counts from 1999, 2008, 2010, and 2011. The point of the table is to illustrate how drastically the visitor counts have increased over the years to over 2,000 visitors per day. Many in the community and on the advisory committee feel this is too many people and therefore forms the basis of proposing visitor limits for the park. This number may change over time as State Parks will adaptively manage what is appropriate based on impacts to cultural, natural, and historic resources and community feedback.

Mahalo for your recommendation to seek Dr. Luciano Minerbi's paper on Hawaiian Sanctuary Places. We reached out to Dr. Minerbi and he kindly shared the attached chapter, "Sanctuary, Places of Refuge, and Indigenous Knowledge in Hawai'i," from the book, *Science of Pacific Island Peoples: Land Use and Agriculture*, which may be the paper you cite. It does include a section on hula and references Kē'ē and the importance of protection, management, and access by Native Hawaiians. It mentions the State's Curator Program and kahu management as options to help protect it and prevent desecration of the site. Both are excellent recommendations, which State Parks appreciates. Currently the County has signed a curatorship agreement with the Hui Maka'āinana o Makana (the "Hui") to mālama their property that contains Ka Ulu a Poa Heiau and Ke Ahu A Laka.

Regarding your comments of things to remember, we offer the following responses:

1. We respect your thoughts on sacred historic sites. We fully agree that they must be protected and cared for.
2. We recognize your thoughts that all the government compliance regulations are tedious, but they must be followed. State Parks is committed to working with appropriate cultural and community advisors in managing the park.
3. As noted above, the Hui has been selected by the County in a curatorship agreement for the heiau. State Parks also has similar agreements with the Hui to tend to the lo'i at Hā'ena State Park and Allerton Caretaker's Cottage and support native community groups in caring for wahi pana.
4. Mahalo nui for the olelo noeau. We take that to heart and the master plan has been revised to respond to the concerns raised by the community. The adaptive management strategy will also allow State Parks to revise and adjust any proposed policy after implementation based on feedback.
5. State Parks supports your desire to allow cultural practices to occur at the park in order to make it a living park rather than a superficial tourist park. One of the main goals of the master plan is to "restore Hā'ena State Park as a living place... cleanse, restore and revive cultural practices again." State Parks appreciates all your recommendations and welcomes the kokua of all Kauai's people to help restore and mālama the park.
6. Mahalo nui for all of your sentiments and we appreciate Ms. Brum for sharing your letter with us.

We also greatly appreciate you sending a copy of the Management Plan for Kē'ē. It will be helpful as State Parks moves forward with a more detailed management plan for the Hula Complex. We have included it as part of your letters in the EIS so it will be available for future use and reference by State Parks and the County of Kauai.

We are sincerely sorry to hear of the lack of appreciation for your efforts and dedication to care for the heiau at Kē'ē. There is still much work to do, but we too are hopeful that the master plan for the park can be accomplished. As noted, the Hui is helping State Parks and the County mālama many areas of the park and they are making great strides in restoring the park and bringing living culture back to this place. One of the key management recommendations is to establish a cultural advisory group and a community advisory group composed of knowledgeable individuals to advise State Parks as they implement the plan and make any improvements at the park. Please see the attached description of them from the EIS.

Mahalo nui for your input on the Draft EIS. Your letter will be included in the Final EIS. If you would like a copy of the Final EIS or portions thereof, please let us know. Otherwise, the electronic copy of the Final EIS will be available on the Office of Environmental Quality Control website at: [http://oeqc2.doh.hawaii.gov/EA\\_EIS\\_Library/2018-\\_-KA-FEIS-Haena-State-Park-Master-Plan.pdf](http://oeqc2.doh.hawaii.gov/EA_EIS_Library/2018-_-KA-FEIS-Haena-State-Park-Master-Plan.pdf) on

Aloha,

Kimi Mikami Yuen, LEED AP BD+C  
Principal

Attachments: Cultural and Community Advisory Groups  
"Sanctuaries, Places of Refuge, and Indigenous Knowledge of Hawai'i" (Minerb)

cc: The Honorable David Y. Ige, Governor  
Office of Environmental Quality Control  
Board of Land and Natural Resources  
Division of State Parks  
Ms. Nalani Brum, County of Kauai

O:\job\2627 01 DLNR-Haena State Park Master Plan\EIS\DEIS\Responses\5-053\_2015-08-13 Roselle Bailey Letter (via Nalani Brum 1-04-2015) - JSK.docx



## SANCTUARIES, PLACES OF REFUGE, AND INDIGENOUS KNOWLEDGE IN HAWAII

Luciano Minerbi

The Hawaiian culture is rich and vibrant, but many Native Hawaiians are at the bottom of socioeconomic-health indicators in Hawai'i. Hawaiian sanctuaries and places of refuge are essential to improving the well-being of Native Hawaiians. The exercise of basic human rights, particularly those of indigenous people under pressure by a larger or dominant society, requires sanctuaries and places of refuge which foster their spiritual, traditional, and cultural survival. These rights are expressed in the present and future stewardship by Native Hawaiians of certain programmes and places important to them on each of the Hawaiian Islands. These rights are linked to principles of social justice and ecological vitality.

In their quest for cultural survival and well-being, Native Hawaiians strive to protect and support their life-styles, lands, and special places. The socioeconomic, political, and demographic pressure of the dominant society is so great, however, as either to assimilate or marginalize them. Alternatives to this situation of structural violence can be found by understanding what is happening to Native Hawaiians and by supporting their legitimate efforts to cultural identity and survival as a people and as a nation.

Native Hawaiians on many occasions have requested assistance in the protection of places important to them. This study is a response to those requests. It explores the interrelation of several themes (table 1). Population growth by immigration has resulted in cultural debasement, physical displacement, and political and economic marginalization of many Native Hawaiians, and the assimilation of some of them in

Table 1. The context of Hawaiian sanctuaries and places of refuge

**The Pressure of Population Growth by Immigration**  
Ecological pressure of the multiethnic population and the resulting cornering and displacement of the Native Hawaiians in the islands.

**Structural Violence/Cultural Displacement/Economic Marginalization**

Demographic decline of the Native Hawaiians: diseases  
Privatization of land: land taking  
Loss of land and loss of subsistence base  
Overthrow of the Monarchy: loss of sovereignty  
Loss of language  
Loss of religion  
Loss of cultural identity

**Escape, Safety, Survival**

Places of refuges and sanctuaries in Polynesia and in Hawai'i of old

**Spirituality, Cultural Continuity**

Hawaiian communities, their role as sanctuaries for contemporary Hawaiians

**Human Well-Being and Cultural Health**

Rural, metropolitan Hawaiians  
Hawaiians on the mainland and their relationships to Hawaiian cultural places and sites

**Geographic Distribution of Native Hawaiians**

Native Hawaiians on the mainland and abroad  
Metropolitan Hawaiians in Honolulu  
Rural Hawaiians  
Homestead Hawaiians

**Hawaiian Land Base**

Department of Hawaiian Home Lands (DHHL)  
Ceded lands: Government lands  
Crown lands  
Kuleana lands and Hawaiian *Hui*  
Federal/state/private encroachment on Hawaiian lands/sites

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Table 2. Typologies of Needs and Places

**Meeting Places**

Where people can get together, feel comfortable with one another, resolve issues, build unity, community centres  
To meet Pacific people in a Hawaiian centre  
Some sort of counterpart of the *marae* of the Maori

**Sacred Places**

High mana places  
For the perpetuation of Hawaiian religion and culture (On Oahu the temple of Lono Kūaloa in Kane Ohe, second most sacred place, is now a park)  
To restore original religious sites and natural places

*Ahiau*, places of the gods, places of the spirits, certain sites

How to protect these places

Curator program can be a vehicle, guardianship another vehicle

**Burial and Ancestral Sites**

Legislation to protect burial and ancestral sites

**Sanctuaries**

Away from distractions to be able to live the culture

Repair Hawaiian Christian churches

**Hawaiian Rural Way of Life**

Protect the Hawaiian rural way of life, including taro cultivation and fishing to perpetuate the Hawaiian culture

**Protection Measures**

Determine policies that would effect change for new zoning category  
Preserve ancestral land  
Sovereignty, land base, and rights  
Establish Native Hawaiian land trusts

Sources: Kinney 1990, McGregor 1990, Mokuau 1990b, Trask 1990.



mainstream society. This has induced stress and alienation among Native Hawaiians, but has also prompted a Hawaiian renaissance to promote their cultural and physical health. Their survival requires the protection and use of places of refuge and sanctuaries. Their traditional beliefs and spiritual values and cosmology identify nature and many of these places as *ʻāhupāhupū* (sacred places) (Nunes 1990).

This study reviews examples of sanctuaries and places of refuge and related Hawaiian practices (table 2). It also links modern sanctuaries to traditional *puʻuhonua* (places of refuge). It includes interviews with Native Hawaiian leaders. This chapter shows the benefits for Native Hawaiians and for the general public in Hawaiʻi if Native Hawaiians control their own sanctuaries and places of refuge. It also discusses possible ways to manage these places. It looks at the relationships among Native Hawaiian religious beliefs and aspects of health, social services, community-based development, cultural programmes, artistic endeavours, political action and research. The intent is to move away from violence, stress, debasement and displacement toward greater justice, community self-reliance, sociocultural well-being and inter-ethnic understanding.

## STRUCTURAL VIOLENCE AND THE NATIVE HAWAIIANS

### Condition of the Native Hawaiians

Native Hawaiians have endured increasing sociocultural, economic, and ecological pressure and displacement by the dominant society. They need room for their survival as indigenous people. They need a land base, sanctuaries, and places of refuge. An individual with any ancestors who were native of the Hawaiian Islands prior to Western contact in 1778 is a Native Hawaiian (Marsella et al. 1985:4). Native Hawaiians include full-blooded Hawaiians and part-Hawaiians. From a population of 1,000,000 before Cook, they declined to only 40,000 in 1893 (Stannard 1988:45). The 1980 US Census shows that self-defined pure Hawaiians continue to decline in number and that part-Hawaiians have continued to grow and should surpass 200,000 by the year 2,000 (Barringer & O'Hagan 1989:51-2). Five interrelated factors help to explain this rapid decline of Native Hawaiians (Blaisdell 1989:8-14):

- (1) rapid depopulation due to introduced infectious diseases to which the indigenous Hawaiian people did not have immunity;

- (2) foreign exploitation resulting in the introduction of a market economy, taking of land, illegal overthrow of the monarchy in 1893, and annexation to the United States in 1898;
- (3) cultural conflict between Hawaiian values and Western values;
- (4) adoption of harmful foreign ways, particularly in life-style and diet; and
- (5) neglect, insensitivity, and sometimes malice toward Native Hawaiians by those in power.

Although some Native Hawaiians are very well placed at political, economic, and social levels, many are not. The pressure is for assimilation or marginalization. Hawaiian educational levels are quite low with high attrition in high school and college, and under-representation in higher learning institutions. They are under-represented in high prestige and high salary occupations and in business and have a much higher unemployment rate than other ethnic groups. They have much lower personal, family and household incomes than Whites, Japanese, and Filipinos. Approximately 68.6 per cent of Native Hawaiians resided in Hawaiʻi in 1980. About 70 per cent of the Native Hawaiians in the islands resided on Oʻahu. Of the 31.4 per cent on the mainland, about half resided in California. It appears that migration to the mainland has not resulted in better income; in fact, Hawaiian household characteristics in Hawaiʻi are better than those on the mainland. Most Hawaiians resided in metropolitan areas; only 4.6 per cent were classified as rural (Barringer & O'Hagan 1989:51-7).

### Problems in Health and Education

The health of Native Hawaiians is a major problem: they fare worse than other people in the United States regarding the leading causes of death, such as heart disorders, cancer, diabetes mellitus, pneumonia, cerebrovascular, arterial, and other conditions. They fare worse than other people in the state of Hawaiʻi for suicide of young adult and elderly males, child abuse and neglect, alcohol and substance abuse, crime and delinquency, and social and psychological disorders. Their chronic depression is expressed by a sense of despair, and self-doubt. Westernization is often pointed to as the cause of these health problems as it has disenfranchised Native Hawaiians in their own land. The result is loss of culture, erosion of pride, and unhealthy con-

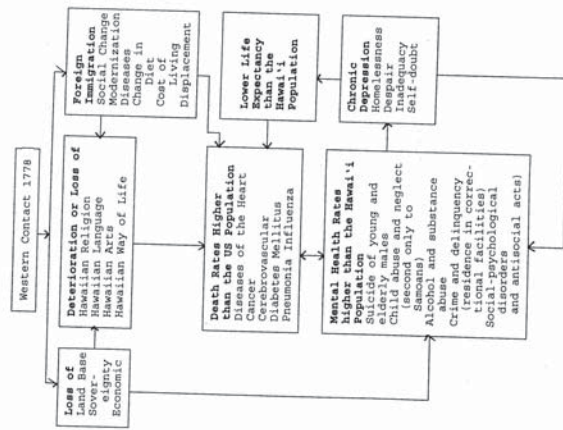


Figure 1. Structural violence and Hawaiians

Sources: Mokuau 1990a, Alu like 1989, E Ola Mau 1985, Kamehameha School/Bernice Pauahi Bishop Estate 1983, Trask 1983.

ditions and stresses (figure 1). These losses in turn are the result of the suppression of the Hawaiian language, religion, values, economic tradition, ruling system, land base, and independence (Alu Like 1989:43, Kamehameha Schools 1983:203-213, Mokuau 1990a:236-238, E Ola Mau 1985:47-61).

Improvements in health practices could include holistic approaches comprising community based services of cultural promotion, self-empowerment and self-determination. This includes 1) focus on native spiritual values where the individual is in unity with nature; 2) group outreach to treat the individual as a member of the group, thus minimizing avoidance and personal risk; and 3) use of an informal personal style (Wegner 1989:152-153). In addition programmes and sites need to be in context and in settings suitable to Native Hawaiians, such as Hawaiian civic clubs, canoe clubs and other social organizations (Wegner 1989:160-161). Studies have proposed a useful ecological framework which sees the educational experience of the Hawaiian child as a set of nested relationships of the self, family, teachers, peers, school board, and broader institutional patterns. The attention is on the systematic changes that affect socioeconomic organization and life-style and on how they effect Hawaiian families and schools (Bronfenbrenner 1979, cited in Kamehameha Schools 1983:5-5).

### Cultural Loss and Stress

Changes at the societal level will produce changes at individual and family level, inducing loss of ethnic identity, alienation, self-doubt, helplessness, and despair (Kamehameha Schools 1983:203). Historical changes have suppressed or distorted Hawaiian practices; nevertheless, many Hawaiian values, beliefs, and behaviours have survived, particularly in the family (Nunes 1990).

Stress, a protective mechanism against harm, when excessive and unresolved evolves into 'chronic stress' affecting both mind and body. Marsella identifies seven areas of culturally induced stress in individuals: value conflicts, social change, acculturation, life events, goal-serving discrepancies, role discrimination of lower status people, and role conflict of individuals assuming conflicting roles (Marsella et al. 1985:208). Cultural stress has negative psycho-social results. Howard has found that those who score low on both Hawaiian and middle-class concepts also tend to score lower on measures of self-esteem and use





concerns, organize themselves, and express *kāhuna* (to build unity) (McGregor 1990).

### Healing Places Within Hawaiian Communities

Native Hawaiian homesteads should include sites of refuge as healing places. They could consist of smaller sites within the homesteads, which act as refuge spaces. Inside these spaces people will *kāhuna* and the two binding elements could be the *ʻohana* and the land. These sites could be tailored to the needs of the specific community and could facilitate activities which require interaction: fish drying, preparation, distribution, net hanging, and net mending could take place in fishing villages. In other sites *hoʻoponopono* (settling things right), *lomiolomi* (massage) and other healing practices could take place. The legitimization of subsistence space to do just that is a common theme for the betterment of Hawaiian homesteads (De Camara 1990). Examples of tailored programmes are:

- 1) services to the *kāpuna* (elderly), such as Hawaiian food, healing practices, and care;
- 2) services such as communal dining and social work provided regularly in certain places; and
- 3) home support, outreach efforts, and legal aid.

Of great interest is the cultural dimension of such programmes. For example communal dining is connected to Hawaiian diet and the availability of growing, cooking, packaging, and serving Hawaiian meals (Sumarnap 1990). This has economic and employment multiplier effects in nearby rural areas. Hawaiian protocol can be used in nutrition and health programmes.

Kinney (1985) in her anthropological study of 30 Native Hawaiian residents of a Hawaiian Homestead community on the Big Island, has found that, although Native Hawaiians live in non-traditional environments and use non-traditional modern tools and technology, they are still traditional in economic beliefs and in family cultural values. There are cultural differences in coping strategies of people under stress. Important caring constructs used by Native Hawaiians were sharing, dreaming, and touching (figure 3). Dreams are important to Native Hawaiians, particularly when they address the *ʻohana* and can be interpreted. Dreams represent direct and continuous means of communication with the *ʻaumākua* (ancestral guardians) and *āhuna* (gods). Kinney's survey

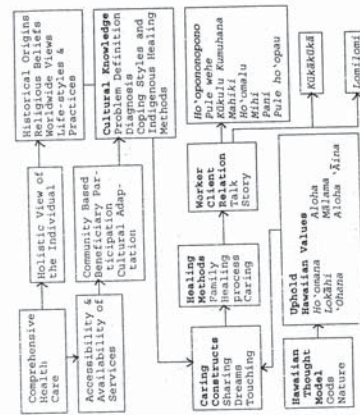


Figure 3. Hawaiian Healing and Caring Approaches. Sources: Kinney 1985, Mokua 1990

indicates that Hawaiians perceive that the diet of fish, pot, stew, Hawaiian medicines, herbs and fruits maintains well-being. A spiritual relationship with God, eating good food and positively interacting with family and friends are valuable activities in achieving a healthy life-style. Hawaiian Christian churches function as sanctuaries, as healing places for Native Hawaiians, but some of them, in Kalaupapa, Kalapana, and on the Kona Coast, have neither ministers nor money for maintenance; they need to be repaired and restored (Trask 1990).

### The Spiritual Connection of the ʻOhana to the ʻĀina: The Symbolism of Taro

Hawaiian thinking is based on a spiritual connection among man, god/gods and nature. *Aloha* and affection to humans is expanded to express love and spiritual connection with the natural environment of the *ʻāina* (land) and *kai* (sea). Native Hawaiians continue to attach great significance to the social and psychic phase of relationships (Lee and Newton 1981:20 in Kinney 1985:14). In fact the *ʻohana* (family) is identified physically and psychically with the *ʻāina*, whose soil has produced the staple of life, *ʻai* (food) made from taro that nourishes the dispersed family (Handy & Pukui 1972:3 in Kinney 1985:17). The taro in turn represents the *ʻohana*, with the *māhū* (parents) as the stem and the *kēle* (the children), as the *ʻāina* (young leaves). Taro propagates itself by means of the *ʻōla* (sprouts). Taro then is a symbol of where Hawaiian people come from, the original parent being Papa and Wākea, for at least one lineage. Taro then represents the strong spiritual connection of the *ʻohana* to the *ʻāina*.

### Modified Hoʻoponopono

The practice of *hoʻoponopono* (meeting to make things right and resolve *ʻohana* problems) is being modified. Migration causes changes in the *ʻohana*. Families become divided among islands and between the mainland and Hawai'i. Some elders have been left without immediate relatives. Now a modified *hoʻoponopono* involving the larger *ʻohana* is acceptable and practised on the Big Island. Elders can now come from different families and the process of healing can reach a broader group of beneficiaries. Four *kāpuna* in Hilo are involved in this activity (Kinney 1990).

## RELIGIOUS BELIEFS, SPIRIT REALMS, SACRED NORMS Sacredness and Spirituality of Nature

In traditional Hawaiian thinking nature and land are considered sacred and animate. The world is a conscious entity and people can communicate with all species in nature and interact in a mutual relationship of rights and responsibilities. The Kumulipo (creation chant) implies that the universe is alive and conscious and that its evolutionary development comes from within. This evolution explains how man is related and is kin to nature (Dudley 1990:8, 45-47). *Āhuna* are conscious spirits; *ʻaumākua* are spirits of the ancestors. These gods already possess or acquire through *hoʻomanamana* (imparting of *mana* by *kāhuna* to the gods) great *mana*. *Āhuna* take animal, plant and other natural forms, even in more than one place at a time. Chiefs were gods who could be seen (Dudley 1990:35, 72, 75; Kepelino 1978:12).

Native Hawaiians therefore perceive nature, plants, animals, and rocks as sentient, divine, and ancestral forms which have extrasensory perception, and interrelate with people as family. This explains *āhuna ʻāina*, the great love that Native Hawaiians have for the land, the *oa* or *ka ʻāina* (life-force of the land) (Dudley 1990:50, 51, 52, 78, 118). Nature is not only conscious, much of it is divine. The presence of gods gives the Hawaiian a constant sense of religious encounter. Sea creatures and land creatures are paired in the Kumulipo and are perceived to accomplish joint purposes (Dudley 1990:82, 89).

### ʻAumākua

*ʻAumākua* are the ancestral deities, spirits and guardian angels of the family. In ancient times *ʻaumākua* were a source of forgiveness; healers countering illness and troubles; providers of increase in food production and fish catches. In Kamaka's time they were perceived more as enemies punishing those disobeying the laws of gods, of the land and of the family. They also took care of family members after death. *ʻAumākua* were related to *ʻaumākua* of the heavens, the ocean, the earth, and the volcano, and could go to and from these places. Only those souls without an *ʻaumākua* realm would wander on the plains of certain places: Kama'omato on Maui, Pū'ukokapolet and Kaupē'a on O'ahu, Uahua for Lāna'i, Maohelaia for Molokai, Mana for Kauai, and

Hahāli, for Niihau. At the *leina-a-le'i-hoane* (sleeping place of souls), such as Kaena and the *uilaui* grove on O'ahu, it was customary to offer prayers for the dead and bunches of *pili* grass. There were *eha-a-ka-tuhua* and *hū-o-lenua* on each island. In these places the spirits were divided to go into one of three realms:

- 1) the realm of the *kūewa* or *anūwana* (homeless, wandering souls) with no place in the *anumakua* realm;
- 2) the realm of the *anumakua* (ancestral spirits), where people related to these *anumakua* had an irrevocable *kūwana* right to go there after death, e.g., the ocean, the Pit of Pele at Kilauea, or some other place. Persons with an *anumakua* realm did not fear death. *Anumakua* would dwell in animals and other natural forms. Pele, the goddess who dwells in Kilauea volcano, appears in her lava form (Dudley 1990:1-2); or
- 3) the *ao o Māui* (realm of Māui), the *pōpau'ole* (endless darkness), the realm of evil (Kamakau 1987: 28-30, 47-49, 51).

## Kapu

There is a hierarchy of *kapu* (royal privileges), those of gods and those of chiefs, and corresponding *kāhāwai* (sacred) laws. A *kapu* place such as a *heiau* was a sacred place which only high chiefs and high priests could enter (Kamakau 1987 11866-18711:10). *Iāmuku* (executive officers) watched over the sacred *kapu* of the chiefs. *Kāhuna* (priests) were the *ilamuku* of the gods (Kamakau 1987:12).

## Kanawai

*Kanawai* are the sacred laws and edicts promulgated by rulers, decreasing life or death. Only this decree could spare individuals, or even the people of an entire *ahupua'a* or *'āina* land section, from death for breaking a *kapu* (Kamakau 1987:11). The *Kāhāwai Waiapaho* *Kōloa* was a decree providing that old people could sleep safely on the highway and that Ena and fishermen had to welcome strangers and feed the hungry on O'ahu. The food of anyone was dedicated and made available to whoever invoked this *kāhāwai*. This *kāhāwai* could be invoked only for just reason, not to rob another of food and provision (Kamakau 1987:11). *Kāhāwai Māmaluhua* was a decree promul-

gated by Kamehameha stating "let old men, old women, and children sleep in safety on the (highway)". It originated from his escape from death when he was beaten by fishermen at Papā in Ke'aua, Puna, and was extended to the whole Hawaiian kingdom (Kamakau 1987:11). This law was a birthright of King Kamehameha and was designed to save lives and fortunes during a time of slaughter (Kamakau 1987:16; 1961:312). The sacred *kāhāwai* of the kings was an absolute edict. *he pū hōhonua ho'ola* (refuge of life). Captives in time of war, numbering in the hundreds or thousands, were no longer slaves if the king placed the sacred *kāhāwai* decree over them (Kamakau 1987:17).

## Religion and Spirituality

Blaisdell (1989) has summarized the cosmology and logic of Hawaiian beliefs which link man, nature and the gods:

Kanaka Maoli believed that the cosmos from the beginning and forever Evolution of species from simple to complex forms Kaku'ai, dedication Great men become chiefs and great chiefs become 'aumākua Acquisition and enhancement of mana Loss of mana leads to misfortune Palua, dualism of complementary opposites in nature Pono, order and harmony Kapu, sacred tabu Lāhāhi unity, interdependence, with ancestors, gods, their kino hau and nature world Self-reliance Death as a reunion with ancestors Kino lau, multiform reincarnation of a god Mau ke ea o ka 'Āina, maintenance of the life of the land Mutual mōlana and sharing of produce Harming others or nature is harming oneself

Native Hawaiians should be able to practise their religion. In the opening lines of the Kumulipo, Native Hawaiians trace their origin to Kumulipo (the dark source) with the mating of Wakea, the sky father, and Papa, the earth mother, from which everything in their cosmos was derived including the *'āina*. Species gradually evolved from simple to

complex forms (Blaisdell 1989:1). All things in the cosmos are thus alive, connected and sibling, and must respect each other to attain *lāhāhi* (harmony in unity) (Blaisdell 1990). The conception of nature as sibling remains of value to many Christian Hawaiians who no longer believe in the *kapu* system.

## SELECTED HAWAIIAN PRACTICES

### Burials, Tapa, and Kūiō

Certain traditional Hawaiian practices such as burial have disappeared. The loss of the traditional religion and language, the abolition of the *kapu* systems, and the subsequent advent of Christianity are remote reasons. The use of Christian mortuaries and cemeteries and Western public health regulations are recent reasons (Kimura 1990). Yet, traditional practices can be quickly revived if the traditional values are still cherished. The recent opposition by Hui Alanui O Mākena to the disintering of more than 900 Hawaiian graves for resort development at Honokahua, Maui, is a case in point. The opposition of the *huli* has not only prompted others to stop such desecration, but has also helped to re-establish Hawaiian protocol for the proper handling of ancestral bones (Adams 1990).

This protocol for reinterment includes wrapping the bones in tapa. A recent effort to make Hawaiian tapa involved participants from other islands who flew to Molokai. An appropriate *heiau* was cleared and prepared for the occasion and many people were on hand to help. These activities have arisen from the determination of a number of Native Hawaiians to treat properly their ancestral graves and bones, by the perpetuation of Hawaiian culture, and by the individual efforts of people such as Pua Kanahale to save and cultivate various Hawaiian plants to make different types of tapa. The plants come from various places, such as 'ao valley, Maui. To the extent that land for growing plants is made available and protected, dedicated Native Hawaiians would be able to produce tapa without having to resort to procuring tapa from the South Pacific. The revival of the tapa manufacture in Hawaii is a possibility. Another Hawaiian practice connected with funerals and burial is *kūiō* (wailing). Wailing shares the burden of grief (Kawoa 1982:23) with inspiring and beautiful poetry (Bailey 1990). Ceremonial *kūiō* was

brought to the public by Kamaki Kanahale during the ceremony for Senator Spark Matsunaga at the Hawai'i State Capitol in April 1990.

## Hula

*Hula* has survived antiquity with its language, poetry, music, dance, genealogy, and religious meaning. *Hula* perpetuates and teaches in Hawaiian language the chronology of a people and its places. It helps Hawaiians to re-establish links with their home and their ancestors. Hawaiian culture and the arts are a good foundation for education of the Hawaiian child as a whole person, so that learning does not take place in compartmentalized ways, but in relation to the child's environment. Children need the outdoors and need to experience nature in many ways, in its meaning, symbolism and aesthetics. Young bodies and young minds can grow together harmoniously through storytelling, play, observation, comprehension, and experience. Contact with nature is needed to move back and forth from group activities to personal and quiet situations (Bailey 1990).

Protection, management and access to ancient *hula* sites such as at Kē'e, Ha'ena on Kauai and at Kā'ana on Molokai is important. This access must be realized through merging various ideas on management of historic and cultural sites, including elements of the State of Hawai'i Curator Program and the *kapu* (guardianship program) envisioned by Hawaiian cultural groups. Proper maintenance and access to these places would benefit not only local *hānau* (groups), but also *hānau* from the mainland which welcome the opportunity to dance on the *hula* temple. They are in touch with the sacred rites of *hula*, the sacredness of the temple ground, its natural beauty and its history. These sacred places have survived, but they need protection. For example, because there is no *kapu* yet on the premises at Kē'e, Ha'ena, various people desecrate the place, leaving inappropriate things behind. The *hānau* Ka Imi Nā'aua O Hawai'i Nei periodically clean and *ho'oponopono* (make right) the place. All this is avoidable with a proper *kapu* in residence (Bailey 1990).

## Religious Aspects of Fishing Practices

Fishing on the open ocean was dangerous, unpredictable and difficult. Safe return and a good catch of fish involved prayer and



magic. Fishing was associated with religious ceremonies and worship of the god of fishing at the *kōwata* and *kōya* (fishing shrines along the shore where the fishermen would assemble in the evening and spend the night in the *imua* (sanctuary), before going to sea. On returning they would assemble around the *kubina* who would perform prayers and make food offerings on the *lāle* (altar). Religious ceremonies, centered especially around the fish *qūqū* and *ālu*, were repeated every fishing season and were part of the Makahiki observances. The *ālu* and the *ālu* *ta* both played crucial roles in the *luakini* temples. In addition sharks and *ālu* were both claimed as *ʻaumakua*. Some *ʻaumakua* (deified spirits). Most sharks who had become *hoʻālo* at *ālu* (supernatural beings) were people who had been changed through an elaborate ritual into forms of their ancestors. They were *kino lala* (direct incarnations of the gods), recognizable by special marks on the cheek or the sides. A relationship of mutual protection existed between an *ʻaumakua* shark and its *kahā*, and even his descendants, provided that its *kāpu* were observed. A *kahā* would feed a shark *ʻala*, pigs, and bananas, and the shark would become his *pūpūia* (defender), help steer the canoe in the right direction, protect him from attack by other sharks by carrying him ashore and lead fish into his net. The people of Maui did not eat shark meat, but worshipped the shark and felt protected by it (Kamakau 1976:373-91). The *kāia* (guardian of all the fishponds were the *mōʻo* (water spirit), the *kāia* *qūqū* (incarnations of the gods) by the Oʻahu. The *mōʻo* would keep the fishpond well stocked with fat fish and pearl oysters, provided that the *konoaho* (land agency) properly honoured the guardian of the fishpond and assisted the poor and fatherless (Kamakau 1987:84).

**SACRED SITES, LOCALITIES, AND STRUCTURES**  
Sacred Localities and Places

Certain areas and places are important because of their sacredness. They have spiritual power because of the presence of the *aktua* and the *'aumakua*. These places have *mana* and are beautiful. The cults of certain gods were prevalent in some localities because that is where the *kino lau* grew or lived.

- 1) Kāne, the god of the creation chant, the life-giving god, is associated with taro, sugar-cane, and bamboo. These plants grow well in the best farming localities where systematic irrigation can be

established. These are the lands of the common people, administered by the *koroniki* for the chief of the *ahupua'a* (land division), the windward coasts and the valleys on the leeward side of Kauai, Oahu, and West Maui, where streams exist and water is available. Kanaloa, the god of the ocean, is associated with banana, squid, and marine life.

- 3) The practice of fishing and god of war, is associated with *coco* (Kū), the patron deity of the Hawaiian Islands. Organized fishing was the prerogative of the *nui* and *ariki* (chiefs) who could presump the best fishing grounds, such as *atū* (fishery) and *Wā'anae*. Fishing shrines along the coast marked Kona, Kū'i, and Wā'anae. Fishing shrines along the coast marked these fishing grounds.
- 4) The practice of being of historical existence, was also the god of Lono, the rain deity, visible on the top of the islands. Lono was also associated with sweet potato and gourd, which were suitable for cultivation in the drier areas of the islands. The cult of Lono was predominant in those areas, such as Kona on Hawai'i and the Uluakapu on Maui, where temples were dedicated to Lono. The Uluakapu was the food of the common people.

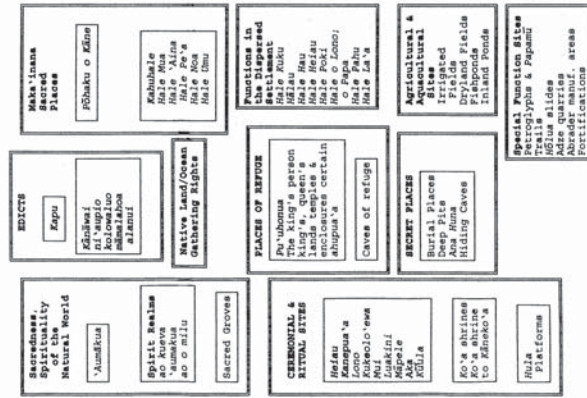
Additional gods would appear and inhabit forests, groves, stones, and *kino lau* in animals, birds, fishes, and natural phenomena. There is a need to recognize the gods and ancestral spirits that legends and traditions associate with sites and localities, establishing their sacredness, and to preserve and protect and archeological significance.

## Sacred Sites and Structures

Sacred sites and structures include the ceremonial and ritual sites of the official religion for chiefs and priests and the sacred places of worship for the common people (figure 4). Sacred sites include groves, lands, caves of refuge, and other places, including Pöhrä o Käine (sacred stones). Sacred structures include temples, *hulla* platforms, and certain stones of the *hainulu* (family compound).

## Heian

The *heiau* is the traditional Hawaiian religious temple. There are many *heiau*, built for different reasons, by paramount chiefs, lesser chiefs, prominent persons, and common people. They varied in size (Bennet 1930). The large ones involved major mobilization of labour. There were *heiau* for the official chiefly religion, agriculture, fishing, and other



**Figure 4. Traditional Hawaiian Sanctuaries and Places of Refuge:  
A Typology.**

Sources: Blaisdell 1990. Kamakau 1976. Kirch 1985, 1990.

[illegible]

### Ko'a Shrines

*Ko'a* shrines were set up to increase the amount of deep sea fish. *Ko'a* shrines to Kāneko'a were set up along the banks of rivers, streams, the coast, and inland ponds to increase 'o'ou (lobster).

## Family Shrines

Family shrines included the *Fukuhaku* or *Ki-no*, which were family shrines of the *mukai* (ancestors) to make offerings and to ask forgiveness and the *Hite Mita*, a miniature house for daily offering and prayer. The stone of *Ki-no* was called *shimada*, a gate to heaven, for each family. The stone of *Ki-no* generation. It was a single stone monument from a family from the same generation. They were placed about. There the *shimada* (stone) with *ti* and other greenery planted about. These families had to obtain relief from illness, death, or misfortune caused by these things that had been irreligious, careless about *kapa*, or had performed defiling actions. They went to the *Fukuhaku* or *Ki-no* to make offerings to their wrongdoing and to pacify the god. Rituals and family purification involved food, pigs, *uma*, *tapa*, and *awa* ceremonies. The stone of *Ki-no* was a stone pointed out by the god in dreams, visions, or by leading someone to the spot. There were many stones of *Ki-no* in an *ahunui* (Kamakau 1987:32-33).

## Hula Platforms

Sacred *bula* platforms include the Hālau Hula at the Kē'ē, Hā'ena, Kāua'i complex and Kē'ana on Molokai.



Many *kubua* are appropriate to build temples for various purposes and for many gods, on hills, ridges, valleys, headlands, level ground and specific island locations and orientations. Throughout the islands there were many *kuabui* (altars) for the many gods and their incarnations: sharks, fish, *mo'o*, thunder, lightning, earthquakes, spirit of the volcano, the sun, the moon, stars, fire, etc. (Kamakau 1976:129-147, Stokes 1991).

There are famous burial places of chiefs who ruled well, high priests and *ahuna*. For example, the bones of *Puao* are buried at Puao-*ka* in Kohala, Hawaii. Graveyards are well known throughout the islands. In the past, the bones of chiefs and nobles were buried in the bones of family and relatives, together with their treasures and possessions. Puhakua is a famous *ahuna* *huna* on O'ahu. Toa is another place at Olopo on Maui. *Ki'a'awa* is a deep pit inside the crater at Haleakala. To fulfil the *mana*, the last will of a loved one, the bones would be transported over long distances, even from one island to another. Sometimes a sick person close to death was secretly taken and buried in an *ahuna* (Kamakau 1987:3, 38). Bowen (1961:72) has identified ten major methods of disposal of the dead employed by Native Hawaiians: exposure; cremation; sea and fresh water; pit or volcanic cave; monument; burial; pits/utens; and house.

Excavation at the pu'uhoua at Hōnaunau, Kona, Hawai'i has revealed artifacts of both uniquely Marquesan form and uniquely Society Island form. These findings support the hypothesis of early arrival in Hawai'i, first from the Marquesas then from the Society Islands. There is also a remarkable uniformity in type of artifacts found in sites on Oahu and at Hōnaunau. Inherent types consist of: 1) monument disposal, platforms or oval stone monuments; and 2) open site, crypt disposal, and cave disposal (Soehren & Tuohy 1987:215, 219-220).

Additional functions in the dispersed settlement with spiritual or religious value included: *bale kuku* (for beating tapa), *bālau* (for canoe), *bula* instruction, meeting house, *bale hau* (for healing the sick)

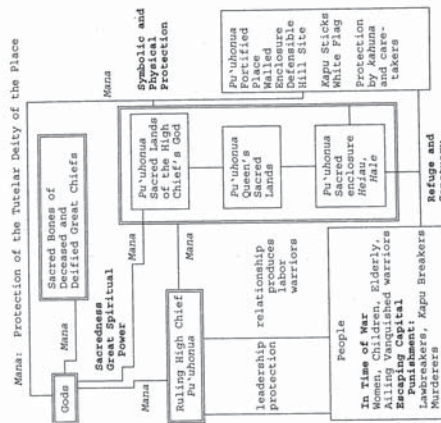


Figure 5. *Pu'ubonua*: Sanctuary and Refuge.

See Kamakau 1961 & 1987 Kelly 1957. Ellis 1969.

*bale betau* (for keeping images), *bale poki* (a shrine where bones of dead chiefs were kept), *bale o Lono* or *Papa* (the respective god), *bale pabu*, drum house, place of refuge; and *bale la'a* (dedicated to a god).

*Pu'ubonua* - the Ruling High Chiefs and Queens

*pu'uho'uwa* were sacrosanct, inviolable places of refuge, where one could be safe from death or capture. The relationship of the ruling high chief (the *pu'uho'uwa* king) to the gods and the people explains the concept of *pu'uho'uwa* as the idea of asylum, the high chief's removal from the people and his subsequent return. The high chief's position was one of authority, productivity, and obedience, and he gave them leadership and protection (Fig. 5). The high chief's position and his accompanying *mana* were inherited from his deified ancestors; his power to spare life and extend mercy regardless of guilt (Kacy 1986:39). The king was called *pu'uho'uwa* because one could run to him and be safe. By him, the king and his very person were *pu'uho'uwa* (Kamakau 1987:17-19). When Liloa, the son of the sacred and ruling high chief Liloa, was 17-19 years old, he was sent to his father's house to help him. He was sent to be speaking to meet his father for the first time, broke the *kapu* by killing the king's *pu'uho'uwa* sticks and jumping over the wooden fence of his father's compound, beyond which commoners were not allowed, he saved himself, and immediately fled by leaping and sitting on Liloa's lap. He was later recognized by Liloa as his son (Kamakau 1961:7). Ka-hakeli, a famous *pu'uho'uwa* chief, was so sacred that whatever touched his body was hallowed. He was so sacred that no one else could use it. Half of his body was taken from his back to feed any person who committed a crime and passed his back side escaped with his life (Kamakau 1961:160).

The king's queen and his gods were sacrosanct; therefore, their grandsons were sacrosanct and were *tina pu'uhoia* (kinsmen of relatives). Ka'ahuana, the favourite wife of King Kamehameha I, was also *tina pu'uhoia* Kamehameha (1787-19). Her body was made *kapa* (X-rayed) by *pu'uhoia* Kamakau (1787-19). Any condemned person could be saved if *pu'uhoia* said good word. All lands of his Queen Ka'ahuana and his god, Kūka'ilimoku, were made *pu'uhoia*. Because of the close association of a *pu'uhoia* with a high chief, *pu'uhoia* of chiefs who lost in war fell in disrepute and were abolished and new ones were established by the victorious ruler such as Kamehameha I. However, when Ellis visited the Big Is-

land of Hawai'i in 1823, two places of refuge had their sacred *hale* still standing and under strict *kapa* in spite of the abolition of the *kapa* in 1819. Ellis was unable to gain access to the site of the *hale* of Rewai in Hawaii, but he did visit the site of the *hale* of Kaula, which was located on the Hawaiian coast, on the way back to the Hale o Liloa and its sacred enclosure in Waipoua Valley of the chief Iliia who reigned fifteen generations before Kamehameha I (Ellis 1979:165-166, 263). On Kaula's *pu'u honua* were probably never abolished because Kamehameha I did not conquer that island and the hereditary chiefs of Kaula had ruled there many generations back (Kamekua 1987:17).

No blood could be shed at a *pu tubonua*. They were open to all: a those who avoided war, women, children, old or ailing people of the neighbouring districts (Ellis 1979:168); b) vanquished warriors escaping their pursuers, and c) lawbreakers and *kapu* violators who were escaping from capital punishment for breaking the law or from the vengeance of the people they offended (Kamakau 1961:312-313). In time of war a white flag was unfurled atop a long spear at each end of the sacred enclosure to mark clearly the *pu tubonua* (Ellis 1969:167).

The literal meaning of *pui'uonua, pui'u* (hill and Moles) that may have originated from hill fortresses such as the hill on Molokai that protected the inhabitants from invaders coming from Maui. The heavy walls at Hōnaunau is an indication of this physical protection (Gell 1986:82). Gell measured the enclosure as 715 feet in length and 404 feet wide. The walls were 12 feet high and 15 feet thick and contained three large *baitai*. The priests and their adherents would immediately kill anyone who had the temerity to follow or molest those who were within the enclosure. The *pui'u* was a sacred enclosure under the protection of the tutelary deity of the place (Ellis 1969:168-169). The *pui'uonua* was a portion of the *ahupua'a* (*ahua* district), like Kailua and Waikāne valleys for the *ahupua'a* *o* *kauna* (Molokai 1987:18). That is, the Kōlaupoko district was not only a site of refuge, but also a large portion of the mountain to the sea, where water, food, fiber, etc., could be obtained for people who took refuge there. Other

A key to cultural identification for an individual is a sense of place, a familiar connection with specific geographic areas and sites which have emotive, genealogical, and historic meanings (Flores 1990). Ancestral lands are such places for Native Hawaiians. *Kūlanā* are one type of ancestral land that include *ʻāina* lands, sanctuaries and places of refuge (M. Ryder 1990). Although few and scattered, the *kūlanā* lands remain important and *hānau* (prestigious) fee simple possessions for the Hawaiian family. Ancestors lived and worked on those lands and are buried there, creating a sense of place for a descendant and strong identification with the site. *Kūlanā* lands were usually fertile, well cultivated for generations, good for growing taro and wa abundant



water. Hawaiian artifacts may still be found there: irrigation and drainage ditches, *lo'i* (irrigated taro patches), house sites, burial grounds, family shrines, and sacred stones. Because Hawaiians liked fruits and shade, old giant trees such as mango may be on the site. The *kūlanā* lands are beautiful places, great family assets which need to be protected from alienation to non-Hawaiians. They need to be restored and put into uses compatible with the Hawaiian culture (K. Ryder 1990).

Originally, the *kūlanā* were awarded by the kingdom only to 9,337 commoners (one per cent of the people) who were able to prove they were already cultivating the fields at the time of the 1850 Kūlanā land act. Fewer than 30,000 acres were actually awarded, in parcels smaller than five acres. Many *kūlanā* lands were subsequently lost by the Hawaiian aristocrats or their heirs for several reasons. *Kūlanā* were abandoned because they were too small to sustain a family when the rights to gather, to pasture, and to grow crops on nearby idle land were not allowed, and when access to water, or to the parcel itself, was cut off by neighbours. Other *kūlanā* were lost when large landowners paid the taxes and took adverse possession of them after 20 years (Kelly 1980). Today *kūlanā* owners face interlocking problems: diversion of water, inappropriate zoning, high taxation, unknown heirs, multiple owners, difficulties in the identification of boundaries, and lack of access (Senate Bill No. 2057-82, Relating to Kūlanā Land).

A number of steps need to be undertaken to protect the remaining *kūlanā*: a) a study to identify these lands, their heirs, and impediments to their use; b) legislative protection of *kūlanā* as inalienable ancestral land so that they will not be sold to non-Hawaiians; c) descendants and heirs should be assisted to form a *hui*, or *'ohana* trust, to keep the property in the family; d) a relative should be encouraged to act as *kāhu* to live and work on the site; and e) members of the *'ohana* retain access to the site for reunions, festivities, parties, short-term visits. They can also participate and share periodically in the cultural and productive activities connected with the site, such as harvesting and planting taro. If this is not possible, at least it should be ensured that the *kūlanā* are sold to Hawaiian relatives or to Native Hawaiians who can farm them, so that they remain in Hawaiian hands.

Because of their beautiful setting, taro cultivation, ancestral burial grounds, and sacred places, restored *kūlanā* are ideal for visits and retreats. School programmes for children need access to the ocean and the land, the *kūpana* programmes need to be presented in a setting not

limited to the classroom. In fact some *kūlanā* have been opened successfully to outside visits. School children have been involved in many aspects of the Hawaiian culture, such as gathering *limu* (seaweed), cultivating taro, going on streamwalk and maintaining the graveyards. If proper *hānai* are built on the lands, additional programmes, such as *hula* and *kīpuna*, can also take place there. For the *kīpuna*, the elderly Native Hawaiians, visits to *kūlanā* are especially important as they remind them of familiar settings from their youth. Such an environment helps them to remember the past and share their Hawaiian knowledge with the younger generations (K. Ryder 1990). The *kūlanā* are also economic assets. They can provide affordable home sites, taro cultivation and flower production. Conducting on-site cultural/educational programmes open to children, the elderly and other target groups, would further complement income generation of *kūlanā* owners, as they would be paid for by the appropriate Hawaiian service agencies.

#### COMMUNITY BASED PROJECTS AS THERAPY

Some Native Hawaiians become uncomfortable with their own culture. Because of the outside pressures of the dominant society, they are no longer sure who they really are. The result is alienation, drinking, drug abuse and even violence in their own family and in the community. The perception of some Native Hawaiians, who have always lived in Wai'anae Valley, or who have taken refuge in Wai'anae after being displaced by the development pressure of the growing Honolulu metropolitan area, is that Wai'anae is their last place of refuge. They also feel that they need appropriate economic development options because they are in a depressed area. But 'their backs are to the wall' because most of the local land resources are owned by outsiders or used by the federal government and the state. In addition, development pressure is increasing with the encroachment of the massive West Beach Resort, which is likely to have adverse impact on Wai'anae, with cost of living increases, water shortages, environmental and resource depletion, displacement of people, etc.

Stressed individuals and families have needed assistance in Wai'anae. Particularly they need to learn self-sufficiency skills through community based initiatives which could help avoid welfare or drugs. Unfortunately, the bureaucracy is not set up for such a task. Grass-

roots groups are essentially outside the system. They are practically 'outlaws' because it is quite difficult to secure a land base or government lease, to access water, to build structures, to live on the site as *kāhu* (guardian), to obtain a loan or a grant and so on.

Some community leaders in Wai'anae have acted on two fronts. They have established Hawaiian culturally compatible alternative community based projects to provide needed services and work opportunities to the residents, and they have opposed inappropriate resort development encroaching on the coast. (In the late 1970s a small group of Native Hawaiians seeking to rediscover the Hawaiian culture rooted in the *āina* and *kāi*, started the 'Opelu Project and the Kāala Farm Inc. (Enos 1990).

The 'Opelu project is a culturally based initiative of Hale Ola O Ho'opāhale, a mental health counselling and training programme to help hard-core unemployed young Hawaiians become self-reliant. Young people are taught to catch fish, then sell it to the community. Improvements include an ice/chill house and a small-scale food processing centre, marketing, and fern cultivation. Focus is on the development and distribution of community resources, use of appropriate technology, and protection and restoration of local natural resources. The psychophysical well-being of people and their cultural and economic health are fostered through the appreciation of traditional Hawaiian concepts of *aloha āina*, *lāwāhi* (co-operation), and re-establishing the relationship between people and the *āina* and *kāi*.

The Kāala Farm Inc. started because traditional counselling had limited impact on alienated Hawaiian youth, who have an affinity with the *āina*. Community economic development was to be achieved by the self-sufficient farm and personal growth, and self-reliance through the youth oriented programs. The five-century-old *lo'i* and *'auwai* (old irrigation systems) were cleared by hand then restored, and dry land agricultural acreage was expanded in the upper Wai'anae Valley. Hawaiian younger people have used the farm and the Wai'anae Rap Center, alternative sentencing, youth employment programmes, Queen Lili'uokalani Children Center, and other activities. The farm produces taro, luau leaf, *ti* leaf and watercress.

The Wai'anae Land Use Concern Committee (WLUCC) for many years opposed the resort development project but it finally agreed with the developers. The result was the creation of the Wai'anae Coast Community Alternative Development Corporation (WCCADC), supported by

a grant from the West Beach Estate. The WCCADC is engaged in three projects:

1) A master plan promotes small-scale enterprises to meet community needs.

2) The Backyard Fish Farm Project allows families to grow fish in tanks in their backyards to improve diet and to generate income. Fish increases the nutritional value of families' diet and surplus can be exchanged or sold in the community. Thus families become more self-sufficient, they work for their own livelihood, and some money circulates in the community.

3) The Mānoa Aquafarm Project establishes an integrated aqua and terrestrial farm on 60 acres of land to provide training, employment, fish protein, and culturally and environmentally compatible locally based development.

These bottom-up projects, relying on help from volunteers, act as 'community anchors' that link people to places through work and better access to, and use of, community resources. They are located in places already familiar to people, where they feel comfortable, such as the church, the school, the clinic, etc. These places are also sanctuaries; there is a feeling of trust and people go there for help. They are more than meeting places; they are places to work together, to link up and reconnect people and to generate some income. These projects revolve around work. People need work; work is medicine, part of the process of healing. Through culturally compatible work, people retrieve their roots, become self-confident and self-reliant. There is a need for places, for land, to reconnect with the *āina*, and to rediscover its symbolic meaning: 'ai (to eat); *kāma-āina* (familiar with the land); *hōa-āina* (friend through the land); *kūa-āina* (the common people as back bond of the land) and *maka-āina* (the eye of the land) (Burgess 1990).

In sum, there is a need to empower Hawaiian people enough so that their traditional view of *aloha āina* is somehow re-established through better access to, and use of, local human and natural resources. Some degree of production of goods and services and income generation must be made possible at the rural community level. These programmes have evolved from services for alienated youth to a broader constituency of beneficiaries and families. The programmes themselves, and the sites where they are located, also attract local and international visitors. They are recognized as community based assets and model projects. The need for community based development of a community



the size of the Wai'anae coast, however, cannot be met with the limited level of funding currently provided by the West Beach Estate. Greater public and private support is required.

## MANAGEMENT ISSUES OF HAWAIIAN SANCTUARIES

Native Hawaiians need to be reminded of another Hawai'i, another time, another way. Places, sounds, rituals can bring it back to life (Wong Morrison 1990). Sanctuaries must be available on each district of every island. How many depends on the historic existence of sacred places with *mana*; the quality of the natural environment; size, density and distribution of the Hawaiian population, and the need for such places, so that old ones are restored and new ones put into use. These places, such as Waip'o, Kahana and Waipua require a protocol for entry and use, so that a limited number of people, the *kahua* and workers, could live there. The number should not exceed a few dozen Hawaiian practitioners in each *ahupua'a*.

The protection, restoration, and creation of sanctuaries must be phased in with the demographic realities of a decrease in Hawaiian blood quantum in mind. This should be seen as added incentive to teach the Hawaiian culture to a broader population who can learn that, for Hawaiians, nature is an all-encompassing state of mind. With increased cost of living, overdevelopment, and population pressure, the sanctuaries must remain culturally and economically viable. Remoteness, isolation, single access, entry protocols, and rites of initiation are assets to sanctuaries because they protect them. Although refuge must be easily and quickly reachable, sanctuaries can be more inaccessible. In fact a valley, an *ahupua'a*, could be divided up with decreasing degree of accessibility and increasing status of pristine conditions and sacredness. The idea of sanctuaries should be legitimized within the National Park System, the Department of Lands and Natural Resources and the Department of Hawaiian Home Lands. A State process must be created which would establish a Native Hawaiian Sanctuaries Advisory Committee. Private sanctuaries should be supported and facilitated by local communities to save Hawaiian temples from the encroachment of tourism, such as Pa'a Curatorship in Kauai. The Temple of Lono would like to reclaim the sacred lands at Kula on Oahu. Moreover proposals are being made to reclaim sanctuaries and the places of refuge as key steps

toward Native Hawaiian sovereignty. Hul Nā'uao, a sovereignty coalition of Native Hawaiian groups, has advocated the *pū'uhonua* concept as a spiritual and cultural land base.

The indigenous knowledge of the Hawaiian sanctuaries and places of refuge encompasses a spiritual and evolutionary view of creation; a deep relationship of people, nature and all living things; the importance of an orienting force; spiritual power, sacred laws; deep understanding of the living aspect of ecosystems; and the power of healing and redemption of the sanctuaries. The enduring value of this Hawaiian knowledge includes the belief in self, god and nature, the psychosocial aspect of human relationships, sharing, dreaming, touching, the role of the extended family, healing methods, and a psychic relationship with natural phenomena and the living and nurturing earth.

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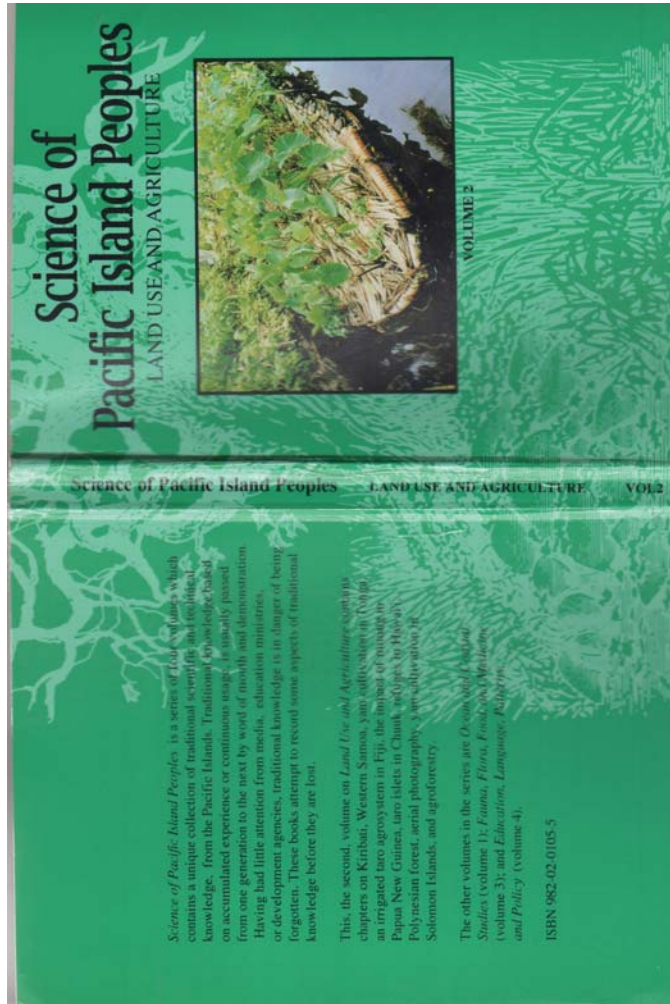
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**Professor Luciano Minerbi**, Dr. Arch., MUP, ACP, AALA, teaches at the University of Hawaii at Mānoa. His research interests are sustainable land use and environmental management and planning with indigenous people. *Luciano Minerbi, Department of Urban and Regional Planning, University of Hawaii at Mānoa, Honolulu, HI 96822 USA.*





# Land Use and Agriculture

SCIENCE OF PACIFIC ISLAND PEOPLES  
VOLUME II

Edited by

John Morrison  
Paul Geraghty  
Linda Crowl

Institute of Pacific Studies  
1994

Page  
① Suggestions for SAIPA DLR CARDING  
WORTH STREET BLVD  
Plans for Naena 808-826 0080  
DML@AOL.COM

State Park + Ke'e Beach  
A. Stop advertising - protecting the area in the  
on T.V. radio and press - which started up in the  
early 2000s - late 1990s

\* ① - Require Hotel + time share Hotel  
to provide shuttle service for  
tourists resident with them +  
require tourists to take shuttles  
to ~~the~~ Naena Beach Park as  
well as Naena State Park +  
Ke'e - either for a fee or the  
Hotel + time Hotels pay for the

shuttle -

\* ② All permanent residents be  
provided a car sticker resident sticker

③ - Shuttle service provided to be paid for by business + hotel <sup>tax</sup> - at least partial.

④ Shuttle to start in Quinceville, stop in Waverly, Waverly Store, Colony Resort + Ke'e Beach

⑤ No entry charge to the state park or Beach.

⑥ Stop advertising + parking on TV from driving to Ke'e, Kula Park Trail etc.  
and from Salee - Omai Gardens  
of North Shore Kauai local  
month

808 826 0050  
danadane@aol.com,

⑦ Do not make to stream the entrance.

⑧ local use the old pond + stream.

⑨ move the entrance to further down the road.

Openly controlled by state  
managed, remove the  
natural joy of the  
area!!





Month XX, 2018 - DRAFT

Ms. Dina (Satya) Gardner,  
Via Email: [dinadance@aol.com](mailto:dinadance@aol.com)

**SUBJECT: COMMENTS ON THE HĀ'ENA STATE PARK MASTER PLAN  
DRAFT ENVIRONMENTAL IMPACT STATEMENT (EIS),  
HĀ'ENA, KAUA'I, HAWAII**

Aloha Ms. Gardner,

Mahalo nui for your comment card from the community meeting held on August 19, 2015 regarding the Hā'ena State Park Master Plan Draft Environmental Impact Statement (EIS). We sincerely apologize for the delay in responding. Due to the feedback received on the Draft EIS, the State of Hawai'i, Department of Land and Natural Resources, Division of State Parks (State Parks) has worked on revising the master plan with a reorganized Hā'ena State Park Community Advisory Committee (HSPCAC) to address the concerns voiced by the larger community. As a result, the master plan presented in the Final EIS has been updated based on the feedback received from the public meetings, comments received, and subsequent extensive collaboration with the HSPCAC. As the planning consultant for State Parks, we offer the following responses to your comments as numbered per your letter:

A. No advertising of the area is proposed as a part of this master plan.

1. We recognize your comment regarding a proposed shuttle service in the master plan. The preferred scenario described in the Master Plan proposes a combination of shuttle service to the park with parking on-site as part of Phase I of implementation. While State Parks is unlikely to initiate its own shuttle service, several options for a shuttle system are identified in the Master Plan including extending the County public transit service to Kē'ē, contracting with a third-party operator to provide the service, or allowing independent private shuttles to stop at the park, or a combination of the above. The Master Plan identifies a shuttle stop in the proposed Master Plan with sheltered seating areas along the turnaround at the entry to the park. The turnaround should be designed to allow other vehicles to pass while shuttles are stopped at the shuttle stop in order to reduce backups and congestion along the highway. In order to encourage ridership, the shuttle service should be initiated in Phase I and the parking lot should be sized appropriately. Various management strategies including parking and entry fees, point of entry tickets are also discussed in the Master Plan report to provide a range of options to support the shuttle. Please see the "Shuttle Service" attachment from Section 4.3.3 of the Final EIS which shows the verbatim changes from the Draft EIS for this section.

2. We also recognize your comment regarding limiting access to the park by user group. The revised master plan calls for an adaptive management approach for both the parking and the proposed visitor limits, which will be adjusted based on an average number of visitors rather than a set limit per day. Please see the "Visitor Limits" attachment from Section 2.5.4.3 of the Final EIS, which shows the verbatim changes from the Draft EIS for this section.

Ms. Dina (Satya) Gardner  
SUBJECT: COMMENTS ON THE HĀ'ENA STATE PARK MASTER PLAN DRAFT ENVIRONMENTAL  
IMPACT STATEMENT (EIS), HĀ'ENA, KAUA'I, HAWAII  
Month XX, 2018  
Page 2

3. We recognize your comment regarding the funding of a proposed shuttle service. The funding of a proposed third-party shuttle service is not part of the State's park budget. Future third party shuttle services will need to produce their own private funding sources.
4. We also recognize your comment regarding the route of a proposed shuttle service. Please see our response to your comment 1 for additional information regarding proposed shuttle service routes.
5. We recognize your comment regarding the park entry fee. Entry fees for state parks are established by Hawai'i Administrative Rules (HAR) 13-146-6, at the rate of \$5/car or \$1/person. HAR 13-146-6 also states that Hawai'i residents are exempt from paying park entry fees if they can show a valid Hawai'i ID. Other categories of fee exempt park users (such as registered volunteers) may be established at a later time. State Parks will continue to work on the different options with the advisory committee and could include a variety of options as long as they do not violate the federal Land and Water Conservation Fund rules, which allow charging different fees for residents and nonresidents as long as they are comparable to current fee differences between the two.
6. Advertising the park on television is not included as a part of this master plan.

Mahalo nui for your input and participation in the environmental review process. Your letter will be included in the Final EIS. If you would like a copy of the Final EIS or portions thereof, please let us know. Otherwise, the electronic copy of the Final EIS will be available on the Office of Environmental Quality Control website at: [http://oeqc2.doh.hawaii.gov/EA\\_EIS\\_Library/2018-Park-Master-Plan.pdf](http://oeqc2.doh.hawaii.gov/EA_EIS_Library/2018-Park-Master-Plan.pdf) on 11/15/2018.

Aloha,

Kimi Mikami Yuen, LEED AP BD+C  
Principal

Attachments: Shuttle Service  
Visitor Limits

cc: The Honorable David Y. Ige, Governor  
Office of Environmental Quality Control  
Board of Land and Natural Resources  
Division of State Parks

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Please share your comments on the Hā'ena State Park Master Plan Draft EIS.  
(If you would like a written response letter, please include your mailing address.)

I do not support any plans that limit  
RESIDENT ACCESS.

An EIS must be conducted for the entire  
area from Hanalei to Ke'e beach to address  
overflow parking concerns.

This plan will not be successful if RESIDENT  
ACCESS IS LIMITED. &

I support a plan that requires permits  
per vehicle for visitor access. & visitor  
shuttle system



Stephanie Krieger  
5179 Kahana St  
Kapaa HI 96746

PBR HAWAII & Associates  
Attn: Kimi Yuen  
1001 Bishop Street, Suite 650  
Honolulu, HI 96813





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PLANNING • LANDSCAPE ARCHITECTURE • ENVIRONMENTAL STUDIES • ENTITLEMENTS / PERMITTING • GRAPHIC DESIGN

Ms. Stephanie Krieger  
SUBJECT: COMMENTS ON THE HĀ'ENA STATE PARK MASTER PLAN DRAFT ENVIRONMENTAL  
IMPACT STATEMENT (EIS), HĀ'ENA, KAUA'I, HAWAII  
Month XX, 2018  
Page 2

We also acknowledge your comments suggesting an EIS to address comprehensive parking concerns extending from Ke'e Beach to Hanalet. The County of Kaua'i is in the process of updating the general plan and regional development plans. While the suggestion is beyond the scope of the Hā'ena State Park Master Plan, the revised plan aligns with the corresponding aspects within the existing County plans. Please see the attached Section 5.4.1 and Section 5.4.2 from the Final EIS describing the corresponding County plans.

Mahalo nui for your input and participation in the environmental review process. Your letter will be included in the Final EIS. If you would like a copy of the Final EIS or portions thereof, please let us know. Otherwise, the electronic copy of the Final EIS will be available on the Office of Environmental Quality Control website at [http://oeqc2.doh.hawaii.gov/EA\\_EIS\\_Library/2018-04/EA-FEIS-Haena-State-Park-Master-Plan.pdf](http://oeqc2.doh.hawaii.gov/EA_EIS_Library/2018-04/EA-FEIS-Haena-State-Park-Master-Plan.pdf) on 4/18/2018.

Aloha,

Kimi Mikami Yuen, LEED AP BD+C  
Principal

Attachments: Park Entry  
Parking  
Adaptive Management  
Visitor Limits  
Kaua'i General Plan  
North Shore Development Plan

cc: The Honorable David Y. Ige, Governor  
Office of Environmental Quality Control  
Board of Land and Natural Resources  
Division of State Parks

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SUBJECT: COMMENTS ON THE HĀ'ENA STATE PARK MASTER PLAN  
DRAFT ENVIRONMENTAL IMPACT STATEMENT (EIS),  
HĀ'ENA, KAUA'I, HAWAII

Aloha Ms. Krieger,

Mahalo nui for your comment card received at the public meeting held on August 19, 2015 regarding the Hā'ena State Park Master Plan Draft Environmental Impact Statement (EIS). We sincerely apologize for the delay in responding. Due to the feedback received on the Draft EIS, the State of Hawai'i, Department of Land and Natural Resources, Division of State Parks (State Parks) has worked on revising the master plan with a reorganized Hā'ena State Park Community Advisory Committee (HSPCAC) to address the concerns voiced by the larger community. As a result, the master plan presented in the Final EIS has been updated based on the feedback received from the public meetings, comments received, and subsequent extensive collaboration with the HSPCAC. As the planning consultant for State Parks, we offer the following responses to your comments.

Mahalo for your support for the aspects of the master plan for regulating vehicle access. We recognize your concerns regarding potential limitations to local resident access. The revised master plan calls for an adaptive management approach for the proposed visitor limits, which will be adjusted based on an average number of visitors rather than a set limit per day. The limits will also be instituted only during peak hours of park use and will allow visitors to enter before and after without being counted against the visitor limit. Therefore, access will be allowed into the park outside those peak hours and will be adjusted as appropriate based on ongoing input from the community. There will also be exemptions from the visitor limit total for special user groups from the community. Please review the attached Section 2.5.4.1 and Section 2.5.4.3 from the Final EIS describing the visitor limits and adaptive management approach.

In response to your comments supporting requirements for vehicle permits, the revised master plan includes a park entry fee structure. While there isn't distinction exempting local residents from the proposed visitor limits, the revised plan includes designated exemptions from park entry fees with a proposed parking separation into a fee-paying lot and non-fee-paying lot. Entry fees for state parks are established by Hawai'i Administrative Rules (HAR) 13-146-6, at the rate of \$5/car or \$1/person. HAR 13-146-6 also states that Hawai'i residents are exempt from paying park entry fees if they can show a valid Hawai'i ID. Similar fees could be instituted at Hā'ena State Park, however, State Parks will continue to work on the different options with the advisory committee. More details on parking can be found in the attached Section 2.5.1.1. In response to your comments on a visitor shuttle system, the new main park entry improvements described in Section 2.5.1.1 of the Final EIS include facilities with shuttle stops designed to support the recommended shuttle service proposed.

Please share your comments on the Hā'ena State Park Master Plan Draft EIS.  
(If you would like a written response letter, please include your mailing address.)

Day or half day of rest for park?

Maintain an area that truly is allowed to run wild...  
Alo Leopold-style. " "

tina-ferrato@hotmail.com

Mahealani for your hard work & intention!



Tina Ferrato  
PO Box 223884  
Princeton, HI 96722

PBR HAWAII & Associates  
Attn: Kimi Yuen  
1001 Bishop Street, Suite 650  
Honolulu, HI 96813



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Ms. Tina Ferrato  
SUBJECT: COMMENTS ON THE HĀ'ENA STATE PARK MASTER PLAN DRAFT ENVIRONMENTAL  
IMPACT STATEMENT (EIS), HĀ'ENA, KAUA'I, HAWAII  
Month XX, 2018  
Page 2

Aloha,

Kimi Mikami Yuen, LEED AP BD+C  
Principal

Attachments: Master Plan Summary  
Visitor Limits

cc: The Honorable David Y. Ige, Governor  
Office of Environmental Quality Control  
Board of Land and Natural Resources  
Division of State Parks

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Month XX, 2018 - DRAFT  
Ms. Tina Ferrato  
P.O. Box 223884  
Princeville, HI 96722  
SUBJECT: COMMENTS ON THE HĀ'ENA STATE PARK MASTER PLAN  
DRAFT ENVIRONMENTAL IMPACT STATEMENT (EIS),  
HĀ'ENA, KAUA'I, HAWAII

Aloha Ms. Ferrato,

Mahalo nui for your comment card received at the public meeting held on August 19, 2015 regarding the Hā'ena State Park Master Plan Draft Environmental Impact Statement (EIS). We sincerely apologize for the delay in responding. Due to the feedback received on the Draft EIS, the State of Hawai'i, Department of Land and Natural Resources, Division of State Parks (State Parks) has worked on revising the master plan with a reorganized Hā'ena State Park Community Advisory Committee (HSPCAC) to address the concerns voiced by the larger community. As a result, the master plan presented in the Final EIS has been updated based on the feedback received from the public meetings, comments received, and subsequent extensive collaboration with the HSPCAC. As the planning consultant for State Parks, we offer the following responses to your comments.

We recognize your comments and suggestions regarding periodic rest for the park and preserving the natural features. The revised master plan includes significant changes and minimal physical improvements to preserve the natural beauty of the park as described in Section 1.9.1 of the Final EIS, attached for reference. The master plan includes many aspects to restore the natural environment of the park as well as designated preservation areas.

In response to your comments on "rest" for the park, the revised master plan calls for a soft limit approach for the proposed visitor limits, which will be adjusted based on an average number of visitors rather than a set limit per day. The soft limit with averaged visitor counts will allow for adjustments for potential park closure days. As the State has more time to analyze user patterns, other options can be explored over time, and they are actively engaged in discussions regarding parking enforcement and increased fines along the roadway outside of the park as well. Please see the attached sections on Visitor Limits from the Final EIS with more details on plan revisions.

Mahalo nui for your input and participation in the environmental review process. Your letter will be included in the Final EIS. If you would like a copy of the Final EIS or portions thereof, please let us know. Otherwise, the electronic copy of the Final EIS will be available on the Office of Environmental Quality Control website at [http://oeqc2.doh.hawaii.gov/EA\\_EIS\\_Library/2018--KA-FEIS-Haena-State-Parks-Master-Plan.pdf](http://oeqc2.doh.hawaii.gov/EA_EIS_Library/2018--KA-FEIS-Haena-State-Parks-Master-Plan.pdf) on 2018.

Please share your comments on the Hā'ena State Park Master Plan Draft EIS.

(If you would like a written response letter, please include your mailing address.)

This is not good for the island or the local residents.

The state needs to show irrefutable proof that Hawaii is a state of USA.

Illegal occupation.

Show me title to land.



W. Mereno Davis  
4-1104 Kuhio Hwy  
Ste 101, PMB #20  
Kapaa, HI 96746

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Attn: Kimi Yuen  
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**Nathalie Razo**

**From:** Lauren.A.Tanaka@hawaii.gov  
**Sent:** Monday, August 24, 2015 10:03 AM  
**To:** Dan.Quinn@hawaii.gov; Curt.A.Cottrell@hawaii.gov; Russell.P.Kumabe@hawaii.gov; Alan.B.Carpenter@hawaii.gov; Kimi Yuen  
**Subject:** Fw: Yes

----- Forwarded by Lauren A Tanaka\DLNR\State\HUS on 08/24/2015 10:00 AM -----

**From:** gardenbounty@gmail.com  
**To:** "Lauren A. Tanaka@hawaii.gov" <Lauren.A.Tanaka@hawaii.gov>  
**Date:** 08/20/2015 10:46 PM  
**Subject:** Yes

My name is Steve McMenamin. I think access should be limited to preserve the reef. Unfortunately the planet is getting crowded and everyone wants to touch the beauty of the park. That access must be managed. Once the reef is gone, no one, even natives will have any rights of preferred access. We all mourn the loss of traditional Hawaiian spirit in some cases. In this case access to the park should be restricted for the benefit of future generations. Locals and tourists will get used to the limitations and the process. In 18 months everybody won't remember what it was like before. This issue is a generational imperative

~~~~~  
Please excuse typographical errors or any brevity. Sent from my mobile device.

Month XX, 2018 - DRAFT

W. Megeso Denis  
P.O. Box 201  
Kapaa, HI 96746

**SUBJECT: COMMENTS ON THE HÄ'ENA STATE PARK MASTER PLAN  
DRAFT ENVIRONMENTAL IMPACT STATEMENT (EIS),  
HÄ'ENA, KAUA'I, HAWAII**

Aloha W. Megeso Denis,

Mahalo nui for your comment card received at the public meeting held on August 19, 2015 regarding the Hä'ena State Park Master Plan Draft Environmental Impact Statement (EIS). We sincerely apologize for the delay in responding. Due to the feedback received on the Draft EIS, the State of Hawai'i, Department of Land and Natural Resources, Division of State Parks (State Parks) has worked on revising the master plan with a reorganized Hä'ena State Park Community Advisory Committee (HSPCAC) to address the concerns voiced by the larger community. As a result, the master plan presented in the Final EIS has been updated based on the feedback received from the public meetings, comments received, and subsequent extensive collaboration with the HSPCAC. As the planning consultant for State Parks, we offer the following responses to your comments.

We recognize your concerns with the Hä'ena State Park Master Plan from the perspective of local residents. The draft version of the Master Plan has been revised to reflect feedback received from the community. Please see the attached **Master Plan Summary** from the Final EIS for reference to review the revisions to the plan.

Mahalo nui for your input and participation in the environmental review process. Your letter will be included in the Final EIS. If you would like a copy of the Final EIS or portions thereof, please let us know. Otherwise, the electronic copy of the Final EIS will be available on the Office of Environmental Quality Control website at [http://oeqc2.doh.hawaii.gov/EA\\_EIS\\_Library/2018\\_KA-FEIS-Haena-State-Park-Master-Plan.pdf](http://oeqc2.doh.hawaii.gov/EA_EIS_Library/2018_KA-FEIS-Haena-State-Park-Master-Plan.pdf) on 8/27/2018.

Aloha,

Kimi Mikami Yuen, LEED AP BD+C  
Principal

Attachments: Master Plan Summary

cc: The Honorable David Y. Ige, Governor  
Office of Environmental Quality Control  
Board of Land and Natural Resources  
Division of State Parks

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Mr. Steve McMenamin  
SUBJECT: COMMENTS ON THE HĀ'ENA STATE PARK MASTER PLAN DRAFT ENVIRONMENTAL  
IMPACT STATEMENT (EIS), HĀ'ENA, KAUA'I, HAWAII  
Month XX, 2018  
Page 2

Board of Land and Natural Resources  
Division of State Parks

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Email-Fw Yes - DSI.docx

Month XX, 2018 - DRAFT

Mr. Steve McMenamin  
5-7130 Kuhio Highway, Unit J-4  
Hanalei, HI 96714

SUBJECT: COMMENTS ON THE HĀ'ENA STATE PARK MASTER PLAN  
DRAFT ENVIRONMENTAL IMPACT STATEMENT (EIS),  
HĀ'ENA, KAUA'I, HAWAII

Aloha Mr. McMenamin,

Mahalo nui for your emailed comment dated August 20, 2015 regarding the Hā'ena State Park Master Plan Draft Environmental Impact Statement (EIS). We sincerely apologize for the delay in responding. Due to the feedback received on the Draft EIS, the State of Hawai'i, Department of Land and Natural Resources, Division of State Parks (State Parks) has worked on revising the master plan with a reorganized Hā'ena State Park Community Advisory Committee (HSPCAC) to address the concerns voiced by the larger community. As a result, the master plan presented in the Final EIS has been updated based on the feedback received from the public meetings, comments received, and subsequent extensive collaboration with the HSPCAC. As the planning consultant for State Parks, we offer the following responses to your comments.

Mahalo for your support of the visitor limit aspects of the master plan to manage access to the park. We recognize your concern with preserving the reef and comments in favor of restricting access to maintain the natural qualities of the park. The revised master plan proposes the 900-person visitor limit as an initial number which can be adaptively managed and adjusted as appropriate, especially if there continues to be unwanted impacts at the park. If there continue to be issues, State Parks will work with the advisory committees on adjusting the number. Please find the attached section from the Final EIS describing the proposed Visitor Limits.

Mahalo nui for your input and participation in the environmental review process. Your letter will be included in the Final EIS. If you would like a copy of the Final EIS or portions thereof, please let us know. Otherwise, the electronic copy of the Final EIS will be available on the Office of Environmental Quality Control website at [http://ceq2.doh.hawaii.gov/EA\\_EIS\\_Library/2018-KA-EIS-Haena-State-Park-Master-Plan.pdf](http://ceq2.doh.hawaii.gov/EA_EIS_Library/2018-KA-EIS-Haena-State-Park-Master-Plan.pdf) on 2018.

Aloha,

Kimi Mikami Yuen, LEED AP BD+C  
Principal

Attachments: Visitor Limits

cc: The Honorable David Y. Ige, Governor  
Office of Environmental Quality Control

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**Nathalie Razo**

**From:** Lauren.A.Tanaka@hawaii.gov  
**Sent:** Monday, August 24, 2015 9:26 AM  
**To:** Dan.Quinn@hawaii.gov; Russell.P.Kumabe@hawaii.gov;  
Alan.B.Carpenter@hawaii.gov; Kimi Yuen  
**Subject:** Fw: Less is more: Haena State Park

----- Forwarded by Lauren A Tanaka/DLNR/StateHUS on 08/24/2015 09:24 AM -----

From: Carol Kuraoka <ckuraoka@aol.com>  
To: lauren.a.tanaka@hawaii.gov  
Date: 08/21/2015 04:55 PM  
Subject: Less is more: Haena State Park

---

dear Lauren Tanaka,

Less is more, a famous quote that is useful in thinking about Haena State Park.

No gate, no moving the road, no board walk, no cultural center. Yes, fewer tourists.

Too many tourists is a big problem everywhere past the Hanalei Bridge. We cannot absorb all the people who are coming, or show them the culture of Hawaii or the way of aloha. There are too many of them and Kauai is small and fragile.

We are longtime residents, one of us from a family here for many generations. We live about a mile from the park. For us to go to the end of the road, we must go there and leave before 7am or arrive after 4:30pm, before most of the tourists come and after they leave.

Haena State Park was always a favorite park for local families -- swimming, fishing, family picnics and camping and hiking. Local families like camping and the beach and all that it involves; meeting at the end of the road for a family activity or gathering of friends to watch the sunset was part of our way of life. But, for the past 12 years or so, the state's emphasis on building ever larger numbers of visitors has resulted in changes that are restricting our access to and enjoyment of the park.

Far too many visitors have been encouraged to come here and they have taken the park from us. We deserve to be able to use our park; we want it back. We cannot support a plan that includes putting up a gate and making it more difficult for us to enjoy our neighborhood. This proposed plan is not an inevitable solution to the problem the state and county have created.

Save money, don't move the road. Rocks don't fall on your head or car, they roll down the hillside. I ride my bike to the end of the road every morning and have never seen a rock fall from above onto the road, and have never seen a rock in the area in front of the wet cave where access is blocked and multiple ugly signs say "rock zone." This is not true, no rocks, not one.

The state park does not need a board walk or a cultural center and we don't either. Please, think low impact on the environment. Don't build, don't put signs, don't have classes. The place speaks for itself, and it's voice is

eloquent.

If any of your advisory board members live in our neighborhood, or even this side of the Hanalei Bridge, they can tell you our parks are overflowing, bulging at the seams. Visitors barred from the state park cannot go to Haena Beach or Lumahai or Hanalei, as your plan suggests, because those parks are filled far past capacity. Bathrooms are overused and closed daily. Portable toilets are added — permanently. Our parks are dirty. People camp on the beach without permits and use the beach as a bathroom.

We are concerned that preserving traditional resident use of Haena State Park and the surrounding areas does not receive a level of attention and concern similar to that given to tourism, and that mention of local resident use seems an afterthought.

Let's take care of what we have and not build anything. We ask you to remember less is more.

sincerely

*Carol & David Kuraoka*



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Ms. Carol and Mr. David Kuraoka  
SUBJECT: COMMENTS ON THE HĀ'ENA STATE PARK MASTER PLAN DRAFT ENVIRONMENTAL  
IMPACT STATEMENT (EIS), HĀ'ENA, KAUA'I, HAWAII  
Month XX, 2018  
Page 2

The master plan has been revised and does not include a cultural center. Only a few new structures are proposed, including a Welcome Hale that is envisioned as an open traditional Hawaiian hale and located near the improved main parking lot. The boardwalk has been modified in the revised master plan. The new pedestrian pathway follows along the first berm of the lo'i closest to the highway and is proposed to be slightly elevated so as not to impact the berm or any of the historic resources. Please see the revised Figure 1 Master Plan graphic and the "Pedestrian Path" attachment from Section 2.5.1.4 of the Final EIS which show the verbatim changes from the Draft EIS.

We recognize your concerns regarding overcrowding and overflow to other parks in the north shore area. We recognize negative effects of the master plan may include the distribution of recreational demand to other facilities on the North Shore and island-wide, especially the nearby Hā'ena Beach Park. State Parks should monitor use of Hā'ena County Park to judge if the recreational demand is shifted from one facility to the other. If so, an adjustment to the number of visitors allowed per day to Hā'ena State Park might be considered as a mitigating measure. If a shuttle is employed, a mitigation measure may be to include a stop at Hā'ena Beach Park to alleviate traffic and congestion at the County park as well.

We recognize your concerns regarding bathroom capacity at the park. As a part of the master plan, new public restrooms are proposed outside of the hale near the main parking lot. This second set of restrooms will help reduce the use of the Kē'ē comfort station, which is located near sensitive archaeological sites.

We recognize your comment expressing your desire not to build anything at the park. The "no change" (or No Action) alternative was discussed in the EIS, but rejected outright due to: 1) the potential for continued degradation of cultural and natural resources and the worsening traffic and parking congestion that would occur if nothing were done; 2) potential risk of rockfalls and threats to public safety; and 3) the five main goals or objectives that have guided the development of the Hā'ena State Park Master Plan and the proposed management strategies would not be met.

Mahalo nui for your input and participation in the environmental review process. Your letter will be included in the Final EIS. If you would like a copy of the Final EIS or portions thereof, please let us know. Otherwise, the electronic copy of the Final EIS will be available on the Office of Environmental Quality Control website at [http://oeqc2.doh.hawaii.gov/EA\\_EIS\\_Library/2018--KA-FEIS-Haena-State-Park-Master-Plan.pdf](http://oeqc2.doh.hawaii.gov/EA_EIS_Library/2018--KA-FEIS-Haena-State-Park-Master-Plan.pdf) on 11/15/2018.

Ms. Carol and Mr. David Kuraoka  
P.O. Box 222  
Hanalei, HI 96714

SUBJECT: COMMENTS ON THE HĀ'ENA STATE PARK MASTER PLAN  
DRAFT ENVIRONMENTAL IMPACT STATEMENT (EIS),  
HĀ'ENA, KAUA'I, HAWAII

Aloha Ms. and Mr. Kuraoka,

Mahalo nui for your emailed comment dated August 24, 2015 regarding the Hā'ena State Park Master Plan Draft Environmental Impact Statement (EIS). We sincerely apologize for the delay in responding. Due to the feedback received on the Draft EIS, the State of Hawai'i, Department of Land and Natural Resources, Division of State Parks (State Parks) has worked on revising the master plan with a reorganized Hā'ena State Park Community Advisory Committee (HSPCAC) to address the concerns voiced by the larger community. As a result, the master plan presented in the Final EIS has been updated based on the feedback received from the public meetings, comments received, and subsequent extensive collaboration with the HSPCAC. As the planning consultant for State Parks, we offer the following responses to your comments.

We recognize your concerns regarding the number of visitors to the park and the impact that has on park users, traffic, and local residents. The revised master plan calls for an adaptive management approach for both the parking and the proposed visitor limits, which will be adjusted based on an average number of visitors rather than a set limit per day. As the State has more time to analyze user patterns, other options can be explored over time, and they are actively engaged in discussions regarding parking enforcement and increased fines along the roadway outside of the park as well. State Parks will continue to work on the different options with the advisory committee and could include a variety of options as long as they do not violate the federal Land and Water Conservation Fund rules, which allow charging different fees for residents and nonresidents as long as they are comparable to current fee differences between the two. Please see the "Visitor Limits" attachment from Section 2.5.4.3 of the Final EIS, which shows the verbatim changes from the Draft EIS for this section.

We recognize your comments regarding gates, access, and the relevance of rockfall hazards. Safety of the public is an essential requirement for any public facility. A new main gate is recommended to be installed when the highway is closed to general vehicle traffic to reduce visitor exposure to the rockfall hazards. The health and safety impacts of rockfalls are proposed to be mitigated by siting all of the major visitor facilities and paths, including the Pedestrian Path to Kē'ē, outside of the 0% chance of modeled rockfalls as mapped by AECOM in their Rockfall Hazard Assessment report (EIS Appendix B). Specifically, the Welcome Hale, Pedestrian Path, highway closure with signage and gates, and the main parking lot/shuttle improvements should be considered elements of rockfall mitigation and therefore prioritized in capital improvement project funding as they will shift the park's major visitor traffic away from the area of potential rockfall hazard. In addition, warning signs should be installed at appropriate locations at both ends of the highway and between the turnaround and Kē'ē. Safety warnings should also be given during the visitor orientation session prior to park entry.



Aloha,

Kimi Mikami Yuen, LEED AP BD+C  
Principal

Attachments: Visitor Limits  
Figure 1: Master Plan  
Pedestrian Path

cc: The Honorable David Y. Ige, Governor  
Office of Environmental Quality Control  
Board of Land and Natural Resources  
Division of State Parks

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Less is more Haena State Park - JSI.docx

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**Nathalie Razo**

**From:** M Taylor <gmiltaylor@gmail.com>  
**Sent:** Friday, August 21, 2015 7:47 PM  
**To:** Lauren.A.Tanaka@hawaii.gov; Kimi Yuen  
**Subject:** DRAFT MASTER PLAN, EIS FOR HAENA STATE PARK

Thank you for the opportunity to express an opinion.

Please do not assume there is parking available near the Princeville Center for people going to Haena State Park on a shuttle. Decades ago, the Kauai County Council prohibited expansion of parking space at the Princeville Center. Now, the Princeville Center has inadequate parking for the current businesses and volume of customers.

Parking is so limited that the Center management has narrowed parking spaces to extremes, where it is now dangerous to park there, if one can find a parking spot. First Hawaiian Bank has tow signs up in their tiny lot for people not on bank business. People parking at the center to catch the bus to Kapaa / Lihue increase the problem.

Fortunately, the short lived shuttle service never caught on and is now gone. 1000 passengers per month is a bit more than 30 per day and I question there was that volume. Those shuttles were often running with 1 or 2 passengers if running at all. A casual observer could see it was not working and the financial support provided by the County of Kauai was a waste of money.

The Princeville Library has tow signs up for anyone parking there for non-library business. The surrounding neighborhood is private property with people who don't want extra cars or traffic.

Please don't think you can have parking at or nearby the Princeville Center during the day for Haena shuttle service. It just is not a practical alternative.

Suggestion - in Hanalei the State has a road maintenance yard - approximately 1 acre where there is very little activity and a maybe a couple of sheds. If you want a public parking area for shuttle service, that is the place to start, not in Princeville.

Michael Taylor  
4391 Emmalani Drive  
Princeville  
808-639-8117



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Mr. Michael Taylor  
SUBJECT: COMMENTS ON THE HĀ'ENA STATE PARK MASTER PLAN DRAFT ENVIRONMENTAL  
IMPACT STATEMENT (EIS), HĀ'ENA, KAUA'I, HAWAII  
Month XX, 2018  
Page 2

Office of Environmental Quality Control  
Board of Land and Natural Resources  
Division of State Parks

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DRAFT MASTER PLAN EIS FOR HAENA STATE PARK - DSI.docx

SUBJECT: COMMENTS ON THE HĀ'ENA STATE PARK MASTER PLAN  
DRAFT ENVIRONMENTAL IMPACT STATEMENT (EIS),  
HĀ'ENA, KAUA'I, HAWAII

Aloha Mr. Taylor,

Mahalo nui for your emailed comment dated August 21, 2015 regarding the Hā'ena State Park Master Plan Draft Environmental Impact Statement (EIS). We sincerely apologize for the delay in responding. Due to the feedback received on the Draft EIS, the State of Hawai'i, Department of Land and Natural Resources, Division of State Parks (State Parks) has worked on revising the master plan with a reorganized Hā'ena State Park Community Advisory Committee (HSPCAC) to address the concerns voiced by the larger community. As a result, the master plan presented in the Final EIS has been updated based on the feedback received from the public meetings, comments received, and subsequent extensive collaboration with the HSPCAC. As the planning consultant for State Parks, we offer the following responses to your comments.

We recognize your concerns with parking availability in Princeville for a potential shuttle service as well as your suggestion for an alternative shuttle service parking lot near Hanalei. We acknowledge your suggestions; however, external parking areas were removed from the revised master plan and consideration for sites in Hanalei were dismissed due to its location within flood zones. While the recommended external shuttle service sites were removed from the revised plan, the proposed main parking lot facilities in the park are designed with shuttle stops at the park entry turnaround to support the potential for shuttle service as described in the attached [Section 2.5.1.1](#) and [Section 2.5.1.2](#) from the Final EIS.

Mahalo nui for your input and participation in the environmental review process. Your letter will be included in the Final EIS. If you would like a copy of the Final EIS or portions thereof, please let us know. Otherwise, the electronic copy of the Final EIS will be available on the Office of Environmental Quality Control website at [http://oexq2.doh.hawaii.gov/EA\\_EIS\\_Library/2018-KA-EIS-Haena-State-Park-Master-Plan.pdf](http://oexq2.doh.hawaii.gov/EA_EIS_Library/2018-KA-EIS-Haena-State-Park-Master-Plan.pdf) on [Month XX, 2018](#).

Aloha,

Kimi Mikami Yuen, LEED AP BD+C  
Principal

Attachments: Park Entry  
Parking

cc: The Honorable David Y. Ige, Governor

**Nathalie Razo**

**From:** underwater2web . <underwater2web@gmail.com>  
**Sent:** Friday, August 21, 2015 7:19 AM  
**To:** lauren.a.tanaka@hawaii.gov  
**Cc:** Kimi Yuen; KAUA'I VOICE; Harry Rabin; tom woods; Robin Mazor; Brittany Lyte; Prajna Marcus; Don Heacock; Gregor Hodgson; Greta Smith Aeb; Thierry M Work; Kauai Editor; Kohola Leo; Felicia Alongi; Cowden; Joel Guy; John Christensen - NOAA Federal Reef Restoration Plan in Ha'ena?

**Subject:**

Hi Lauren,

I am a marine biologist living in Hanalei and I have been studying the dying coral reefs in Ha'ena for ten years along with UH, NOAA and the USGS. I also work with a Kauai non profit, Reef Guardians Hawaii, Reef Check and the State Eyes Of The Reef program.

I have over 1,000 hours of underwater experience, surveys and video of the dying coral reefs along the Ha'ena coastline.

I support the project to limit tourist into the area as there are currently damaging the environment and sacred places. I also support turning the area back into a functional ahupua'a.

Is there a reef restoration project within this new Ha'ena management plan? If not I would be happy to help develop one with the non profit Reef Guardians Hawaii.

I have over 3,000 hours of HD underwater video from 10 different countries and lots of experience with reef restoration projects that could work in Kauai.

We have a huge problem with the US Military killing our corals and marine life in Ha'ena but the area was recently declared "critical habitat" for the Hawaiian Monk Seal so we may now be able to limit the military activities and help save the few remaining healthy corals we have.

A restoration project is going to be needed at Ke'e, Tunnels, Limahuli and other Ha'ena reefs.

I have videos of each reef and here is the link to my Ke'e video I did recently.

<https://www.youtube.com/watch?v=2klGlnYtl>

Aloha,

Terry Lilley  
Marine Biologist  
Hanalei, Kauai  
<http://underwater2web.com>  
All Photographs © 2015 Terry Lily



Month XX, 2018 - DRAFT

Ms. Terry Lilley  
P.O. Box 1560  
Hanalei, HI 96714

**SUBJECT: COMMENTS ON THE HA'ENA STATE PARK MASTER PLAN  
DRAFT ENVIRONMENTAL IMPACT STATEMENT (EIS),  
HA'ENA, KAUAI, HAWAII**

Aloha Ms. Lilley,

Mahalo nui for your emailed comment dated August 21, 2015 regarding the Ha'ena State Park Master Plan Draft Environmental Impact Statement (EIS). We sincerely apologize for the delay in responding. Due to the feedback received on the Draft EIS, the State of Hawaii, Department of Land and Natural Resources, Division of State Parks (State Parks) has worked on revising the master plan with a reorganized Ha'ena State Park Community Advisory Committee (HSPCAC) to address the concerns voiced by the larger community. As a result, the master plan presented in the Final EIS has been updated based on the feedback received from the public meetings, comments received, and subsequent extensive collaboration with the HSPCAC. As the planning consultant for State Parks, we offer the following responses to your comments.

Mahalo for your support for the master plan's goal of protecting and restoring the park's sensitive and unique natural, cultural, historic, and scenic resources through responsible visitor limits.

We recognize your concerns regarding the coral reefs in the vicinity of the park. There currently is not a reef restoration component associated with the master plan, but the State is open to coordination with community groups such as Reef Guardians Hawaii. Human disturbance in the water can also cause harm to marine resources, including coral, fishes, and honu. It is recommended that all visitors receive educational materials that would provide a brief overview of the park's extensive but sensitive natural and cultural resources and instruct visitors of the appropriate activities and behaviors allowed at the park, such as no reef walking or harassing marine life, especially endangered and threatened species. Please see the "Visitor Orientation" attachment from Section 2.5.4.5 of the Final EIS, which shows the verbatim changes to this section from the Draft EIS.

We recognize your comment regarding the critical habitat for the Hawaiian Monk Seal. In August 2015, the National Marine Fisheries Service (NMFS) issued a final rule revising the critical habitat for the Hawaiian monk seals to include the marine habitat fronting Ha'ena State Park from the 200-meter depth contour line, including the seafloor, through the water's edge and 5 meters into the terrestrial environment from the shoreline (50 Code of Federal Regulations Part 226). Therefore, any changes in these areas will require consultation with the NMFS. Also, if habitats are created within the park specifically for endangered or threatened wildlife, additional permits and approvals may be required such as a Habitat Conservation Plan.

THOMAS WITTEN, FASLA  
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Aloha,

Kimi Mikami Yuen, LEED AP BD+C  
Principal

Attachments: Visitor Orientation

cc: The Honorable David Y. Ige, Governor  
Office of Environmental Quality Control  
Board of Land and Natural Resources  
Division of State Parks

O:\Job26\2627.01.DI.NR-Haena State Park Master Plan\EIS\DEIS Responses\Mail Merge\2015-08-21 Lilley Email Reef Restoration Plan in Ha'ena - ISI.docx

Please share your comments on the Hä'ena State Park Master Plan Draft EIS.

(If you would like a written response letter, please include your mailing address.)

I THINK VISITORS SHOULD HAVE TO APPLY FOR A DAY PASS (PERMIT) TO VISIT THE PARK, BUT RESIDENTS SHOULD BE ABLE TO OBTAIN PASSES VALID FOR ONE YEAR OR LONGER, SOME OF THE PARKING SPACES SHOULD ALSO BE ALLOCATED FOR RESIDENTS WITH PARK PASSES (OWN STICKERS). SHUTTLES ARE ALSO A GOOD IDEA BUT SHOULD INCORPORATE HAWAIIAN INTO THE SCHEDULED SERVICE SO THAT TOURISTS CAN STOP THERE FOR FOOD/SHOPPING.







Month XX, 2018 - DRAFT

Mr. Brad Lanotte  
P.O. Box 1349  
Hanalei, HI 96714

SUBJECT: COMMENTS ON THE HĀ'ENA STATE PARK MASTER PLAN  
DRAFT ENVIRONMENTAL IMPACT STATEMENT (EIS),  
HĀ'ENA, KAUA'I, HAWAII

Aloha Mr. Lanotte,

Mahalo nui for your comment card received on August 24, 2015 in response to the public meeting held on August 19, 2015 regarding the Hā'ena State Park Master Plan Draft Environmental Impact Statement (EIS). We sincerely apologize for the delay in responding. Due to the feedback received on the Draft EIS, the State of Hawai'i, Department of Land and Natural Resources, Division of State Parks (State Parks) has worked on revising the master plan with a reorganized Hā'ena State Park Community Advisory Committee (HSPCAC) to address the concerns voiced by the larger community. As a result, the master plan presented in the Final EIS has been updated based on the feedback received from the public meetings, comments received, and subsequent extensive collaboration with the HSPCAC. As the planning consultant for State Parks, we offer the following responses to your comments.

We recognize your concerns with resident access and your suggestion distinguishing day passes for nonresidents and annual passes for residents. While there is not a distinction based on residential status for time-based passes, the revised plan proposes similar park entry fees. The proposals also designate exemptions from park entry fees, and the main parking lot is proposed to be separated into a fee-paying lot and non-fee-paying lot. As the State has more time to analyze user patterns, other options can be explored over time, and they are actively engaged in discussions regarding parking enforcement and increased fines along the roadway outside of the park as well. Currently, entry fees for all state parks are established by Hawai'i Administrative Rules (HAR) 13-146-6, at the rate of \$5/car or \$1/person. HAR 13-146-6 also states that Hawai'i residents are exempt from paying park entry fees if they can show a valid Hawai'i ID. Similar fees could be instituted at Hā'ena State Park. A description of parking improvements proposed is attached in Section 2.5.1.2 from the Final EIS.

We also acknowledge your comments on scheduled shuttle service to incorporate Hanalei. While the potential shuttle service is not proposed to be administered by State Parks in the revised master plan, it does include specific elements to support effective implementation with infrastructure design for the proposed park entry and main parking lot to support a recommended shuttle service with shuttle stop structures, as described in Section 2.5.1.1 and Section 2.5.1.2 from the Final EIS.

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Mahalo nui for your input and participation in the environmental review process. Your letter will be included in the Final EIS. If you would like a copy of the Final EIS or portions thereof, please let us know. Otherwise, the electronic copy of the Final EIS will be available on the Office of Environmental Quality Control website at [http://oeqc2.doh.hawaii.gov/EA\\_EIS\\_Library/2018-05-04-FEIS-Haena-State-Park-Master-Plan.pdf](http://oeqc2.doh.hawaii.gov/EA_EIS_Library/2018-05-04-FEIS-Haena-State-Park-Master-Plan.pdf) on 05/04/2018.

Aloha,

Kimi Mikami Yuen, LEED AP BD+C  
Principal

Attachments: Park Entry  
Parking

cc: The Honorable David Y. Ige, Governor  
Office of Environmental Quality Control  
Board of Land and Natural Resources  
Division of State Parks

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### Please share your comments on the Hā'ena State Park Master Plan Draft EIS.

(If you would like a written response letter, please include your mailing address.)

Limiting access to Ke'e will not eliminate the traffic and parking issues with N. Shore beaches. You will create more illegal parking along the road side before you reach the park entrance, Haena Beach park, and Lānāhāi beach. All of these beaches roadside parking issued need to be policed and ticketed accordingly. Stopping all traffic in P. Ville and supplying regular shuttles before sunrise to after sunset is a better plan and only allowing Haenā residents to drive past our beautiful river bridge. This is only 1 of many of my concerns. I do not support your Master Plan

fwy





Month XX, 2018 - DRAFT

Joe Shannon, Heather Joll, and Family  
P.O. Box 1474  
Hanalei, HI 96714

**SUBJECT: COMMENTS ON THE HĀ'ENA STATE PARK MASTER PLAN  
DRAFT ENVIRONMENTAL IMPACT STATEMENT (EIS),  
HĀ'ENA, KAUA'I, HAWAII**

Aloha Mr. Shannon, Heather Joll, and Family,

Mahalo nui for your comment card dated August 24, 2015 from the community meeting held on August 19, 2015 regarding the Hā'ena State Park Master Plan Draft Environmental Impact Statement (EIS). We sincerely apologize for the delay in responding. Due to the feedback received on the Draft EIS, the State of Hawai'i, Department of Land and Natural Resources, Division of State Parks (State Parks) has worked on revising the master plan with a reorganized Hā'ena State Park Community Advisory Committee (HSPCAC) to address the concerns voiced by the larger community. As a result, the master plan presented in the Final EIS has been updated based on the feedback received from the public meetings, comments received, and subsequent extensive collaboration with the HSPCAC. As the planning consultant for State Parks, we offer the following responses to your comments.

We recognize your comment regarding traffic and parking issues in the master plan. The revised master plan calls for an adaptive management approach for both the parking and the proposed visitor limits, which will be adjusted based on an average number of visitors rather than a set limit per day. The limits will also be instituted only during peak hours of park use and will allow visitors to enter before after peak hours without being counted against the visitor limit. The main parking lot is proposed to be separated into a fee-paying lot and non-fee-paying lot, which will also be adjusted daily to allow flexibility depending on future demand for parking and the potential use of a proposed shuttle. Please see the "Parking", and "Visitor Limits" attachments from the Final EIS which show the verbatim changes from the Draft EIS for these sections.

We also thank you for your recommendation regarding proposed third-party shuttles from Princeville. The preferred scenario described in the Master Plan proposes a combination of shuttle service to the park with parking on-site as part of Phase I of implementation. While State Parks is unlikely to initiate its own shuttle service, several options for a shuttle system are identified in the Master Plan including extending the County public transit service to Kē'e, contracting with a third-party operator to provide the service, or allowing independent private shuttles to stop at the park, or a combination of the above. The Master Plan identifies a shuttle stop in the proposed Master Plan with sheltered seating areas along the turnaround at the entry to the park. The turnaround should be designed to allow other vehicles to pass while shuttles are stopped at the shuttle stop in order to reduce backups and congestion along the highway. In order to encourage ridership, the shuttle service should be initiated in Phase I and the parking lot should be sized appropriately. Various management strategies including parking and entry fees, point of entry tickets are also discussed in the Master Plan report to provide a range of options to support the shuttle. Please see the "Shuttle Service" attachment from Section 4.3.3 of the Final EIS which shows the verbatim changes from the Draft EIS for this section.

THOMAS WITTEN, FASIA  
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TOM SCHINELL, AIA  
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We also recognize your concerns regarding resident access to the park. Entry fees for state parks are established by Hawai'i Administrative Rules (HAR) 13-146-6, which states that Hawai'i residents are exempt from paying park entry fees if they can show a valid Hawai'i ID. Other categories of fee exempt park users (such as registered volunteers) may be established at a later time.

Mahalo nui for your input and participation in the environmental review process. Your letter will be included in the Final EIS. If you would like a copy of the Final EIS or portions thereof, please let us know. Otherwise, the electronic copy of the Final EIS will be available on the Office of Environmental Quality Control website at [http://oeqc2.doh.hawaii.gov/EA\\_EIS\\_Library/2018\\_KA-FEIS-Haena-State-Park-Master-Plan.pdf](http://oeqc2.doh.hawaii.gov/EA_EIS_Library/2018_KA-FEIS-Haena-State-Park-Master-Plan.pdf) on 2018.

Aloha,

Kimi Mikami Yuen, LEED AP BD+C  
Principal

Attachments: Parking  
Visitor Limits  
Shuttle Service

cc: The Honorable David Y. Ige, Governor  
Office of Environmental Quality Control  
Board of Land and Natural Resources  
Division of State Parks

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— NO TO THIS PLAN — Please fix it.

Please share your comments on the Hä'ena State Park Master Plan Draft EIS.  
(If you would like a written response letter, please include your mailing address.)

- ① REJECT FEDERAL MONEY FOR THE "STATE PARK"
- ② NEVER - LIMIT "LOCAL RESIDENT" USE OF STATE PARK
- ③ SIMPLIFY AND DEFINE - "GOALS" - BETTER.  
IS IT DAY USE OR NIGHT USE THAT'S THE CONCERN?
- ④ LIMIT STREET PARKING TO RESIDENTS - VISITORS  
PARK IN PARKING LOT. ENCOURAGE SHUTTLES.
- ⑤ NO - PRIORITY TO HUNTERS + FISHERMAN!
- ⑥ NO 'GATE GUARD'.
- \* IF - YOU LIMIT THE NUMBER OF VISITORS —  
THEY WILL GO TO TUNNELS (MAKUA BAY)  
THINK ABOUT THIS FOLLY PEOPLE —  
GET REAL FOLKS ON THE ADVISORY BOARD







Month XX, 2018 - DRAFT

Mr. Mike Dennis  
P.O. Box 106  
Hanalei, HI 96714

**SUBJECT: COMMENTS ON THE HÄENA STATE PARK MASTER PLAN  
DRAFT ENVIRONMENTAL IMPACT STATEMENT (EIS),  
HÄENA, KAUA'I, HAWAII**

Aloha Mr. Dennis,

Mahalo nui for your comment card dated August 24, 2015 from the community meeting held on August 19, 2015 regarding the Häena State Park Master Plan Draft Environmental Impact Statement (EIS). We sincerely apologize for the delay in responding. Due to the feedback received on the Draft EIS, the State of Hawai'i, Department of Land and Natural Resources, Division of State Parks (State Parks) has worked on revising the master plan with a reorganized Häena State Park Community Advisory Committee (HSPCAC) to address the concerns voiced by the larger community. As a result, the master plan presented in the Final EIS has been updated based on the feedback received from the public meetings, comments received, and subsequent extensive collaboration with the HSPCAC. As the planning consultant for State Parks, we offer the following responses to your comments.

1. We recognize your comment regarding federal funding for the park. Häena State Park is under the jurisdiction of the State of Hawai'i parks system. The Master Plan itself is an effort by State Parks to improve funding of coastal recreational planning and management. Completion of the plan and Chapter 343, HRS processing will enable State Parks to move forward with capital improvement projects to improve coastal recreation at the park. The timing of implementation of the proposed Master Plan is subject to CIP budget requests submitted by State Parks and approvals granted by the State Legislature.

2. We recognize your comment regarding excluding residents from park visitor limits. The revised master plan calls for an adaptive management approach for both the parking and the proposed visitor limits, which will be adjusted based on an average number of visitors rather than a set limit per day. As the State has more time to analyze user patterns, other options can be explored over time, and they are actively engaged in discussions regarding parking enforcement and increased fines along the roadway outside of the park as well. Currently, entry fees for all state parks are established by Hawai'i Administrative Rules (HAR) 13-146-6, at the rate of \$5/car or \$1/person. HAR 13-146-6 also states that Hawai'i residents are exempt from paying park entry fees if they can show a valid Hawai'i ID. Similar fees could be instituted at Häena State Park. However, State Parks will continue to work on the different options with the advisory committee and could include a variety of options as long as they do not violate the federal Land and Water Conservation Fund rules, which allow charging different fees for residents and nonresidents as long as they are comparable to current fee differences between the two. Please see the "Visitor Limits" attachment from the Final EIS, which shows the verbatim changes from the Draft EIS for this section.

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R. SEAN BUNGAN, ASIA  
President / Principal

RUSSELL Y. J. CHUNG, FASIA, LEED® AP BD+C  
Executive Vice President / Principal

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TOM SCHENELL, AIA  
Principal

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3. We recognize your comment regarding the definition of the master plan's goals. The goals and vision for the Hä'ena State Park Master Plan were developed with State Parks staff and the Master Plan Advisory Committee. There are five main goals that have guided the development of the Master Plan and the proposed management strategies. They are:
  - Recognize that the entire park is culturally significant.
  - Restore Hä'ena State Park as a living place... cleanse, restore and revive cultural practices again.
  - Involve the original families and reconnect the local community to the place.
  - Uphold State Parks' responsibility for the public's safety, access, and welfare.
  - Balance the provision of recreational opportunities with the preservation of the significant natural and cultural resources.
4. We recognize your comment regarding limiting parking for the park. As a part of the previously described adaptive management approach, the main parking lot is proposed to be separated into a fee-paying lot and non-fee-paying lot, which will also be adjusted daily to allow flexibility depending on future demand for parking and the potential use of a proposed shuttle. Please see the "Parking" attachment from Section 2.5.1.2 of the Final EIS, which show the verbatim changes from the Draft EIS for this section.
5. We recognize your concerns regarding different types of user groups having access to the park. Initial exemptions to the proposed daily visitor limit include overnight campers or hunters with valid permits, members of the Hui, cemetery caretakers, kīpuna who have cultural or ancestral ties to the area, or attendees at special educational or cultural events such as volunteer workdays or events at the Hula Complex. This will encourage visitors to plan ahead and an informational system via the internet, text messages, and email could be developed to distribute real-time information on park access, ticket availability, special events, and weather, ocean and any hazardous conditions at the park. The Master Plan acknowledges that park access will be an ever-evolving operational issue and will likely change over time as new policies are implemented. However, the goal is to study the impacts of these proposed policies and to adjust them as appropriate to improve the long-term management of the park and visitor satisfaction.
6. We recognize your concern regarding the presence of a gate guard at the park. The revised master plan includes a vehicle turnaround provided just past the park entry that provides separate accesses to and from the main parking lot, as well as the special access parking at Kē'e, and a separate staging area that could be used for various park purposes. Those who do not have valid park parking access may continue around the turnaround and exit the park without blocking traffic. Please see the "Park Entry" attachment from Section 2.5.1.1 of the Final EIS, which show the verbatim changes from the Draft EIS for this section.

We also recognize your comment regarding the overspill of visitors that are unable to enter Hä'ena State Park into other parks in the region. The previously mentioned adaptive management approach will analyze the effectiveness of the limits throughout the year, and coordination with other State and County agencies, including the County of Kaua'i Parks and Recreation Department, will be on-going in order to determine the best way to serve the community's needs.

Mahalo nui for your input and participation in the environmental review process. Your letter will be included in the Final EIS. If you would like a copy of the Final EIS or portions thereof, please let us know. Otherwise, the electronic copy of the Final EIS will be available on the Office of Environmental Quality Control website at [http://oeqc2.doh.hawaii.gov/EA\\_EIS\\_Library/2018--KA-FEIS-Haena-State-Park-Master-Plan.pdf](http://oeqc2.doh.hawaii.gov/EA_EIS_Library/2018--KA-FEIS-Haena-State-Park-Master-Plan.pdf) on , 2018

Aloha,

Kimi Mikami Yuen, LEED AP BD+C  
Principal

Attachments: Visitor Limits  
Parking  
Park Entry

cc: The Honorable David Y. Ige, Governor  
Office of Environmental Quality Control  
Board of Land and Natural Resources  
Division of State Parks

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No to this plan.

Please share your comments on the Hā'ena State Park Master Plan Draft EIS.

(If you would like a written response letter, please include your mailing address.)

Aloha Committee, I do not support this plan. This is my Aina as well. State Parks are to be enjoyed by the people, especially residents. This is the most contentious part of your Draft. Permits are available to cultural practitioners (Maui Hanaui, HBS), hunters and fishermen. Discontinuing taxpaying residents.

1. Select Federal money for the "State Park" 2. Never limit "local Resident" use of the Park, 3. Define Simply Concerns.
4. Visitors can have Rd. Parking ~~near~~ like on the ~~Island~~ - local free of charge and street parking. 5. No Gates 6. No limits People will still come - if you bypass handle town and business small business owners will suffer.

6. Bring back the north shore shuttle for everyone. Please rethink!

(5-6617 Kaho Hwy)

Suzie Conklin

P.O. Box 106

Hanalei, HI 96714

HONOLULU HI 968

21 AUG 2015 PM 2 L



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AUG 2 2015

PBR HAWAII

PBR HAWAII & Associates

Attn: Kimi Yuen

1001 Bishop Street, Suite 650

Honolulu, HI 96813

56813348450





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President / Principal

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Ms. Suzy Conklin  
SUBJECT: COMMENTS ON THE HĀ'ENA STATE PARK MASTER PLAN DRAFT ENVIRONMENTAL  
IMPACT STATEMENT (EIS), HĀ'ENA, KAUA'I, HAWAII  
Month XX, 2018  
Page 2

5. A new main gate is recommended to be installed to reduce visitor exposure to the rockfall hazards. As a public safety concern, this gate should be prioritized in capital improvement project funding as it will shift the park's major visitor traffic away from the area of potential rockfall hazard. Please see the "Park Entry," attachment from Section 2.5.1.1 of the Final EIS, which show the verbatim changes from the Draft EIS for this section.
6. A proposed third party shuttle service has been analyzed as a part of the project's traffic impact assessment report, included in the EIS as Appendix F. The preferred scenario is to implement a third party shuttle from the Princeville facility at the start of Phase I, minimizing the need for visitor parking in the parking lot in the park. Please see the "Shuttle Service" attachment from Section 4.3.3 of the Final EIS, which shows the verbatim changes from the Draft EIS for this section.

Mahalo nui for your input and participation in the environmental review process. Your letter will be included in the Final EIS. If you would like a copy of the Final EIS or portions thereof, please let us know. Otherwise, the electronic copy of the Final EIS will be available on the Office of Environmental Quality Control website at [http://oeqc2.doh.hawaii.gov/EA\\_EIS\\_Library/2018\\_KA-FEIS-Haena-State-Park-Master-Plan.pdf](http://oeqc2.doh.hawaii.gov/EA_EIS_Library/2018_KA-FEIS-Haena-State-Park-Master-Plan.pdf) on 11/15/2018.

Aloha,

Kimi Mikami Yuen, LEED AP BD+C  
Principal

Attachments: Parking  
Visitor Limits  
Park Entry  
Shuttle Service

cc: The Honorable David Y. Ige, Governor  
Office of Environmental Quality Control  
Board of Land and Natural Resources  
Division of State Parks

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SUBJECT: COMMENTS ON THE HĀ'ENA STATE PARK MASTER PLAN  
DRAFT ENVIRONMENTAL IMPACT STATEMENT (EIS),  
HĀ'ENA, KAUA'I, HAWAII

Aloha Ms. Conklin,

Mahalo nui for your comment card dated August 24, 2015 from the community meeting held on August 19, 2015 regarding the Hā'ena State Park Master Plan Draft Environmental Impact Statement (EIS). We sincerely apologize for the delay in responding. Due to the feedback received on the Draft EIS, the State of Hawai'i, Department of Land and Natural Resources, Division of State Parks (State Parks) has worked on revising the master plan with a reorganized Hā'ena State Park Community Advisory Committee (HSPCAC) to address the concerns voiced by the larger community. As a result, the master plan presented in the Final EIS has been updated based on the feedback received from the public meetings, comments received, and subsequent extensive collaboration with the HSPCAC. As the planning consultant for State Parks, we offer the following responses to your comments.

We recognize your comment regarding resident access to the park. The revised master plan calls for an adaptive management approach for visitor limits, which will be adjusted based on an average number of visitors rather than a set limit per day. The limits will also be instituted only during peak hours of park use and will allow visitors to enter before and after peak hours without being counted against the visitor limit. The main parking lot is proposed to be separated into a fee-paying lot and non-fee-paying lot, which will also be adjusted daily to allow flexibility depending on future demand for parking and the potential use of a proposed shuttle. Please see the "Parking" and "Visitor Limits" attachments from the Final EIS which show the verbatim changes from the Draft EIS for these sections.

We also recognize your comments as numbered below:

1. Hā'ena State Park is part of the State of Hawai'i parks system, and is under state jurisdiction. The Master Plan itself is an effort by State Parks to improve funding of coastal recreational planning and management. Completion of the plan and Chapter 343, HRS processing will enable State Parks to move forward with capital improvement projects to improve coastal recreation at the park. The timing of implementation of the proposed Master Plan is subject to CIP budget requests submitted by State Parks and approvals granted by the State Legislature.
2. As stated earlier in this letter, visitor limits will be a part of the master plan's adaptive management plan, which will be adjusted based on an average number of visitors rather than a set limit per day.
3. Define simply concerns?
4. As stated earlier in this letter, parking will be separated into a fee-paying lot and non-fee-paying lot, which will also be adjusted daily to allow flexibility depending on future demand.



Please share your comments on the Hā'ena State Park Master Plan Draft EIS.  
(If you would like a written response letter, please include your mailing address.)

Hope it doesn't desecrate.  
Our love one Grave site!!!  
Stop by!!! Limiting passengers  
from the airport. It will help.  
We as Native to Kēe, should be free  
from all others. Do the right thing.



HONOLULU HI 968  
21 AUG 2015 PM 2 L

I. Mahuki  
P.O. Box 138  
Hanalei, HI 96714

RECEIVED  
AUG 21 2015  
PBR HAWAII

PBR HAWAII & Associates  
Attn: Kimi Yuen  
1001 Bishop Street, Suite 650  
Honolulu, HI 96813

95513348450



Please share your comments on the Hā'ena State Park Master Plan Draft EIS.  
(If you would like a written response letter, please include your mailing address.)

Please Inform the Community! of  
what is in this plan! Making and  
decided on Plans and Changes to the  
Native People! Community! before the  
State And Federal Decisions!!  
with Limited time for the Community  
to be shared. It should be informed  
before Planned.



HONOLULU HI 968

21 AUG 2015 PM 2:1



T. Mahuki'  
P.O. Box 138  
Hanalei, HI 96714

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AUG 21 2015

PER HAWAII

PBR HAWAII & Associates

Attn: Kimi Yuen

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Honolulu, HI 96813

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RUSSELL Y. CHUNG, FASLA, LEED® AP BD+C  
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PLANNING • LANDSCAPE ARCHITECTURE • ENVIRONMENTAL STUDIES • ENTITLEMENTS • PERMITTING • GRAPHIC DESIGN

T. Mahuiki  
SUBJECT: COMMENTS ON THE HĀ'ENA STATE PARK MASTER PLAN DRAFT ENVIRONMENTAL  
IMPACT STATEMENT (EIS), HĀ'ENA, KAUA'I, HAWAII  
Month XX, 2018  
Page 2

We recognize your concerns regarding community input and outreach in the master plan process. The updated draft Master Plan for Hā'ena State Park includes management and development strategies that bring the significant historic, cultural and ecological resources of the park to the forefront and balance the protection of those resources with recreational and community uses. The current Master Plan utilizes new and previously prepared data, including updated historic, cultural and ecological information where necessary, along with continued community input. Collaboration with the community was a critical and vital element throughout the planning process and will continue to be required to help ensure the success of and support for implementation of the plan and ongoing management of the park.

Mahalo nui for your input and participation in the environmental review process. Your letter will be included in the Final EIS. If you would like a copy of the Final EIS or portions thereof, please let us know. Otherwise, the electronic copy of the Final EIS will be available on the Office of Environmental Quality Control website at [http://oeq2.doh.hawaii.gov/EA\\_EIS\\_Library/2018-04-KA-FEIS-Haena-State-Park-Master-Plan.pdf](http://oeq2.doh.hawaii.gov/EA_EIS_Library/2018-04-KA-FEIS-Haena-State-Park-Master-Plan.pdf) on 04/20/2018.

Aloha,

Kimi Mikami Yuen, LEED AP BD+C  
Principal

Attachments: Cultural and Community Advisory Group  
Visitor Limits

cc: The Honorable David Y. Ige, Governor  
Office of Environmental Quality Control  
Board of Land and Natural Resources  
Division of State Parks

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island.

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PBR HAWAII &amp; ASSOCIATES

Attn: Kimi Yuen

1001 Bishop Street, Suite 650

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RAMAN E. M. TAJM  
Cultural Sustainability Planner

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Senior Associate

GATE CULLISON, AICP  
Senior Associate

MARC SHIMATSU, ASLA  
Senior Associate

DACHUNG DONG, LEED® AP  
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SCOTT MURAKAMI, ASLA, LEED® AP  
Associate

MICHAEL SCHULTEN, ASLA, LEED® AP  
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NATHALIE BAGO  
Associate

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Ms. Taylor Lowe  
SUBJECT: COMMENTS ON THE HĀ'ENA STATE PARK MASTER PLAN DRAFT ENVIRONMENTAL  
IMPACT STATEMENT (EIS), HĀ'ENA, KAUA'I, HAWAII  
Month XX, 2018  
Page 2

We also acknowledge your comments on shuttle service from Princeville. The potential shuttle service is not proposed to be administered by State Parks in the revised master plan, however, it does include specific elements to support effective implementation with infrastructure design for the proposed park entry and main parking lot. The improvements include facilities designed to support the proposed shuttle with shuttle stop structures near the main parking lot, as described in Section 2.5.1.1 and Section 2.5.1.2 from the Final EIS.

Mahalo nui for your input and participation in the environmental review process. Your letter will be included in the Final EIS. If you would like a copy of the Final EIS or portions thereof, please let us know. Otherwise, the electronic copy of the Final EIS will be available on the Office of Environmental Quality Control website at [http://oeqc2.doh.hawaii.gov/EA\\_EIS\\_Library/2018-04/EA-FEIS-Haena-State-Park-Master-Plan.pdf](http://oeqc2.doh.hawaii.gov/EA_EIS_Library/2018-04/EA-FEIS-Haena-State-Park-Master-Plan.pdf) on 4/20/2018.

Aloha,

Kimi Mikami Yuen, LEED AP BD+C  
Principal

Attachments: Park Entry  
Parking  
Welcome Hale  
Visitor Limits  
Kaua'i General Plan  
North Shore Development Plan

cc: The Honorable David Y. Ige, Governor  
Office of Environmental Quality Control  
Board of Land and Natural Resources  
Division of State Parks

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Month XX, 2018 - DRAFT  
Ms. Taylor Lowe  
P.O. Box 774  
Hanalei, HI 96714  
SUBJECT: COMMENTS ON THE HĀ'ENA STATE PARK MASTER PLAN  
DRAFT ENVIRONMENTAL IMPACT STATEMENT (EIS),  
HĀ'ENA, KAUA'I, HAWAII

Aloha Ms. Lowe,

Mahalo nui for your emailed comments received on August 24, 2015 in response to the public meeting held on August 19, 2015 regarding the Hā'ena State Park Master Plan Draft Environmental Impact Statement (EIS). We sincerely apologize for the delay in responding. Due to the feedback received on the Draft EIS, the State of Hawai'i, Department of Land and Natural Resources, Division of State Parks (State Parks) has worked on revising the master plan with a reorganized Hā'ena State Park Community Advisory Committee (HSPCAC) to address the concerns voiced by the larger community. As a result, the master plan presented in the Final EIS has been updated based on the feedback received from the public meetings, comments received, and subsequent extensive collaboration with the HSPCAC. As the planning consultant for State Parks, we offer the following responses to your comments.

Mahalo for your support for the visitor limits and educational aspects of the master plan. We recognize your suggestions on limiting access for a specific number of vehicles and allowing pedestrian and bike access, however, the revised master plan proposes the visitor limit base on individuals and not vehicles. If there continue to be issues, State Parks will work with the advisory committees on adjusting the visitor limit number. While there are not proposed permits specifically for local resident exemption as you describe in your comments, there will be exemptions for community groups such as cultural practitioners. Please see the attached section from the Final EIS on "Visitor Limits" for more information.

While we appreciate your support for an education "building" to provide public information, please note that the originally proposed structure has been eliminated from the master plan and a traditional hale, referred to as the "Welcome Hale" in the FEIS, will now provide educational information. The attached Section 2.5.1.3 from the Final EIS provides a full description of the Welcome Hale.

We recognize your comments and suggestions on installing multiple gates to manage access and daily fees for entry past Hanalei. The revised plan calls for gate installation at the park entry turnaround, however, managing access at Hanalei is beyond the scope of the revised master plan. While the suggestion is beyond the scope of the Hā'ena State Park Master Plan, the revised plan aligns with corresponding aspects within the existing county plans. The County of Kaua'i is in the process of updating the general plan and regional development plans applicable to your comments. Please review Section 2.5.1.1 attached for more information on park entry and proposed gate as well as Section 5.4.1 and Section 5.4.2 describing the county plans.

I AM A 42 YEAR RESIDENT OF HAENA!  
WE NEED A BETTER PLAN PEOPLE AGREE UPON  
THIS IS A FORM OF ANNEXATION.  
Please share your comments on the Ha'ena State Park Master Plan Draft EIS.

(If you would like a written response letter, please include your mailing address.)

I ABSOLUTELY OPPOSE THIS PLAN! LOCAL  
HAWAIIANS A VERY UPSET! IT IS DIVIDING OUR  
COMMUNITY. WILL RESULT IN MASSIVE TRAFFIC JAMS.  
AND WILL ANGER THE TOURIST INDUSTRY. GOES AGAINST  
ALL CONSERVATION PURPOSES. BAD AREA FOR  
TUSSEMI ZONE. WASTED MONEY! WILL OVER FILL  
ALL RESTROOMS AT HAENA BEACH PARK. THEATERS OUR  
ACCESS RITES BY CLOSING AREAS. DESIGNATES A  
PRECIOUS AREA WITH LARGE STATUES GATES  
AND BAD AND EVIL INTENTIONS TO CONTROL AND  
USE AS A WAY OF MAKING DIRT MONEY  
THREATENS WILD LIFE, BURIAL SITES AND DEFEAT  
MAIKAWA MOUNTAIN.



HONOLULU HI 96813

24 AUG 2015 PM 2:1

DAVID LALOCK  
BOX 484 HAWALEIHI, 96714  
PH: 808 826 9165

KEEP YOUR CHEEZY  
CULTURAL CENTERS  
IN WAIKIKI!

PBR HAWAII & Associates

Attn: Kimi Yuen

1001 Bishop Street, Suite 650

Honolulu, HI 96813

RECEIVED  
AUG 26 2015  
PBR HAWAII

PS. THIS PLAN CATER TO THE TOURISTS NOT THE LOCALS!  
95% OF THE LOCAL RESIDENCE WILL BE DISPLACED  
TO MAKE ROOM FOR THE TOURISTS



THOMAS WITTEN, ESQ.  
Chairman / Principal

R. SEAN DUNCAN, ASLA  
President / Principal

RUSSELL Y. CHUNG, ASLA, LEED® AP BD+C  
Executive Vice President / Principal

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Principal

KIMI MURAMATSU, LEED® AP BD+C  
Principal

W. FRANK BRANTZ, ASLA  
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Project Director

RAMONA E. M. TAMM  
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Mr. David LaCock  
SUBJECT: COMMENTS ON THE HĀ'ENA STATE PARK MASTER PLAN DRAFT ENVIRONMENTAL  
IMPACT STATEMENT (EIS), HĀ'ENA, KAUA'I, HAWAII  
Month XX, 2018  
Page 2

and is proposed to be slightly elevated so as not to impact the berm or any of the historic resources, but will maintain a low profile just above the berm. Please see the revised Figure 1 Master Plan graphic and the "Master Plan Summary" attachment from Section 1.9.1 of the Final EIS, which show the verbatim changes from the Draft EIS in this section.

We recognize your comment regarding concerns with the park and tsunami zones. While Hā'ena has been struck by tsunami waves multiple times in recorded history, the master plan includes a section on natural hazard mitigation. Staff training and visitor education sessions, as well as ongoing coordination, communication, and annual park emergency evacuation drills with the County Fire and Police Departments are recommended management strategies proposed in the Master Plan to help improve emergency readiness and public safety.

We recognize your comment regarding restroom capacity at the park. Based on strong community preference, the Master Plan proposes that any new wastewater systems include a treatment system that brings wastewater to an R-2 water quality level at a minimum and to reuse the effluent as much as possible to minimize impacts to the sensitive natural and cultural resources at the park.

We recognize your comment regarding your feeling that your access to the park is being threatened, and your comment regarding resident access to the park. The Master Plan's proposed adaptive management approach will work to ensure all the diverse park users in the community have their opportunity to utilize and enjoy the park. There also will be exemptions for special user groups, such as hunters and cultural practitioners. Entry fees for state parks are established by Hawai'i Administrative Rules (HAR) 13-146-6, which states that Hawai'i residents are exempt from paying park entry fees if they can show a valid Hawai'i ID. Other categories of exempt users, such as registered volunteers, may be established at a later time. Please see the "Adaptive Management" attachment from Section 2.5.4.1 of the Final EIS, which shows the verbatim changes from the Draft EIS in this section.

We recognize your comments regarding structures, gates, and protection of the park's natural and cultural resources. The main reasons for proceeding with the proposed Master Plan include protection and restoration of the park's sensitive and unique natural, cultural, historic, and scenic resources; improvement of the environmental conditions such as surface and marine water quality; removal of alien species and restoration of native ecosystems; improving public safety; increasing knowledge and sensitivity of the cultural values and activities that occur within the park; providing outdoor educational opportunities as well as recreational opportunities for residents and visitors alike; and reducing negative impacts to native flora and fauna.

Mahalo nui for your input and participation in the environmental review process. Your letter will be included in the Final EIS. If you would like a copy of the Final EIS or portions thereof, please let us know. Otherwise, the electronic copy of the Final EIS will be available on the Office of Environmental Quality Control website at [http://oeq2.doh.hawaii.gov/EA\\_EIS\\_Library/2018--KA-FEIS-Haena-State-Park-Master-Plan.pdf](http://oeq2.doh.hawaii.gov/EA_EIS_Library/2018--KA-FEIS-Haena-State-Park-Master-Plan.pdf) on 2018.

Aloha,

Kimi Mikami Yuen, LEED AP BD+C  
Principal

Attachments: Roadways and Traffic  
Master Plan Summary  
Figure 1: Master Plan  
Adaptive Management

cc: The Honorable David Y. Ige, Governor  
Office of Environmental Quality Control  
Board of Land and Natural Resources  
Division of State Parks

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**Nathalie Razo**

**From:** Amithea L <amithea.love@gmail.com>  
**Sent:** Tuesday, August 25, 2015 7:53 PM  
**To:** lauren.a.tanaka@hawaii.gov; Kimi Yuen  
**Subject:** Feedback on plan for Haena State Park

To whom it may concern,

I am writing to express grave concern regarding the proposed plans for Haena State Park, particularly in regard to Kee beach.

As a resident and frequent user of Kee beach, I feel the proposed plan is not practical and detracts from the natural beauty of the area.

Here are my suggestions:

- 1) Restrict parking to current parking lots only. Strictly enforce parking rules.
- 2) Do not exempt hikers from regulations. The hiker cars are the majority of the reason the parking lots fill up. Hikers leave their cars for days at a time. Even if you arrive to Kee at 6 am, you find the parking lot nearly full, but no one is on the beach. Hikers should be required to park at the far parking lot, leaving the beach parking for those using the beach.
- 3) Do not build anything in this beautiful place! No gate, no walkway, no cultural center.
- 4) DO NOT CHARGE!!!

If you have not walked along Kee beach at sunrise toward Princeville then paused to look down the Na Pali coast, please do so. God did an amazing job creating this slice of heaven. Your so-called improvements are not needed or wanted.

Thank you,

Dr. Amithea Love





THOMAS WITTEN, FASLA  
Chairman / Principal

R. SEAN DUNCAN, ASLA  
President / Principal

RUSSELL Y. CHUNG, FASLA, LEED® AP BD+C  
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Dr. Amithea Love  
SUBJECT: COMMENTS ON THE HĀ'ENA STATE PARK MASTER PLAN DRAFT ENVIRONMENTAL  
IMPACT STATEMENT (EIS), HĀ'ENA, KAUA'I, HAWAII  
Month XX, 2018  
Page 2

Month XX, 2018 - DRAFT

Dr. Amithea Love  
2037 Puu Kaa Street  
Kapaa, HI 96746

SUBJECT: COMMENTS ON THE HĀ'ENA STATE PARK MASTER PLAN  
DRAFT ENVIRONMENTAL IMPACT STATEMENT (EIS),  
HĀ'ENA, KAUA'I, HAWAII

Aloha Dr. Love,

Mahalo nui for your emailed comment dated August 25, 2015 regarding the Hā'ena State Park Master Plan Draft Environmental Impact Statement (EIS). We sincerely apologize for the delay in responding. Due to the feedback received on the Draft EIS, the State of Hawai'i, Department of Land and Natural Resources, Division of State Parks (State Parks) has worked on revising the master plan with a reorganized Hā'ena State Park Community Advisory Committee (HSPCAC) to address the concerns voiced by the larger community. As a result, the master plan presented in the Final EIS has been updated based on the feedback received from the public meetings, comments received, and subsequent extensive collaboration with the HSPCAC. As the planning consultant for State Parks, we offer the following responses to your comments.

We recognize your concerns regarding parking issues at the park. The revised master plan calls for an adaptive management approach for both the parking and the proposed visitor limits, which will be adjusted based on an average number of visitors rather than a set limit per day. The main parking lot is proposed to be separated into a fee-paying lot and non-fee-paying lot, which will also be adjusted daily to allow flexibility depending on future demand for parking and the potential use of a proposed shuttle. Please see the "Parking" and "Visitor Limits" attachments from the Final EIS, which show the verbatim changes from the Draft EIS for these sections.

We recognize your comment regarding hikers and parking availability. The revised master plan simplifies and better organizes parking by limiting it to two lots; the main one at the entrance and the special access parking lot at Ke'e. Non special needs users such as hikers would be designated to use the main parking area away from the beach.

We recognize your concerns regarding built construction at the park. Only a few new structures are proposed, including a Welcome Hale that is envisioned as an open traditional Hawaiian hale and located near the improved main parking lot. The boardwalk has been modified in the revised master plan. The new pedestrian pathway follows along the first berm of the lo'i closest to the highway and is proposed to be slightly elevated so as not to impact the berm or any of the historic resources. A new main gate is recommended to be installed when the highway is closed to general vehicle traffic to reduce visitor exposure to the rockfall hazards. Only those with special access to Ke'e, such as the lifeguards and rescue personnel, those with valid ADA parking placards or plates, park staff, the Hula Complex and other cultural practitioners will be allowed along the limited access portion of the highway. It will have a separate entry off the turnaround.

Please see the revised Figure 1 Master Plan graphic and the "Master Plan Summary" attachment from Section 1.9.1 of the Final EIS, which show the verbatim changes to this section.

We recognize your comment regarding charging an entry fee for the park. Entry fees for state parks are established by Hawai'i Administrative Rules (HAR) 13-146-6, at the rate of \$5/car or \$1/person. HAR 13-146-6 also states that Hawai'i residents are exempt from paying park entry fees if they can show a valid Hawai'i ID. Other categories of fee exempt park users, such as registered volunteers may be established at a later time.

Mahalo nui for your input and participation in the environmental review process. Your letter will be included in the Final EIS. If you would like a copy of the Final EIS or portions thereof, please let us know. Otherwise, the electronic copy of the Final EIS will be available on the Office of Environmental Quality Control website at [http://oeqc2.doh.hawaii.gov/EA\\_EIS\\_Library/2018\\_KA-FEIS-Haena-State-Park-Master-Plan.pdf](http://oeqc2.doh.hawaii.gov/EA_EIS_Library/2018_KA-FEIS-Haena-State-Park-Master-Plan.pdf) on 11/15/2018.

Aloha,

Kimi Mikami Yuen, LEED AP BD+C  
Principal

Attachments: Parking  
Visitor Limits  
Master Plan Summary  
Figure 1: Master Plan

cc: The Honorable David Y. Ige, Governor  
Office of Environmental Quality Control  
Board of Land and Natural Resources  
Division of State Parks

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Feedback on plan for Haena State Park - JSI.docx

Please share your comments on the Hā'ena State Park Master Plan Draft EIS.  
(If you would like a written response letter, please include your mailing address.)

I am Against the proposals. There is no data supporting the proposed changes. The plan smacks of localism! Why have other members of the kaula community not been invited to participate? Why add more buildings? How will traffic be handled when over 100 bikers decide to come out of kaula at once? Who is parking in the area? Not tourists - but mostly North Shore locals. I object the twisting of the definition of volunteer to accommodate Haem locals. This park belongs to ALL, not just North shore residents. SHAME on you for blaming bounds



HONOLULU HI 96813

24 AUG 2015 PM 2 L

Blake more, stephenie

4780 Iiwi Rd. # 2

Kapa'a HI. 96746

RECEIVED

AUG 26 2015

PBR HAWAII

PBR HAWAII & Associates

Attn: Kimi Yuen

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Honolulu, HI 96813

96813348450





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Ms. Stephanie Blakemore  
SUBJECT: COMMENTS ON THE HĀ'ENA STATE PARK MASTER PLAN DRAFT ENVIRONMENTAL  
IMPACT STATEMENT (EIS), HĀ'ENA, KAUA'I, HAWAII  
Month XX, 2018  
Page 2

fee-paying lot and non-fee-paying lot, which will also be adjusted daily to allow flexibility depending on future demand for parking and the potential use of a proposed shuttle. Please see the "Roadways and Traffic" and "Visitor Limits" attachments from the Final EIS which show the verbatim changes from the Draft EIS for these sections

Mahalo nui for your input and participation in the environmental review process. Your letter will be included in the Final EIS. If you would like a copy of the Final EIS or portions thereof, please let us know. Otherwise, the electronic copy of the Final EIS will be available on the Office of Environmental Quality Control website at [http://oeqc2.doh.hawaii.gov/EA\\_EIS\\_Library/2018--KA-FEIS-Haena-State-Park-Master-Plan.pdf](http://oeqc2.doh.hawaii.gov/EA_EIS_Library/2018--KA-FEIS-Haena-State-Park-Master-Plan.pdf) on 11/15/2018.

Aloha,

Kimi Mikami Yuen, LEED AP BD+C  
Principal

Attachments: Master Plan Summary  
Figure 1: Master Plan  
Roadways and Traffic  
Visitor Limits

cc: The Honorable David Y. Ige, Governor  
Office of Environmental Quality Control  
Board of Land and Natural Resources  
Division of State Parks

O:\Job262627\01 D\NR-Haena State Park Master Plan\EIS\DEIS Responses Mail Merge\2015-08-26 Stephanie Blakemore - JSI.docx

SUBJECT: COMMENTS ON THE HĀ'ENA STATE PARK MASTER PLAN  
DRAFT ENVIRONMENTAL IMPACT STATEMENT (EIS),  
HĀ'ENA, KAUA'I, HAWAII

Aloha Ms. Blakemore,

Mahalo nui for your comment card dated August 26, 2015 from the community meeting held on August 19, 2015 regarding the Hā'ena State Park Master Plan Draft Environmental Impact Statement (EIS). We sincerely apologize for the delay in responding. Due to the feedback received on the Draft EIS, the State of Hawai'i, Department of Land and Natural Resources, Division of State Parks (State Parks) has worked on revising the master plan with a reorganized Hā'ena State Park Community Advisory Committee (HSPCAC) to address the concerns voiced by the larger community. As a result, the master plan presented in the Final EIS has been updated based on the feedback received from the public meetings, comments received, and subsequent extensive collaboration with the HSPCAC. As the planning consultant for State Parks, we offer the following responses to your comments.

We recognize your concerns regarding building additional structures on site as a part of the master plan. Only a few new structures are proposed in this revised master plan, including a Welcome Hale that is envisioned as an open traditional Hawaiian hale and located near the improved main parking lot. The new pedestrian path would follow along the first berm of the lo'i closest to the highway and is proposed to be slightly elevated so as not to impact the berm or any of the historic resources, and will maintain a low profile just above the berm. Please see the revised Figure 1 Master Plan graphic and the "Master Plan Summary" attachment from Section 1.9.1 of the Final EIS, which show the verbatim changes to the Section from the Draft EIS.

We also recognize your concerns regarding traffic and resident usage of the park as a part of the master plan. The Master Plan includes a combination of physical improvements and programmatic options that when applied in combination will have a positive impact on the existing roadway conditions.

Vehicle access beyond the main parking area to Kē'ē beach is proposed to be reduced from the currently unrestricted conditions to special access only (ADA, lifeguards, and cultural practitioners). Restricting general vehicular access from the main parking area to Kē'ē Beach will effectively eliminate illegal parking along the highway's shoulder, reduce the wear on the historic roadway's macadam surface, and reduce the number of visitors traveling in a potential rockfall hazard area.

The revised master plan calls for an adaptive management approach for both the parking and the proposed visitor limits, which will be adjusted based on an average number of visitors rather than a set limit per day. The limits will also be instituted only during peak hours of park use and will allow visitors to enter before and after peak hours without being counted against the visitor limit. The main parking lot is proposed to be separated into a

Too controlled + over-planned

Please share your comments on the Hā'ena State Park Master Plan Draft EIS.  
(If you would like a written response letter, please include your mailing address.)

- ① I Do Not want this overcontrolled
- ② Plan:
- ③ Shuttle service required from hotels + time shares.
- ④ Tourist required to take shuttle.
- ⑤ Stop to transport adviser of  
to area, tv, magazines + tour guide  
book - which has brought so many to  
the area with the increase of  
promoting the area since 2000.
- ⑥ move entrance to be beyond the stream  
can access via still use old road of stream



GARDNER  
3800 Kapeha meka Rd #14  
Punahele HI  
96722

PBR HAWAII & Associates

Attn: Kimi Yuen

1001 Bishop Street, Suite 650

Honolulu, HI 96813





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Gardner  
SUBJECT: COMMENTS ON THE HĀ'ENA STATE PARK MASTER PLAN DRAFT ENVIRONMENTAL  
IMPACT STATEMENT (EIS), HĀ'ENA, KAUA'I, HAWAII  
Month XX, 2018  
Page 2

Month XX, 2018 - DRAFT

Gardner  
3800 Kamehameha Road, Unit 14  
Princeville, HI 96722

SUBJECT: COMMENTS ON THE HĀ'ENA STATE PARK MASTER PLAN  
DRAFT ENVIRONMENTAL IMPACT STATEMENT (EIS),  
HĀ'ENA, KAUA'I, HAWAII

Aloha Gardner,

Mahalo nui for your comment card from the community meeting held on August 19, 2015 regarding the Hā'ena State Park Master Plan Draft Environmental Impact Statement (EIS). We sincerely apologize for the delay in responding. Due to the feedback received on the Draft EIS, the State of Hawai'i, Department of Land and Natural Resources, Division of State Parks (State Parks) has worked on revising the master plan with a reorganized Hā'ena State Park Community Advisory Committee (HSPCAC) to address the concerns voiced by the larger community. As a result, the master plan presented in the Final EIS has been updated based on the feedback received from the public meetings, comments received, and subsequent extensive collaboration with the HSPCAC. As the planning consultant for State Parks, we offer the following responses to your comments.

We recognize your comments as numbered in your letter:

1. We recognize your opposition to the master plan due to the level of oversight by the State. The Master Plan itself is an effort by State Parks to improve funding of coastal recreational planning and management. Completion of the plan and Chapter 343, HRS processing will enable State Parks to move forward with capital improvement projects to improve the park's programs, as well as the park's efforts to preserve and protect the park's existing cultural and historical resources.

2.&3. We recognize your comment regarding a potential shuttle service to the park. The preferred scenario described in the Master Plan proposes a combination of shuttle service to the park with parking on-site as part of Phase I of implementation. While State Parks is unlikely to initiate its own shuttle service, several options for a shuttle system are identified in the Master Plan including extending the County public transit service to Kē'e, contracting with a third-party operator to provide the service, or allowing independent private shuttles to stop at the park, or a combination of the above. The Master Plan identifies a shuttle stop in the proposed Master Plan with sheltered seating areas along the turnaround at the entry to the park. The turnaround should be designed to allow other vehicles to pass while shuttles are stopped at the shuttle stop in order to reduce backups and congestion along the highway. In order to encourage ridership, the shuttle service should be initiated in Phase I and the parking lot should be sized appropriately. Various management strategies including parking and entry fees, point of entry tickets are also discussed in the Master Plan report to provide a range of options to support the shuttle. Please see the "Shuttle Service" attachment from Section 4.3.3 of the Final EIS which shows the verbatim changes from the Draft EIS for this section.

4. No advertising of the area is proposed as a part of this master plan.

5. We recognize your concerns in regards to changes in the main entry of the park. A new main gate is recommended to be installed when the highway is closed to general vehicle traffic to reduce visitor exposure to the rockfall hazards. Only those with special access to Kē'e, such as the lifeguards and rescue personnel, those with valid ADA parking placards or plates, park staff, the Hula Complex and other cultural practitioners will be allowed along the limited access portion of the highway. It will have a separate entry off the turnaround. Rockfall hazard warning signs will be installed on the gate across the highway and a swing gate on the mauka half of the right-of-way could be automated to open for exiting traffic only.

A vehicle turnaround is provided just past the park entry and provides separate accesses to and from the main parking lot, as well as the special access parking at Kē'e, and a separate staging area that could be used for various park purposes. Those who do not have valid park parking access may continue around the turnaround and exit the park without blocking traffic. Please see attachment "Park Entry" from Section 2.5.1.1 of the Final EIS which shows the verbatim changes from the Draft EIS.

Mahalo nui for your input and participation in the environmental review process. Your letter will be included in the Final EIS. If you would like a copy of the Final EIS or portions thereof, please let us know. Otherwise, the electronic copy of the Final EIS will be available on the Office of Environmental Quality Control website at [http://oeq2.doh.hawaii.gov/EA\\_EIS\\_Library/2018--KA-FEIS-Haena-State-Parks-Master-Plan.pdf](http://oeq2.doh.hawaii.gov/EA_EIS_Library/2018--KA-FEIS-Haena-State-Parks-Master-Plan.pdf) on 11/15/2018.

Aloha,

Kimi Mikami Yuen, LEED AP BD+C  
Principal

Attachments: Shuttle Service  
Park Entry

cc: The Honorable David Y. Ige, Governor  
Office of Environmental Quality Control  
Board of Land and Natural Resources  
Division of State Parks

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---

**Nathalie Razo**

**From:** Lauren.A.Tanaka@hawaii.gov  
**Sent:** Thursday, August 27, 2015 1:44 PM  
**To:** Dan.Quinn@hawaii.gov; Russell.P.Kumabe@hawaii.gov; Alan.B.Carpenter@hawaii.gov; Kimi Yuen  
**Subject:** Fw: Kee Beach

----- Forwarded by Lauren A Tanaka/DLNR/StateHUS on 08/27/2015 01:42 PM -----

---

**From:** Lauren A Tanaka/DLNR/StateHUS  
**To:** nrltting@hawaiiantel.net  
**Date:** 08/27/2015 01:42 PM  
**Subject:** Re: Kee Beach

---

Aloha Marjorie:

Thank you for your comments. It sounds like it could work if all things necessary were in place. A formal response will be sent to you after the public review comment period ends on Sept. 8th. May I have your mailing address to send it?

---

**From:** nrltting@hawaiiantel.net  
**To:** Lauren.A.Tanaka@hawaii.gov,  
**Date:** 08/27/2015 11:09 AM  
**Subject:** Kee Beach

---

Aloha,

I want to second the motion to keep Kee Beach as unimproved as possible as mentioned in THE GARDEN ISLAND letters today. Here is my suggestion for doing that:

Make all places near Kee Beach 1 hour maximum and place a heavy fine on over parking. AND enforce it. Mark tires with chalk on pass 1 and if still there on pass 2 fine them. Maybe even have a graduated fine such as \$25 for the first hour, \$50 for the second hour, etc....

Place no parking signs along the road and enforce the no parking by

towing away cars. The sign should read, "All roadside areas are tow away zones."

Tow away to Haena Beach with a special area for paying the fine.

Improve and expand the parking facility that is some distance m the beach and place a sign there that says "All hikers must park here. No overnight parking."

When purchasing an overnight hiking permit, hikers should be made aware that they must shuttle to Kee and they must certify that they understand this.

Provide a shuttle with stops at Haena Beach, the parking facility, and turn around at Kee Beach. Improve the parking at Haena Beach to accommodate the need.

A NorthShore shuttle from Princeville would be ineffective because there is no place in Princeville available to leave an automobile. It is unreasonable to expect those of us who wish to shop in Princeville to share parking space that is already overcrowded and funded privately. The shuttle can be a small tram-like shuttle from Haean Beach that makes a 20 or 30 minute round trip every half hour.

The limit on numbers will take care of itself if the parking ordinances are enforced. The expense of the shuttle and the enforcement should be borne by the TAT and we should get our fair share of the TAT from the state TAT revenues.

Marjorie Gifford, Princeville



Month XX, 2018 - DRAFT

Ms. Marjorie Gifford  
Via Email: miffing@hawaiiante.net

**SUBJECT: COMMENTS ON THE HĀ'ENA STATE PARK MASTER PLAN  
DRAFT ENVIRONMENTAL IMPACT STATEMENT (EIS),  
HĀ'ENA, KAUA'I, HAWAII**

Aloha Ms. Gifford,

Mahalo nui for your comment card dated August 27, 2015 from the community meeting held on August 19, 2015 regarding the Hā'ena State Park Master Plan Draft Environmental Impact Statement (EIS). We sincerely apologize for the delay in responding. Due to the feedback received on the Draft EIS, the State of Hawai'i, Department of Land and Natural Resources, Division of State Parks (State Parks) has worked on revising the master plan with a reorganized Hā'ena State Park Community Advisory Committee (HSPCAC) to address the concerns voiced by the larger community. As a result, the master plan presented in the Final EIS has been updated based on the feedback received from the public meetings, comments received, and subsequent extensive collaboration with the HSPCAC. As the planning consultant for State Parks, we offer the following responses to your comments.

We recognize your comments regarding keeping Kē'e Beach unimproved. The revised Master Plan does not propose new structures directly adjacent to the beach. Only a few new structures are proposed for the overall Master Plan, including a Welcome Hale that is envisioned as an open traditional Hawaiian hale and located near the improved main parking lot. Please see the revised Figure 1 Master Plan graphic and the "Master Plan Summary" attachment from Section 1.9.1 of the Final EIS, which show the verbatim changes from the Draft EIS in this section.

Also, the rockfall hazard study included in the EIS identified a high-risk area along the highway which is the main visitor corridor to Kē'e Beach. This mix of recreational, cultural and environmental resources gives rise to the need to develop a conscientious and comprehensive master plan in order to balance conservation, preservation, recreation, cultural integrity, and public safety. Please see the "Park Entry" attachment from Section 2.5.1.1 of the Final EIS, which shows the verbatim changes from the Draft EIS for this section.

We also recognize your comments and suggestions regarding parking concerns. The revised master plan calls for an adaptive management approach for both the parking and the proposed visitor limits, which will be adjusted based on an average number of visitors rather than a set limit per day. The main parking lot is proposed to be separated into a fee-paying lot and non-fee-paying lot, which will also be adjusted daily to allow flexibility depending on future demand for parking and the potential use of a proposed shuttle. Please see the and "Parking" attachments from the Final EIS which shows the verbatim changes from the Draft EIS for this section.

THOMAS WITTEN, ESQ.  
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Ms. Marjorie Gifford  
SUBJECT: COMMENTS ON THE HĀ'ENA STATE PARK MASTER PLAN DRAFT ENVIRONMENTAL  
IMPACT STATEMENT (EIS), HĀ'ENA, KAUA'I, HAWAII  
Month XX, 2018  
Page 2

Mahalo nui for your input and participation in the environmental review process. Your letter will be included in the Final EIS. If you would like a copy of the Final EIS or portions thereof, please let us know. Otherwise, the electronic copy of the Final EIS will be available on the Office of Environmental Quality Control website at [http://oeq2.doh.hawaii.gov/EA\\_EIS\\_Library/2018-18-KA-FEIS-Haena-State-Park-Master-Plan.pdf](http://oeq2.doh.hawaii.gov/EA_EIS_Library/2018-18-KA-FEIS-Haena-State-Park-Master-Plan.pdf) on 11/15/2018.

Aloha,

Kimi Mikami Yuen, LEED AP BD+C  
Principal

Attachments: Master Plan Summary  
Figure 1: Master Plan  
Park Entry  
Parking

cc: The Honorable David Y. Ige, Governor  
Office of Environmental Quality Control  
Board of Land and Natural Resources  
Division of State Parks

O:\Jab26\262701 DLNR-Haena State Park Master Plan\EIS\EIS Responses\Mail Merge\2015-08-27 Gifford Email-Fw  
Kee Beach - ISI.docx

Please share your comments on the Hā'ena State Park Master Plan Draft EIS.  
(If you would like a written response letter, please include your mailing address.)

Good SARB! Thank you for taking time to prepare plan. I think the biggest worry for most folks living down here is that they will lose their freedom to visit and enjoy the area. But in my opinion that's like lost w/ so many visitors. Changes that I think would improve plan ① Place Gate at Haena State Park. ② Have stickers for "locals" cars/truck for access ③ Have hotel/county shuttles. ④ - you could make entrance free for residents and very expensive for tourists to park to encourage riding shuttles on bus.



HONOLULU HI 96813

25 AUG 2015 PM 5 L

A-Wha-Ha (0)  
Box 1256  
Hana, HI 96714

PBR HAWAII & Associates

Attn: Kimi Yuen

1001 Bishop Street, Suite 650

Honolulu, HI 96813

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AUG 28 2015

PBR HAWAII

95813348450







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Executive Vice President / Principal

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PLANNING • LANDSCAPE ARCHITECTURE • ENVIRONMENTAL STUDIES • ENTITLEMENTS • PERMITTING • GRAPHIC DESIGN

A. Whitfield  
SUBJECT: COMMENTS ON THE HĀ'ENA STATE PARK MASTER PLAN DRAFT ENVIRONMENTAL  
IMPACT STATEMENT (EIS), HĀ'ENA, KAUA'I, HAWAII  
Month XX, 2018  
Page 2

4. We recognize your comment regarding the park entry fee. Entry fees for state parks are established by Hawai'i Administrative Rules (HAR) 13-146-6, at the rate of \$5/car or \$1/person. HAR 13-146-6 also states that Hawai'i residents are exempt from paying park entry fees if they can show a valid Hawai'i ID. Other categories of fee exempt park users (such as registered volunteers) may be established at a later time.

Mahalo nui for your input and participation in the environmental review process. Your letter will be included in the Final EIS. If you would like a copy of the Final EIS or portions thereof, please let us know. Otherwise, the electronic copy of the Final EIS will be available on the Office of Environmental Quality Control website at [http://oeqc2.doh.hawaii.gov/EA\\_EIS\\_Library/2018\\_KA-EIS-Haena-State-Park-Master-Plan.pdf](http://oeqc2.doh.hawaii.gov/EA_EIS_Library/2018_KA-EIS-Haena-State-Park-Master-Plan.pdf) on , 2018.

Aloha,

Kimi Mikami Yuen, LEED AP BD+C  
Principal

Attachments: Park Entry  
Visitor Limits  
Shuttle Service

cc: The Honorable David Y. Ige, Governor  
Office of Environmental Quality Control  
Board of Land and Natural Resources  
Division of State Parks

O:\J0626\2627\01 DLNR-Haena State Park Master Plan\EIS\DEIS Responses\Mail Merge\2015-08-28 A. Whitfield - JS1.docx

SUBJECT: COMMENTS ON THE HĀ'ENA STATE PARK MASTER PLAN  
DRAFT ENVIRONMENTAL IMPACT STATEMENT (EIS),  
HĀ'ENA, KAUA'I, HAWAII

Aloha A. Whitfield,

Mahalo nui for your comment card dated August 28, 2015 from the community meeting held on August 19, 2015 regarding the Hā'ena State Park Master Plan Draft Environmental Impact Statement (EIS). We sincerely apologize for the delay in responding. Due to the feedback received on the Draft EIS, the State of Hawai'i, Department of Land and Natural Resources, Division of State Parks (State Parks) has worked on revising the master plan with a reorganized Hā'ena State Park Community Advisory Committee (HSPCAC) to address the concerns voiced by the larger community. As a result, the master plan presented in the Final EIS has been updated based on the feedback received from the public meetings, comments received, and subsequent extensive collaboration with the HSPCAC. As the planning consultant for State Parks, we offer the following responses to your comments as numbered per your letter:

1. We recognize your comment regarding a gate for the park. A new main gate is recommended to be installed to reduce visitor exposure to the rockfall hazards. Please see the "Park Entry" attachment from Section 2.5.1.1 of the Final EIS, which shows the verbatim changes from the Draft EIS for this section.
2. We recognize your comment regarding resident access to the park. The revised master plan calls for an adaptive management approach for both the parking and the proposed visitor limits, which will be adjusted based on an average number of visitors rather than a set limit per day. State Parks will continue to work on the different options with the advisory committee and could include a variety of options as long as they do not violate the federal Land and Water Conservation Fund rules, which allow charging different fees for residents and nonresidents as long as they are comparable to current fee differences between the two. Please see the "Visitor Limits" attachment from Section 2.5.4.3 of the Final EIS, which shows the verbatim changes from the Draft EIS for this section.
3. We recognize your comment regarding a proposed shuttle to the park. A proposed third party shuttle service has been analyzed as a part of the project's traffic impact assessment report, included in the EIS as Appendix F. The preferred scenario is to implement a third party shuttle from the Princeville facility at the start of Phase I, minimizing the need for visitor parking in the parking lot in the park. Please see the "Shuttle Service" attachment from Section 4.3.3 of the Final EIS, which shows the verbatim changes from the Draft EIS for this section.

Please share your comments on the Hā'ena State Park Master Plan Draft EIS.

(If you would like a written response letter, please include your mailing address.)

I fully support the plan for Hā'ena and  
appreciate all the hard work that's  
gone into planning.

HOB OSTERLUND  
JOANNE LITTLE

4209 Kimo Rd  
96722

HONOLULU HI 968  
25 AUG 2015 PM 2 L



PBR HAWAII & Associates

Attn: Kimi Yuen

1001 Bishop Street, Suite 650

Honolulu, HI 96813

RECEIVED  
AUG 28 2015  
PBR HAWAII

96813348450





Month XX, 2018 - DRAFT

Mr. Hob Osterlund and Ms. Joanne Little  
4209 Kinau Place  
Princeville, HI 96722

**SUBJECT: COMMENTS ON THE HÄ'ENA STATE PARK MASTER PLAN  
DRAFT ENVIRONMENTAL IMPACT STATEMENT (EIS),  
HÄ'ENA, KAUA'I, HAWAII**

Aloha Mr. Osterlund and Ms. Little,

Mahalo nui for your comment card dated August 24, 2015 from the community meeting held on August 19, 2015 regarding the Hä'ena State Park Master Plan Draft Environmental Impact Statement (EIS). We sincerely apologize for the delay in responding. Due to the feedback received on the Draft EIS, the State of Hawai'i, Department of Land and Natural Resources, Division of State Parks (State Parks) has worked on revising the master plan with a reorganized Hä'ena State Park Community Advisory Committee (HSPCAC) to address the concerns voiced by the larger community. As a result, the master plan presented in the Final EIS has been updated based on the feedback received from the public meetings, comments received, and subsequent extensive collaboration with the HSPCAC. As the planning consultant for State Parks, we offer the following responses to your comments.

Mahalo for supporting the Hä'ena State Park Master Plan effort.

Mahalo nui for your input and participation in the environmental review process. Your letter will be included in the Final EIS. If you would like a copy of the Final EIS or portions thereof, please let us know. Otherwise, the electronic copy of the Final EIS will be available on the Office of Environmental Quality Control website at [http://oeq2.doh.hawaii.gov/EA-EIS\\_Library/2018-2018-KA-EIS-Haena-State-Park-Master-Plan.pdf](http://oeq2.doh.hawaii.gov/EA-EIS_Library/2018-2018-KA-EIS-Haena-State-Park-Master-Plan.pdf) on 2018.

Aloha,

Kimi Mikami Yuen, LEED AP BD+C  
Principal

cc: The Honorable David Y. Ige, Governor  
Office of Environmental Quality Control  
Board of Land and Natural Resources  
Division of State Parks

O:\0626\2627\01 DUNR-Haena State Park Master Plan\EIS\Responses\Mail Merge\2015-08-28 Hob Osterlund and Joanne Little - JSI.docx

**HONOLULU OFFICE**  
1001 Bishop Street, Suite 650  
Honolulu, HI 96813-5484  
Tel: (808) 521-5631  
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Hä'ena State Park Master Plan | Draft | Environmental Meeting | August 19, 2015

Please share your comments on the Hä'ena State Park Master Plan Draft EIS.  
(If you would like a written response letter, please include your mailing address.)

*This plan is not before house. I should let limit autos from Princeville (w/ parking at Princeville). I a shuttle from Princeville to Ke'e (one auto in at one out). To make this plan 8-4 addressing parking (a BIG issue) is not responsible and will not work.  
→ On the old court house (State owned?) would be the best staging & parking area. It has not been used for anything for @ least 15 years!*





Month XX, 2018 - DRAFT

C. B. Martin  
P.O. Box 1126  
Hanalei, HI 96714

**SUBJECT: COMMENTS ON THE HÄ'ENA STATE PARK MASTER PLAN  
DRAFT ENVIRONMENTAL IMPACT STATEMENT (EIS),  
HÄ'ENA, KAUA'I, HAWAII'**

THOMAS WITTEN, FASIA  
Chairman / Principal

R-SEAN BUNGAN, ASIA  
President / Principal

RUSSELL Y. J. CHUNG, FASIA, LEED® AP BD+C  
Executive Vice President / Principal

VINCENT SHIGEKUNI  
Vice President / Principal

GRANT T. MURAKAMI, AEP, LEED® AP BD+C  
Vice President / Principal

TOM SCHINELL, ACP  
Principal

KIM MUKAMUYEN, LEED® AP BD+C  
Principal

W. FRANK BRANDT, FASIA  
Chairman Emeritus

ANN MIKAO KOSHIKAWA, PhD  
Project Director

RAMONA E. M. TAIUM  
Cultural Sustainability Planner

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HONOLULU HI 968  
27 AUG 2015 PM 5 L

C. B. Martin  
PO Box 1126  
Hanalei HI 96714

PBR HAWAII & Associates

Attn: Kimi Yuen

1001 Bishop Street, Suite 650

Honolulu, HI 96813

RECEIVED  
AUG 31 2015  
PBR HAWAII

56813348450



Aloha C. B. Martin,  
Mahalo nui for your comment card dated August 31, 2015 from the community meeting held on August 19, 2015 regarding the Hä'ena State Park Master Plan Draft Environmental Impact Statement (EIS). We sincerely apologize for the delay in responding. Due to the feedback received on the Draft EIS, the State of Hawai'i, Department of Land and Natural Resources, Division of State Parks (State Parks) has worked on revising the master plan with a reorganized Hä'ena State Park Community Advisory Committee (HSPCAC) to address the concerns voiced by the larger community. As a result, the master plan presented in the Final EIS has been updated based on the feedback received from the public meetings, comments received, and subsequent extensive collaboration with the HSPCAC. As the planning consultant for State Parks, we offer the following responses to your comments.

We recognize your concerns regarding parking issues for the park master plan. The revised master plan calls for an adaptive management approach for both the parking and the proposed visitor limits, which will be adjusted based on an average number of visitors rather than a set limit per day. The main parking lot is proposed to be separated into a fee-paying lot and non-fee-paying lot, which will also be adjusted daily to allow flexibility depending on future demand for parking and the potential use of the proposed shuttle. Please see the "Parking" and "Visitor Limits" attachments from the Final EIS, which show the verbatim changes from the Draft EIS for these sections.

We also appreciate your feedback regarding a proposed shuttle from Princeville. A proposed third-party shuttle service has been analyzed as a part of the project's traffic impact assessment report, included in the EIS as Appendix F. The preferred scenario is to implement a third-party shuttle from the Princeville facility at the start of Phase I, minimizing the need for visitor parking in the parking lot in the park. Please see the "Shuttle Service" attachment from Section 4.3.3 of the Final EIS, which shows the verbatim changes from the Draft EIS for this section.

Mahalo nui for your input and participation in the environmental review process. Your letter will be included in the Final EIS. If you would like a copy of the Final EIS or portions thereof, please let us know. Otherwise, the electronic copy of the Final EIS will be available on the Office of Environmental Quality Control website at [http://oeq2.doh.hawaii.gov/EA\\_EIS\\_Library/2018--KA-EIS-Haena-State-Park-Master-Plan.pdf](http://oeq2.doh.hawaii.gov/EA_EIS_Library/2018--KA-EIS-Haena-State-Park-Master-Plan.pdf) on 2018.



Aloha,

Kimi Mikami Yuen, LEED AP BD+C  
Principal

Attachments: Parking  
Visitor Limits  
Shuttle Service

cc: The Honorable David Y. Ige, Governor  
Office of Environmental Quality Control  
Board of Land and Natural Resources  
Division of State Parks

O:\0626\2627\01 DLNR-Haena State Park Master Plan\EIS\DEIS Responses\Mail Merge\2015-08-31 CB Martin -  
JS1.docx

PO Box 30848

Anahola, Kauai, Hawaii 96703-0848

2 September 2015

RECEIVED  
SEP 9 2015

PBR HAWAII

Contact: Lauren Tanaka, Department of Land and Natural Resources (DLNR)  
Division of State Parks

P.O. Box 621  
Honolulu, Hawaii 96809

Contact: Kimi Yuen, PBR HAWAII & Associates, Inc.  
1001 Bishop Street, Suite 650, Honolulu, Hawaii 96813.

David Ige, Governor – State of Hawaii  
Hawaii State Capitol  
415 S Beretania St #5, Honolulu, Hawaii 96813

SUBJECT: *Ha'ena State Park Master Plan 5(b) Draft Environmental Impact Statement (dEIS)*  
*TMK: (4) 5-9-008: 001, (4) 5-9-001: 025 and (4) 5-9-001: 022 (por.)*

Dear Governor Ige, DLNR, PBR Hawaii & Associates, Incorporated:

Aloha! I deeply appreciate the ability to comment on the Ha'ena State Park Master Plan 5(b) Draft Environmental Impact Statement (dEIS). I have been extremely blessed to live in Hawaii Nei for over forty (40) years. Ha'ena is sacred beyond words to the Host People of Hawaii Nei – since time immortal – the Native Hawaiian, as well – the Kanaka Maoli. We believe that this is a premature massive poor decision making by the state of Hawaii and the federal government.

'Ae, the immense vehicular traffic is a BIG problem – to put it mildly... the proposals in the dEIS for the protection of Ha'ena should revisit the most extensive quandary... which is thousands of rent-a-cars. It would behoove the state of Hawaii to have the rent-a-car industry provide a necessary parking lot and shuttle service to return Ha'ena to its peaceful and serene status.

We also believe all permits must be denied: Permits: Compliance with Chapter 343, HRS; Compliance with Chapter 6E, HRS (Historic Preservation); Special Management Area Use Permit; Conservation District Use Permit; Shoreline Setback Determination; Wetland Delineation Study and Determination; National Pollution Discharge Elimination System (NPDES) Permit; Grading and Grubbing Permits; Building Permits; and dependent on extent of instream activities pursued, Stream Channel Alteration Permit; Stream Diversion Works and/or Petition to Amend Instream Flow Standard.

**Just say "No" to the board walk plan – Yes: a cap on visitor vehicles' not residential vehicles**

The Hawaiian people must be allowed access 24/7 – 365-days a year to uphold their religious, customary rights, traditional and cultural rights.


Please keep us abreast via the U.S. Postal Service on ALL future concerns/documents... Hopefully, the decision will be No Action until MORE information and time is made available to the Host People of Hawaii Nei – the Native Hawaiian(s) / Kanaka Maoli and the General Public.

It is sacrilegious that Ha'ena has been desecrated to the way it has been for decades there!  
It's unacceptable that the state of Hawaii and the DLNR has been mis-managing this revered and holy land!

*Ua Mau ke Ea o ka 'Āina i ka Pono*

Mahalo for making sure we are able to receive the documentation of the outcome of this dEIS process!

Sincerely with ALOHA,



Bonnie P. Bator and 'Ohana (Keana'aina, Kaiaokamalie, Keli'ikoa and Kai)



THOMAS WITTEN, ESQ.  
Chairman / Principal

R. SEAN DUNCAN, ASLA  
President / Principal

RUSSELL Y. CHUNG, ASLA, LEED® AP BD+C  
Executive Vice President / Principal

VINCENT SHIGEKUNI  
Vice President / Principal

GRANT T. MURAKAMI, AIA®, LEED® AP BD+C  
Vice President / Principal

TOM SCHNELL, AICP  
Principal

KIMI MIKAMI YUEN, LEED® AP BD+C  
Principal

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Project Director

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Cultural Sustainability Planner

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Senior Associate

MARC SHIMATSU, ASLA  
Senior Associate

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Ms. Bonnie Bator and "Ohana  
SUBJECT: COMMENTS ON THE HĀ'ENA STATE PARK MASTER PLAN DRAFT ENVIRONMENTAL  
IMPACT STATEMENT (EIS), HĀ'ENA, KAUA'I, HAWAII  
Month XX, 2018  
Page 2

The main parking lot is proposed to be separated into a fee-paying lot and non-fee-paying lot, which will be adjusted daily to allow flexibility depending on future demand for parking and the potential use of a proposed shuttle. Please see the "Parking" attachment from Section 2.5.1.2 of the Final EIS, which shows the verbatim changes from the Draft EIS for this section.

The boardwalk has been modified in the revised master plan. The new pedestrian pathway follows along the first berm of the lo'i closest to the highway and is proposed to be slightly elevated so as not to impact the berm or any of the historic resources. Please see the "Pedestrian Path" attachment from Section 2.5.1.4 of the Final EIS, which shows the verbatim changes to this section.

As you noted, practitioners require access for cultural uses, and there will be exemptions for these and other special user groups. Cultural aspects of the master plan include the rehabilitation and restoration of the lo'i and other culturally significant aspects of the park. The master plan will lay the foundation for protecting cultural practices for the state park for decades to come.

Mahalo nui for your input and participation in the environmental review process. Your letter will be included in the Final EIS. If you would like a copy of the Final EIS or portions thereof, please let us know. Otherwise, the electronic copy of the Final EIS will be available on the Office of Environmental Quality Control website at [http://oeq2.deh.hawaii.gov/EA\\_EIS\\_Library/2018-\\_-KA-FEIS-Haena-State-Park-Master-Plan.pdf](http://oeq2.deh.hawaii.gov/EA_EIS_Library/2018-_-KA-FEIS-Haena-State-Park-Master-Plan.pdf) on 2018.

Aloha,

Kimi Mikami Yuen, LEED AP BD+C  
Principal

Attachments: Roadways and Traffic  
Shuttle Service  
Parking  
Pedestrian Path

cc: The Honorable David Y. Ige, Governor  
Office of Environmental Quality Control  
Board of Land and Natural Resources  
Division of State Parks

O:\J06262627\01 DLNR-Haena State Park Master Plan\EIS\DEIS Responses\Mail Merge\2015-09-02 Bonnie Bator - JS1.docx

SUBJECT: COMMENTS ON THE HĀ'ENA STATE PARK MASTER PLAN  
DRAFT ENVIRONMENTAL IMPACT STATEMENT (EIS),  
HĀ'ENA, KAUA'I, HAWAII

Aloha Ms. Bator and 'Ohana,

Mahalo nui for your comment letter dated September 2, 2015 regarding the Hā'ena State Park Master Plan Draft Environmental Impact Statement (EIS). We sincerely apologize for the delay in responding. Due to the feedback received on the Draft EIS, the State of Hawai'i, Department of Land and Natural Resources, Division of State Parks (State Parks) has worked on revising the master plan with a reorganized Hā'ena State Park Community Advisory Committee (HSPCAC) to address the concerns voiced by the larger community. As a result, the master plan presented in the Final EIS has been updated based on the feedback received from the public meetings, comments received, and subsequent extensive collaboration with the HSPCAC. As the planning consultant for State Parks, we offer the following responses to your comments.

We recognize your comments regarding the cultural sacredness of Hā'ena. The Master Plan's goals are to protect the park's sensitive and unique natural, cultural, historic, and scenic resources.

We also recognize your concerns regarding the traffic impacts at Hā'ena. The Master Plan includes a combination of physical improvements and programmatic options that when applied in combination will have a positive impact on the existing roadway conditions.

Vehicle access beyond the main parking area to Kē'ē beach is proposed to be reduced from the currently unrestricted conditions to special access only (ADA, lifeguards, and cultural practitioners). Restricting general vehicular access from the main parking area to Kē'ē Beach will effectively eliminate illegal parking along the highway's shoulder, reduce the wear on the historic roadway's macadam surface, and reduce the number of visitors traveling in a potential rockfall hazard area. Please see the "Roadways and Traffic" attachment from Section 4.3.1 of the Final EIS, which shows the verbatim changes from the Draft EIS for this section.

A proposed third-party shuttle service has been analyzed as a part of the project's traffic impact assessment report, included in the EIS as Appendix F. The preferred scenario is to implement a third-party shuttle from the Princeville facility at the start of Phase I, minimizing the need for visitor parking in the parking lot in the park. Please see the "Shuttle Service" attachment from Section 4.3.3 of the Final EIS, which shows the verbatim changes from the Draft EIS for this section.

P.O. Box 30848 Anahola, Kaua'i Hawaii'i 96703-0848  
Lauren Tanaka, Department of Land and Natural Resources (DLNR)  
Division of State Parks  
P.O. Box 621  
Honolulu, Hawaii'i 96809

11 September 2015  
**RECEIVED**  
SEP 18 2015  
PBR HAWAII

Senior Associate: Kimi Yuen, PBR HAWAII & Associates, Inc. David Ige, Governor – State of Hawaii  
1001 Bishop Street, Suite 650, Honolulu, Hawaii'i 96813. Hawaii State Capitol  
415 S Beretania St #5, Honolulu, Hawaii'i 96813  
**SUBJECT: Ha'ena State Park Master Plan 5(b) Draft Environmental Impact Statement (dEIS)**  
**TMK: (4) 5-9-008: 001, (4) 5-9-001: 025 and (4) 5-9-001: 022 (por.)**

Dear Governor Ige, PBR Hawaii & Associates, Incorporated and Department of Land & Natural Resources:  
Aloha! We deeply appreciate the ability to comment on the Ha'ena State Park Master Plan 5(b) Draft Environmental Impact Statement (dEIS). It's very good that the 'Public Comment Period' has been extended! Personally, I have been *extremely* blessed to live in Hawaii'i Nei for over forty (40) years. I am mother to a Hawaiian man who is thirty-two (32) years old – He has a 50% blood quantum. I am a grandmother that has five (5) mo' opuna; grandchildren who have Hawaiian blood.

Ha'ena: Wahi Pana is sacrosanct ... a Legendary Place which is Kapu, very, very spiritual – La'a...  
The Creation Chant, *The Kumulipo* captures the immeasurable and incalculable significance of Ha'ena.  
The state of Hawaii's state tourism agency, the Hawaii Tourism Authority (HTA), uses its expertise to develop and implement strategic tourism marketing. Annually, 100 million dollars is spent 'marketing' Hawaii'i Nei.  
**The state of Hawaii, DLNR hires a consultant firm: PBR HAWAII & Associates, Inc – to turn an exceptionally and exceedingly revered holy place to the Hawaiian people and others' whom reverse Ha'ena – into mainland crowded and crass commercialism.**

**All permits must be denied:** [Permits: Compliance with Chapter 343, HRS; Compliance with Chapter 6E, HRS (Historic Preservation); Special Management Area Use Permit; Conservation District Use Permit; Shoreline Setback Determination; Wetland Delineation Study and Determination; National Pollution Discharge Elimination System (NPDES) Permit; Grading and Grubbing Permits; Building Permits; and dependent on extent of instream activities pursued, Stream Channel Alteration Permit; Stream Diversion Works and/or Petition to Amend Instream Flow Standard.] These permits will allow Ha'ena to become a mainland replica.  
Tourism is '*Killing the Goose – that laid the Golden Egg*' – the solution to the dilemma is to severely limit the amount of '*rent-a-cars*'. **The 'Rent-a-Car' companies are making out like bandits. These companies should be part of the 'ticket price' – make them accountable for the traffic situation.** Most tourists come for the essence of Hawaiian culture & tradition: not congestion, parody and fabrication. Nature in its glory – naturally – as evolved – not some convoluted model

The final Environmental Impact Statement (EIS) must address this valid forward-looking advanced manner to fix the traffic torment / anguish / nightmare. Mahalo for inserting this solution into the *EIS*!  
**The 'Rent-a-Car' Industries can work with DLNR, PBR Hawaii & Associates, Incorporated – to devise a plan (it can be a 'tax write-off' somehow) to situate a huge parking lot AWAY from Ha'ena and have numerous shuttles to take visitors / tourists to Ha'ena.**  
*Think of ALL the jobs that that would create.* It would add employment possibilities to our residential population in need of jobs!

– Heiau are liken to a Church, Temple, The Vatican, or Sistine Chapel –  
Ha'ena has been assaulted/trampled/abused. Its 2015 – a paradigm shift is warranted & necessary.  
**Just say "No" to the ill-considered proposed 'Board Walk' proposition – "Yes" to residential vehicles!**  
Aloha Aina  
*Ua Mai ke Ea o ka 'Aina i ka Pono*  
Please keep us, via the U.S. Postal Service mailing list of ANY updates and information on this *EIS* process.

Mahalo nui! Sincerely with ALOHA, Bonnie P. Bator and 'Ohana (Keana'aina, Kaiakamalie, Keli'ikoa & Kai)



Month XX, 2018 - DRAFT

Ms. Bonnie Bator and 'Ohana  
P.O. Box 30848  
Anahola, HI 96703-0848

**SUBJECT: COMMENTS ON THE HA'ENA STATE PARK MASTER PLAN DRAFT ENVIRONMENTAL IMPACT STATEMENT (EIS), HA'ENA, KAUA'I, HAWAII**

Aloha Ms. Bator and 'Ohana,

Mahalo nui for your comment dated September 11, 2015 regarding the Ha'ena State Park Master Plan Draft Environmental Impact Statement (EIS). We sincerely apologize for the delay in responding. Due to the feedback received on the Draft EIS, the State of Hawaii's Department of Land and Natural Resources, Division of State Parks (State Parks) has worked on revising the master plan with a reorganized Ha'ena State Park Community Advisory Committee (HSPCAC) to address the concerns voiced by the larger community. As a result, the master plan presented in the Final EIS has been updated based on the feedback received from the public meetings, comments received, and subsequent extensive collaboration with the HSPCAC. As the planning consultant for State Parks, we offer the following responses to your comments.

We recognize your comments regarding overdevelopment and commercial uses at Ha'ena State Park. The Master Plan's goals do not focus on tourism, advertising, commercial development or commercial uses. The main goals of the master plan are to protect the park's sensitive and unique natural, cultural, historic, and scenic resources.

We also recognize your concerns regarding the impact of traffic and parking at Ha'ena. Because of the unique nature of the traffic congestion and circulation issues at the park, the EIS took an innovative approach to the traffic impact analysis report. The traffic engineer provided analyses of engineering considerations and potential traffic impacts as well as five example shuttle service scenarios to help inform the direction and design of the preferred Master Plan. They also considered varying amounts of parking spaces at the park and estimated the potential costs and break-even requirements for potential shuttle solutions. A proposed third-party shuttle service has been analyzed as a part of the project's traffic impact assessment report, included in the EIS as Appendix F. The preferred scenario is to implement a third-party shuttle from the Princeville facility at the start of Phase I, minimizing the need for visitor parking in the parking lot in the park. **Please see the "Shuttle Service" attachment from Section 4.3.3 of the Final EIS, which shows the verbatim changes from the Draft EIS for this section**

The Master Plan includes a combination of physical improvements and programmatic options that when applied in combination will have a positive impact on the existing roadway conditions.

THOMAS WITTEN, FASLA  
Chairman / Principal

R-SEAN BUCKAN, ASLA  
President / Principal

RUSSELL Y. CHUNG, FASLA, LEED+ AP BD-C  
Executive Vice President / Principal

VINCENT SHIGEKUNI  
Vice President / Principal

GRANT MURAKAMI, AICP, LEED+ AP BD-C  
Vice President / Principal

TOM SCHENELL, AICP  
Principal

KIMI MIYAMOTO, LEED+ AP BD-C  
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W. FRANK BRANDE, FASLA  
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Vehicle access beyond the main parking area to Kē'ē beach is proposed to be reduced from the currently unrestricted conditions to special access only (ADA, lifeguards, and cultural practitioners). Restricting general vehicular access from the main parking area to Kē'ē Beach will effectively eliminate illegal parking along the highway's shoulder, reduce the wear on the historic roadway's macadam surface, and reduce the number of visitors traveling in a potential rockfall hazard area. Please see the "Roadways and Traffic" attachment from Section 4.3.1 of the Final EIS, which shows the verbatim changes from the Draft EIS for this section.

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Mahalo nui for your input and participation in the environmental review process. Your letter will be included in the Final EIS. If you would like a copy of the Final EIS or portions thereof, please let us know. Otherwise, the electronic copy of the Final EIS will be available on the Office of Environmental Quality Control website at [http://oeqc2.doh.hawaii.gov/EA\\_EIS\\_Library/2018--KA-FEIS-Haena-State-Park-Master-Plan.pdf](http://oeqc2.doh.hawaii.gov/EA_EIS_Library/2018--KA-FEIS-Haena-State-Park-Master-Plan.pdf) on \_\_\_\_, 2018.

Aloha,

Kimi Mikami Yuen, LEED AP BD+C  
Principal

Attachment: Shuttle Service  
Roadways and Traffic  
Parking  
Pedestrian Path

cc: The Honorable David Y. Ige, Governor  
Office of Environmental Quality Control  
Board of Land and Natural Resources  
Division of State Parks

Please share your comments on the Hā'ena State Park Master Plan Draft EIS.

(If you would like a written response letter, please include your mailing address.)

Would you please explain why to decrease car parking at Kē'ē, a North Shore Shuttle at least a number seasonally has not been throughly considered 90% of cars there are tourists from North Shore - Pāhāhāhā to Hanalei. Have shuttles run every 15 minutes 8am-5pm and charge parking fees at Kē'ē of \$20-30 to park (Hā'ena residents exempt) and 90% of the current traffic will opt to take a shuttle. Even residents would - I would. It does not need an expensive overhaul and construction!

Jenn Tyler  
PO Box 1684  
Hanalei HI 96714







Month XX, 2018 - DRAFT

Ms. Jenn Tyler  
P.O. Box 1681  
Hanalei, HI 96714

**SUBJECT: COMMENTS ON THE HĀ'ENA STATE PARK MASTER PLAN  
DRAFT ENVIRONMENTAL IMPACT STATEMENT (EIS),  
HĀ'ENA, KAUAI, HAWAII**

Aloha Ms. Tyler,

Mahalo nui for your comment card dated September 2, 2015 from the community meeting held on August 19, 2015 regarding the Hā'ena State Park Master Plan Draft Environmental Impact Statement (EIS). We sincerely apologize for the delay in responding. Due to the feedback received on the Draft EIS, the State of Hawai'i, Department of Land and Natural Resources, Division of State Parks (State Parks) has worked on revising the master plan with a reorganized Hā'ena State Park Community Advisory Committee (HSPCAC) to address the concerns voiced by the larger community. As a result, the master plan presented in the Final EIS has been updated based on the feedback received from the public meetings, comments received, and subsequent extensive collaboration with the HSPCAC. As the planning consultant for State Parks, we offer the following responses to your comments.

We recognize your comment regarding parking and a proposed shuttle service for the park master plan. The revised master plan calls for an adaptive management approach for both the parking and the proposed visitor limits, which will be adjusted based on an average number of visitors rather than a set limit per day. The main parking lot is proposed to be separated into a fee-paying lot and non-fee-paying lot, which will also be adjusted daily to allow flexibility depending on future demand for parking and the potential use of the proposed shuttle. Please see the "Parking" attachment from the Final EIS, which shows the verbatim changes from the Draft EIS for this section.

A proposed third-party shuttle service has been analyzed as a part of the project's traffic impact assessment report, included in the EIS as Appendix F. The preferred scenario is to implement a third-party shuttle from the Princeville facility at the start of Phase I, minimizing the need for visitor parking in the parking lot in the park. Please see the "Shuttle Service" attachment from Section 4.3.3 of the Final EIS, which shows the verbatim changes from the Draft EIS for this section.

We also recognize your concerns regarding construction and overhaul of the park. Only a few new structures are proposed, including a Welcome Hale that is envisioned as an open traditional Hawaiian hale and located near the improved main parking lot. Please see the revised Figure 1 Master Plan graphic and the "Master Plan Summary" attachment from Section 1.9.1 of the Final EIS, which show the verbatim changes from the Draft EIS in this section.

THOMAS WITTEN, FASLA  
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NATHALIE BAO  
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Mahalo nui for your input and participation in the environmental review process. Your letter will be included in the Final EIS. If you would like a copy of the Final EIS or portions thereof, please let us know. Otherwise, the electronic copy of the Final EIS will be available on the Office of Environmental Quality Control website at [http://oeqc2.doh.hawaii.gov/EA\\_EIS\\_Library/2018-04-04-FEIS-Haena-State-Park-Master-Plan.pdf](http://oeqc2.doh.hawaii.gov/EA_EIS_Library/2018-04-04-FEIS-Haena-State-Park-Master-Plan.pdf) on 04/04/2018.

Aloha,

Kimi Mikami Yuen, LEED AP BD+C  
Principal

Attachments: Parking Shuttle Service  
Master Plan Summary  
Figure 1: Master Plan

cc: The Honorable David Y. Ige, Governor  
Office of Environmental Quality Control  
Board of Land and Natural Resources  
Division of State Parks

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Please share your comments on the Hä'ena State Park Master Plan Draft EIS.  
(If you would like a written response letter, please include your mailing address.)

Holoholo

I understand the need to limit the amount of cars that can park at Ke'e. I think it would be fair to allow bikes and pedestrians access still. That would lower the impact but still give priority to locals to have open access. Mahalo for the info.

P.O. Box 693 Hanalei HI

Resident in Haena



Lana Shea  
Po Box 693 Hanalei  
96714

HONOLULU HI 968  
31 AUG 2015 PM 1 L



RECEIVED  
SEP 02 2015  
PBR HAWAII

PBR HAWAII & Associates  
Attn: Kimi Yuen  
1001 Bishop Street, Suite 650  
Honolulu, HI 96813

96813348450

Nathalie Razo

**From:** Lauren.A.Tanaka@hawaii.gov  
**Sent:** Tuesday, September 08, 2015 2:23 PM  
**To:** Curt.A.Cottrell@hawaii.gov; Russell.P.Kumabe@hawaii.gov; Alan.B.Carpenter@hawaii.gov; Kimi Yuen  
**Subject:** Fw: Ha'ena Master Plan testimony

----- Forwarded by Lauren A Tanaka/DLNR/State/HUS on 09/08/2015 02:21 PM -----

**From:** Lana Shea <merdaystar@hotmail.com>  
**To:** "Lauren A. Tanaka@hawaii.gov" <Lauren.A.Tanaka@hawaii.gov>  
**Date:** 09/08/2015 12:03 PM  
**Subject:** Ha'ena Master Plan testimony

I understand the need to limit cars but please allow bikes and pedestrians open access so that us residents still have that freedom!  
Lana Shea  
Po box 693 Hanalei hi 96714  
Sent from my iPhone



Month XX, 2018 - DRAFT

Ms. Lana Shea  
P.O. Box 693  
Hanalei, HI 96714

**SUBJECT: COMMENTS ON THE HĀ'ENA STATE PARK MASTER PLAN  
DRAFT ENVIRONMENTAL IMPACT STATEMENT (EIS),  
HĀ'ENA, KAUA'I, HAWAII**

Aloha Ms. Shea,

Mahalo nui for your comment card received on September 2, 2015 in response to the public meeting held on August 19, 2015 as well as your emailed comment dated September 8, 2015 regarding the Hā'ena State Park Master Plan Draft Environmental Impact Statement (EIS). We sincerely apologize for the delay in responding. Due to the feedback received on the Draft EIS, the State of Hawai'i, Department of Land and Natural Resources, Division of State Parks (State Parks) has worked on revising the master plan with a reorganized Hā'ena State Park Community Advisory Committee (HSPCAC) to address the concerns voiced by the larger community. As a result, the master plan presented in the Final EIS has been updated based on the feedback received from the public meetings, comments received, and subsequent extensive collaboration with the HSPCAC. As the planning consultant for State Parks, we offer the following responses to your comments.

In response to your comment card, we appreciate your recognition of the need to limit the amount of cars at Ke'e. We also acknowledge your comment favoring bicycle and pedestrian access to allow open access to prioritize locals while also mitigating the impact on parking. The proposed visitor limits apply to all visitors regardless of transportation mode; however, the revised master plan proposes the 900-person visitor limit as an initial number which can be adaptively managed and adjusted as appropriate. State Parks will continue to work with the advisory committees for reviewing and potentially adjusting the number.

The revised limits will also be instituted only during peak hours of park use and will allow visitors to enter before and after without being counted against the visitor limit. Therefore, access will be allowed into the park outside those peak hours and will be adjusted as appropriate based on ongoing input from the community. However, the revised plan include proposed facilities to accommodate better access with new bicycle parking at both the Welcome Hale and Ke'e special access parking. Please reference the attached **Section 2.5.4.3** and **Section 2.5.1.3** from the Final EIS with more information on the visitor limits and bicycle facilities proposed.

In response to your emailed comments, we again appreciate your recognition of the need to limit the amount of cars and acknowledge your request to allow open access for bicycles and pedestrians access for local residents as noted previously in this letter. As mentioned earlier, the proposed visitor limits apply to all visitors regardless of transportation mode, but the proposed visitor limits will be adaptively managed and adjusted as appropriate based on input from the community and continued consultation with the advisory committee. There visitor limits will also only apply during peak hours of park use and details on these hours will be determined based on an adaptive management approach. As

Ms. Lana Shea  
SUBJECT: COMMENTS ON THE HĀ'ENA STATE PARK MASTER PLAN DRAFT ENVIRONMENTAL  
IMPACT STATEMENT (EIS), HĀ'ENA, KAUA'I, HAWAII  
Month XX, 2018  
Page 2

noted earlier, more information on visitor limits and new bicycle facilities proposed are attached.

Mahalo nui for your input and participation in the environmental review process. Your letter will be included in the Final EIS. If you would like a copy of the Final EIS or portions thereof, please let us know. Otherwise, the electronic copy of the Final EIS will be available on the Office of Environmental Quality Control website at [http://ceq2.doh.hawaii.gov/EA\\_EIS\\_Library/2018-04-04-FEIS-Haena-State-Park-Master-Plan.pdf](http://ceq2.doh.hawaii.gov/EA_EIS_Library/2018-04-04-FEIS-Haena-State-Park-Master-Plan.pdf) on 04/04/2018.

Aloha,

Kimi Mikami Yuen, LEED AP BD+C  
Principal

Attachments: Welcome Hale  
Visitor Limits

cc: The Honorable David Y. Ige, Governor  
Office of Environmental Quality Control  
Board of Land and Natural Resources  
Division of State Parks

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DACHENG HONG, LEED AP  
Senior Associate

SCOTT MURAKAMI, ASLA, LEED AP  
Associate

MICHAEL MCHILLEN, ASLA, LEED AP  
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**Nathalie Razo**

**From:** Lauren.A.Tanaka@hawaii.gov  
**Sent:** Wednesday, September 02, 2015 1:25 PM  
**To:** Curt.A.Cottrell@hawaii.gov; Russell.P.Kumabe@hawaii.gov; Alan.B.Carpenter@hawaii.gov; Kimi Yuen  
**Subject:** Fw: Feedback: DEIS - Ha'ena State Park Master Plan

----- Forwarded by Lauren A Tanaka/DLNR/StateHUS on 09/02/2015 01:24 PM -----

**From:** Rory Enright <gen\_rnr@pcaonline.org>  
**To:** Lauren A Tanaka@hawaii.gov,  
**Cc:** April McGinnis <april@pcaonline.org>; Denise Wardlow <denise.wardlow@westin.com>; Gary A Rexrode <garyrexrode@yahoo.com>; Jennifer Luck <jluckkaui@gmail.com>; Michael Dexter-Smith <mids@xtremesoft.com>; Julie Schuller <julie.schuller@msn.com>  
**Date:** 09/02/2015 12:51 PM  
**Subject:** Feedback: DEIS - Ha'ena State Park Master Plan

Aloha Lauren,

I wanted to provide the following short feedback on the Ha'ena State Park Master Plan DEIS:

- Very comprehensive and well thought out plan
- Strongly support limiting visitors to 900 (or whatever number is deemed appropriate) per day
- Strongly support a "real-time" reservation system to meet the needs of Haena State Park and be expanded to all Kauai visitor sites that need "visitor numbers control"
- Strongly support developing parking facility up in Princeville (makua of highway) and shuttle service to both Hanalei and out to Ha'ena
- Would like to also see this parking facility and shuttle be of service to visitors coming into Princeville thereby reducing automobile congestion in areas like Queen's Bath and Hideaways Beach.

Thank you for giving us a chance to provide feedback.

Regards,

**Rory Enright**  
General Manager, Princeville Community Association (PHCA)(808) 977-8714 | [rory@princevillecommunity.com](mailto:rory@princevillecommunity.com) | P.O. Box 223277, Princeville, HI 96722



Month XX, 2018 - DRAFT

Mr. Rory Enright  
General Manager  
Princeville Community Association  
P.O. Box 223277  
Princeville, HI 96722

**SUBJECT: COMMENTS ON THE HA'ENA STATE PARK MASTER PLAN  
DRAFT ENVIRONMENTAL IMPACT STATEMENT (EIS),  
HA'ENA, KAUAI, HAWAII**

Aloha Mr. Enright,

Mahalo nui for your emailed comment dated September 2, 2015 regarding the Ha'ena State Park Master Plan Draft Environmental Impact Statement (EIS). We sincerely apologize for the delay in responding. Due to the feedback received on the Draft EIS, the State of Hawai'i, Department of Land and Natural Resources, Division of State Parks (State Parks) has worked on revising the master plan with a reorganized Ha'ena State Park Community Advisory Committee (HSPCAC) to address the concerns voiced by the larger community. As a result, the master plan presented in the Final EIS has been updated based on the feedback received from the public meetings, comments received, and subsequent extensive collaboration with the HSPCAC. As the planning consultant for State Parks, we offer the following responses to your comments.

Mahalo for your support of the visitor limit aspects of the master plan. As described in **Section 2.5.4.3** of the Final EIS, the revised master plan proposes the 900-person visitor limit as an initial number which can be adaptively managed and adjusted as appropriate, especially if there continues to be unwanted impacts at the park. If there continue to be issues, State Parks will work with the advisory committees on adjusting the number.

We also acknowledge your comments in support of a "real time" reservation system and the revised master plan includes a proposed online notification system for informing the public on updates to ticketing availability. Please see the attached section on **Visitor Limits** for more details on the proposed notice system.

We also recognize your comments relating to a proposed shuttle service from Princeville. While the potential shuttle service is not proposed to be administered by State Parks in the revised master plan, it does include specific elements to support effective implementation with infrastructure design for the proposed park entry and main parking lot to support a recommended shuttle service with shuttle stop structures, as described in **Section 2.5.1.1** and **Section 2.5.1.2** from the Final EIS.

Mahalo nui for your input and participation in the environmental review process. Your letter will be included in the Final EIS. If you would like a copy of the Final EIS or portions thereof, please let us know. Otherwise, the electronic copy of the Final EIS will be available on the Office of Environmental Quality Control website at [http://oeq2.doh.hawaii.gov/EA\\_EIS\\_Library/2018--KA-EIS-Haena-State-Park-Master-Plan.pdf](http://oeq2.doh.hawaii.gov/EA_EIS_Library/2018--KA-EIS-Haena-State-Park-Master-Plan.pdf) on **9/2/2018**.

THOMAS WITTEN, FASLA  
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President / Principal

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Mr. Rory Enright  
SUBJECT: COMMENTS ON THE HAENA STATE PARK MASTER PLAN DRAFT ENVIRONMENTAL  
IMPACT STATEMENT (EIS), HAENA, KAUAI, HAWAII  
Month XX, 2018  
Page 2

Aloha,

Kimi Mikami Yuen, LEED AP BD+C  
Principal

Attachments: Park Entry  
Parking  
Visitor Limits

cc: The Honorable David Y. Ige, Governor  
Office of Environmental Quality Control  
Board of Land and Natural Resources  
Division of State Parks

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Feedback DEIS - Haena State Park Master Plan - DS.docx

**Nathalie Razo**

**From:** Steve Drapkin <sdrapkin13@gmail.com>  
**Sent:** Wednesday, September 09, 2015 6:11 PM  
**To:** Kimi Yuen; lauren.a.tanaka@hawaii.gov  
**Subject:** Posting Comments?

Might I suggest that you post comments on the Haena State Park Master Plan on your web site, as they are received?

Thanks.

Steve Drapkin  
808-826-1825  
[sdrapkin13@gmail.com](mailto:sdrapkin13@gmail.com)  
Fax: 808-443-0080

Nathalie Razo

**From:** Steve Drapkin <sdrapkin13@gmail.com>  
**Sent:** Wednesday, September 09, 2015 9:29 AM  
**To:** lauren.a.tanaka@hawaii.gov; Kimi Yuen  
**Subject:** The 9/8 Deadline for Comment Should Be Extended

This is to request that the 9/8 deadline for comments re the Haena State Park Master Plan be extended through the end of September.

I have a strong hunch that the following factors would establish that the cut-off period was legally premature or, even if legal, inappropriate under the circumstances. I believe that there are many people who would submit comments if the time period were to be extended.

1. There was only one public meeting held. The meeting was deficient because the lack of a sound amplification system. It is my understanding that questions were not allowed.
2. The timing of the meeting (mid-August) and comment cut-off (day after Labor Day) seemingly was designed to minimize comment.

Out of curiosity, how many written comments were received?

Steve Drapkin

**From:** Steve Drapkin [mailto:sdrapkin13@gmail.com]  
**Sent:** Friday, September 4, 2015 6:15 AM  
**To:** lauren.a.tanaka@hawaii.gov; kyuon@pbhawaii.com  
**Subject:** Comment letter in opposition to Haena State Park "Master Plan"

Nathalie Razo

**From:** Steve Drapkin <sdrapkin13@gmail.com>  
**Sent:** Friday, September 04, 2015 6:15 AM  
**To:** lauren.a.tanaka@hawaii.gov; Kimi Yuen  
**Subject:** Comment letter in opposition to Haena State Park "Master Plan"  
**Attachments:** 9-3-15.pdf

To: Lauren Tanaka - [lauren.a.tanaka@hawaii.gov](mailto:lauren.a.tanaka@hawaii.gov)  
Kimi Yuen - [kyuen@pbrhawaii.com](mailto:kyuen@pbrhawaii.com)  
From: Steven and Robin Drapkin  
Date: September 3, 2015  
Re: Proposed Haena State Park Master Plan

This is written to express our serious concerns about, and opposition to, the currently-proposed Master Plan for Haena State Park. We have owned our home in Haena for nearly 20 years and were regular visitors in Haena (camping and vacation renting homes) for more than 20 years before that. Hence, we have had a close relationship with Haena and North Shore for the last 40+ years.

We have bicycled, walked and run along the road to Ke'e countless times. Many, many other people – whether residents or vacation renters – enjoy the same routine. We often have gone swimming at Ke'e, typically first thing in the morning. Short visits for sunsets also are part of routine life for us and others in Haena.

We believe that the number of people who come into the park by foot or bicycle on a daily basis is a significant number. There appears to be no reliable census in your materials relating to arrivals on foot or bicycle. It is a huge number of people who may be impacted by your planning who happen to be the least intrusive park visitors.

We don't think anyone can dispute that Haena State Park is sometimes overcrowded. To try to sell your "plan," you seemingly picked the most crowded week of the year – mid-August. Many times throughout the year, however, the use of the park is at a more appropriate level. This week, for example, there have been empty spaces in the parking lot late in the morning at the times we went by.

Here are a number of our concerns:

1. **The "Master Plan":** We downloaded and read large parts of the 1000+ page EIR. To our surprise, the "plan" is only about 20 pages long.<sup>1</sup> It is exceedingly vague and incomplete.

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<sup>1</sup> Your confusion as to what constitutes a plan is exemplified by an email exchange I had yesterday with Kimi. I stated in my first email that "the proposed plan itself is only about 20 pages long (pages 2-8 to 2-31)." She said I was mistaken: "I believe the detail you are looking for is in the master plan report itself, which is Appendix 1 of the Draft EIS." The comment surprised me and I looked again at that document. I, in turn, responded: "If I look at that document, it seems that the 'master plan' is the 20 pages between pages 3-1 and 4-1. That seems just to be an earlier version of what is now at pp. 2-8 to 2-31 of the main document." Kimi then conceded: "Yes, the 10/14 draft report describes the same master plan that is referenced in the Draft EIS. They are the same version." Thus, my characterization of the "master plan" as being but 20-pages long, vague and incomplete, and totally silent as to key elements is entirely correct.

In the meeting we attended, the presenter mentioned plans that are not to be found in the "plan." It is a hallmark of governmental planning, that before a project be "green lit," a true plan be established first, and then subjected to the processes contemplated by law. As a starter, therefore, we think that any true plan should be fleshed out before being submitted for final approval. As it is written, the "plan" is entirely premature and incomplete. I suspect it is a legally void document.

It also appears to us that public input has been curtailed by the processes utilized to date. To our knowledge, there was one meeting at Hanalei School which was disappointing. No planning was done to provide for use of a sound amplification system which made the meeting tense and difficult to digest. Ultimately, the presented was given a bullhorn and awkwardly presented in that manner. There was no question and answer session as is typically provided in such meetings and, we suspect, required by law before a plan of this magnitude can be adopted.

2. **Imposing a Per-Day Quota:** The "plan" entirely fails to state how the per-day limit would be applied and enforced. Is it based on "first come/first served," so that by a certain time of day access is prohibited for late comers? Will there be a need to make advance reservations? Will there be a lottery for reservations? A limit to how many times you can come into the park during any given month or year? Will the limit apply to people, such as ourselves, who come into the park only or primarily as part of a daily walk or bike ride, for a short swim, or to watch the sunset? Any of these limits would be arbitrary and capricious and undoubtedly completely unacceptable to the people who live in Haena, Hanalei and beyond. You are trying to sell formal approval of a plan which conspicuously omits discussion of this critically essential point.

Kimi acknowledged in her email yesterday that "how the 900 person/day limit will be enforced or applied has yet to be determined. . . . So all of the input we are receiving will help State Parks decide when they implement it." But that is entirely putting the "cart before the horse." One cannot decide on a limit before determining how that limit will affect residents and visitors alike. That is antithetical to the environmental impact study process.

3. **Bicycle Access:** The "plan" very clearly contemplates limiting the access currently enjoyed by people on bikes to get to Ke'e, whether to take in the view for a couple of minutes or to take a swim. The "plan" closes the road to bicyclists, even if they are willing to assume the risk of a rockfall. It requires walking bikes for a significant part of the proposed boardwalk and contemplates the possibility of banning bicycles entirely. Any plan for use of the park should give great encouragement for bicyclist visitors, whether people ride from the neighborhood or from Hanalei, Princeville or beyond. The "plan" seems designed to place a heavy burden on bicyclists.<sup>2</sup>

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<sup>2</sup> It seems that the plan contemplates a possible alternative that bicyclists with a liability waiver on file could continue to ride the road. At the very least, we urge that this alternative be available. This would be much like the waiver signed to use the 5-mile trail adjacent to the Kilauea miniature golf course.



**Nathalie Razo**

**From:** Steve Drapkin <sdrapkin13@gmail.com>  
**Sent:** Wednesday, September 02, 2015 6:58 PM  
**To:** Kimi Yuen  
**Subject:** Re: Haena State Park Plan highlighted language

The language you highlighted suggested a plan re 900 would be adopted and then would be subject to revision? So what is the thinking of the proponents? First come/first served? Reservations? Lottery? Surely there must be some alternative being contemplated?

Steve Drapkin  
Sent remotely

On Sep 2, 2015, at 6:52 PM, Steve Drapkin <sdrapkin13@gmail.com> wrote:

Thanks.

So, what is proposed to be subject to written public comment, then if adopted, you enter a new phase? It seems so strange to be adopting a 900 person limit with new clue as to how it is to be counted and prioritized. How can there be adoption of a plan without determination of one of the most important terms or even a delineation of the alternatives?

Steve Drapkin  
Sent remotely

On Sep 2, 2015, at 6:40 PM, Kimi Yuen <[kyuen@pbrhawaii.com](mailto:kyuen@pbrhawaii.com)> wrote:

Hi Steve: see my responses to the below.

Mahalo,  
Kimi

**From:** Steve Drapkin [<mailto:sdrapkin13@gmail.com>]  
**Sent:** Wednesday, September 02, 2015 5:04 PM  
**To:** Kimi Yuen <[kyuen@pbrhawaii.com](mailto:kyuen@pbrhawaii.com)>  
**Subject:** RE: Haena State Park Plan

Kimi, I am more than a little confused. Here are followup questions 1-4.

1. Are you saying that the document, watermarked "draft" and dated 10/14, is the currently proposed Master Plan? If I look at that document, it seems that the "master plan" is the 20 pages between pages 3-1 and 4-1. That seems just to be an earlier version of what is now at pp. 2-8 to 2-31 of the main document. It does not seem to contain an independent proposed Master plan. Yes, the 10/14 draft report describes the same master plan that is referenced in the Draft EIS. They are the same version. Please note that there is a near-term plan and the full build-out plan. Is this perhaps the confusion? I'm not sure what you are referring to as an "independent proposed master plan"? Could you kindly clarify?

1

4. **Parking:** The parking "plan" is virtually non-existent. Yes, you say that there should be room for about 100 cars, but say that perhaps the amount should be lower. The "plan" says nothing about parking for people who don't get a spot in the lot, other than to say they won't be able to park at the end of the road unless they are cultural practitioners or the like.

The idea that the bulk of the parking for Haena State Park users will be in a presently non-existent parking lot in Princeville seems absurd for financial and practical reasons. It is one thing to have shuttle access to crowded venues such as spots within Grand Canyon or Zion, but there the parking for those taking shuttles is very close at hand to the open-only-to-shuttle routes.

A significant improvement in the traffic could be accomplished by having employees with radios monitoring the parking and turning people around at the existing parking lot when the lot is full. The traffic crowding could also be reduced by limiting the parking on the road between Limahuli stream and the parking area and, indeed, enforcing the existing parking restrictions there. There is plenty of possible parking along the road, so long as the cars do not get packed in.

Of course, as noted above, much of the traffic confusion would be alleviated by considering re-establishing the parking area next to the end-of-the-road area.

5. **The Rock Fall Zone:** Much is made about the alleged safety concerns prompted by a geologic study. If the concerns are as great as the report suggests, then shouldn't those concerns be applicable to park users whom the "plan" contemplates would continue to utilize the road? The place where the road is closest to the cliff is adjacent to the cave and lasts for about 100 feet or so. The road could easily be rerouted to move outward from the cliffs (instead of inward as it is now), and constructed on pilings, much like a bridge.

Bottom line: If the existing roadway is dangerous, then it is dangerous to all and special exceptions should not be allowed.

Whereas a more detailed letter could easily be written, the above concerns are more than sufficient to show that the proposed "plan" is no plan at all. The planning should be done first and then presented to the public for true comment.

3

# ***Hā'ena State Park Final Master Plan Revised Pre-Final Report***

Prepared for:

State of Hawai'i  
Department of Land and Natural Resources  
Division of State Parks

Prepared by:

PBR HAWAII & Associates, Inc.

October 2014

2. Please respond to my earlier question below: "I did not find any place in the document where there was discussion as to how you intend to apply and enforce the 900 person/day limit, such as first come/first served, advance reservation etc.?" Can you confirm there is no such discussion? If I am wrong, can you direct me to where I should be looking."

As I mentioned, how the 900 person/day limit will be enforced or applied has yet to be determined (see highlighted text below). So all of the input we are receiving will help State Parks decide when they implement it.

Where precisely can I find the "pros and cons discussed in matrix form in the master plan report." Chapter 4 contains many matrices of the management options. Please scroll through to see them.

Imposing a limit with no plan as to what that limit exactly means, how it is enforced and the like is critical to understanding one's position as to the merits of the plan.

3. Same with "I did not see any detailed discussion as to alternative proposed parking plans, including the creation of a lot in Princeville, and the use of a shuttle van service. Am I missing something? If I am, can you please tell me where to look."

Section 4.3 discusses access, parking, and transportation alternatives. It also contains the matrices. Appendix C of the 10/14 draft master plan contains the shuttle study that looked at the different shuttle scenarios and offsite parking options.

4. Was there a meeting this (or last) week? Is there a meeting summary? How was that meeting publicized, I never saw it. There was a meeting organized by some members of the community held this past Sunday on 8/30, but it was not organized by us or State Parks so we are not aware of any official meeting summaries.

---

**From:** Kimi Yuen [mailto:kvien@nhrhawaii.com]

**Sent:** Wednesday, September 2, 2015 4:37 PM

**To:** Steve Drapkin <sdrapkin13@gmail.com>; lauren.a.tanaka@hawaii.gov

**Subject:** RE: Haena State Park Plan

2

Aloha, Steve: thank you for your time reviewing the Draft EIS. The initial pages of the Draft EIS as you have noticed provides a summary of the master plan. I believe the detail you are looking for is in the master plan report itself, which is Appendix I of the Draft EIS.

Chapter 4 of the master plan report discusses all the different management alternatives and potential scenarios. However, please note that many of the management policies **including the visitor limit and how that would be implemented are still yet to be determined** and are subject to change, especially if they're not working well to serve the community. Therefore, when you look at the alternatives discussed in the master plan, it's set up much like a menu of alternatives with the pros and cons discussed in matrix form in the master plan report.

Please let me know if you have any further questions.

Mahalo,  
Kimi

---

**From:** Steve Drapkin [mailto:sdrapkin13@gmail.com]

**Sent:** Wednesday, September 02, 2015 4:14 PM

**To:** lauren.a.tanaka@hawaii.gov; Kimi Yuen <kvien@nhrhawaii.com>

**Subject:** Haena State Park Plan

I live in Haena and attend the meeting you had at Hanalei School. Apparently there was another meeting this week (or last week)? Is there any summary of what was said at that meeting?

I have endeavored to review the 1000+ page plan. I have read good portions of it.

As best as I can tell, the proposed plan itself is only about 20 pages long (pages 2-8 to 2-31). Is that correct? If I am wrong, can you please advise as to the other page numbers which reflect the proposed plan (as opposed to the rationale and supporting EIR studies).

I did not find any place in the document where there was discussion as to how you intend to apply and enforce the 900 person/day limit, such as first come/first served, advance reservation etc.? Can you confirm there is no such discussion? If I am wrong, can you direct me to where I should be looking.

I did not see any detailed discussion as to alternative proposed parking plans, including the creation of a lot in Princeville, and the use of a shuttle van service. Am I missing something? If I am, can you please tell me where to look.

Thank you for your anticipated prompt response. I wish to finalize my input to you by tomorrow, if possible.

Steve Drapkin  
808-826-1825

[sdrapkin13@gmail.com](mailto:sdrapkin13@gmail.com)

3



Month XX, 2018 - DRAFT

Mr. Steve Drapkin  
P.O. Box 1197  
Hanalei, HI 96714

**SUBJECT: COMMENTS ON THE HĀ'ENA STATE PARK MASTER PLAN  
DRAFT ENVIRONMENTAL IMPACT STATEMENT (EIS),  
HĀ'ENA, KAUA'I, HAWAII**

Aloha Mr. Drapkin,

Mahalo nui for your emails dated September 2 and 9, 2015 and letter dated September 3, 2015 received via email on September 4, 2015 regarding the Hā'ena State Park Master Plan Draft Environmental Impact Statement (EIS). We sincerely apologize for the delay in responding. Due to the feedback received on the Draft EIS, the State of Hawai'i, Department of Land and Natural Resources, Division of State Parks (State Parks) has worked on revising the master plan with a reorganized Hā'ena State Park Community Advisory Committee (HSPCAC) to address the concerns voiced by the larger community. As a result, the master plan presented in the Final EIS has been updated based on the feedback received from the public meetings, comments received, and subsequent extensive collaboration with the HSPCAC. As the planning consultant for State Parks, we offer the following responses to your comments in reverse order as latter emails compile and repeat information from earlier correspondence.

Mahalo for your suggestion to post the comments on a website from your email dated September 9, 2015. The comments received on the EIS submittals are included in the respective EIS documents posted on the State Office of Environmental Quality Control's (OEQC) website:

[http://oeqc2.doh.hawaii.gov/layers/15/start.aspx#EA\\_EIS\\_Library/Forms/AllItems.aspx](http://oeqc2.doh.hawaii.gov/layers/15/start.aspx#EA_EIS_Library/Forms/AllItems.aspx). They include the EIS Preparation Notice, which was published February 23, 2015 edition of *The Environmental Notice* (TEN) and the Draft EIS, which was published in the July 23, 2015 edition of TEN. All of these comments will be compiled in the Final EIS and posted on the OEQC website as noted below. State Parks has also uploaded the Final EIS at their Hā'ena State Park website which includes all the comments received on the EIS: <http://dlnr.hawaii.gov/dsp/parks/kauai/haena-state-park/>.

With regards to your email dated September 9, 2015, the public comment period for the Draft EIS was extended for another 30 days until October 8, 2015. The original 45-day public comment period started on July 23, 2015 from the day OEQC published the Draft EIS in TEN and the Draft EIS was available to the public as legally required according to Section 343-5, Hawai'i Revised Statutes (HRS). Twenty-four comments from the public were received during the extension; four of which were second comments from individuals or groups who submitted a previous letter or email before the close of the September 8, 2015 public comment period deadline. A total of 157 letters/emails/comment cards were received on the Draft EIS.

Mahalo for your comments regarding the public meeting held on August 19, 2015. The purpose of the meeting was to collect additional comments on the Draft EIS, which was made public on July 23, 2015, and was an optional meeting. The meeting included a presentation of the proposed master plan and breakout groups were held after the

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presentation so attendees could fill out comment cards and ask questions of the project team. Section 8.3.3 of the Final EIS summarizes the oral and written comments received at the meeting and is attached as the "Draft EIS Public Meeting" attachment. As noted, the public comment period was extended until October 8, 2015.

In response to your letter dated September 3, 2015, we offer the following responses:

We understand your concerns regarding the master plan proposed in the Draft EIS. The plan has been revised based on the comments received from the public. Please see the attached revised Master Plan Summary and Figure 1 graphic of the master plan from the Final EIS. The full master plan report is available for download at the State Parks website for Hā'ena State Park: <http://dlnr.hawaii.gov/dsp/parks/kaui/haena-state-park/>.

Mahalo for your comments regarding the many visitors who arrive by foot or bicycle in the early mornings and at sunset. The proposed visitor limits would only apply during peak park hours in the middle of the day so you would still be able to enjoy those routines. The visitor limits will also be based on an average number of visitors per day and so if there are days with fewer visitors, more visitors could be allowed during busier days. Please see the text of Section 2.5.4.3 from the EIS which discusses the proposed visitor limits in the "Visitor Limits" attachment. Please also note that the recommendation is to adaptively manage the visitor limits based on feedback from the community and impacts to the park resources and are therefore open to change if there are issues that arise from the initial implementation.

1. Mahalo for your comments regarding the master plan. The master plan describes the proposed physical improvements to the park. The proposed plan has been in development since 2010 with the original Master Plan Advisory Committee and most recently with a reorganized Hā'ena State Park Community Advisory Committee, which has been working on plan revisions since the August 19, 2015 public meeting and conducting community outreach throughout the revisions of the master plan.

As noted above, breakout sessions were held with the attendees after the presentation at the August 19, 2015 meeting and comment cards were distributed to facilitate collecting as many comments and talking with as many attendees as possible given the large number of attendees. The comments received at that meeting as well as other comments that have been mailed in during the public comment period have helped guide the revisions to the master plan, which is the subject of the Final EIS.

The Final EIS is before the Board of Land and Natural Resources for recommendation for submittal to the Governor for acceptance at their May 25, 2018 Board meeting. The Board's approval of the Final Master Plan will follow.

2. Mahalo for your concern about how the visitor limits will be applied. As noted above, the visitor limits are proposed to apply initially during peak hours and will be adjusted and adaptively managed as needed. Section 2.5.4.3 of the Final EIS describes the updated proposal and is attached in the Visitor Limits attachment.

3. With regards to bicycle access, the master plan proposes to add bicycle racks at two locations to support bicyclists. The first is near the Welcome Hale and the other is at Kē'ē as shown on the Figure 1 master plan graphic. While State Parks does not encourage bicyclists to use the limited access roadway, rockfall hazard signs are

recommended to be posted at the gate across the highway to warn visitors of the potential for rockfalls. State Parks appreciates your recommendation to allow bicycle access along the highway with riders signing a liability waiver as is done at the Kilauea miniature golf course and will take that into consideration.

4. We understand your concerns regarding parking. The HSPCAC has worked on a revised parking management concept which does not necessitate the remote Princeville parking lot and the description of the parking has been revised in Sections 2.5.1.2 and 4.3.2 of the Final EIS. Please see the "Parking" attachment for the revised description and discussion in the EIS.

Mahalo nui for your recommendations on staffing the parking lots with people who could tell drivers when the parking lot is full to help manage traffic. When the lot is full, the entrance to the lot can be closed at the turnaround, which allows drivers to continue out of the park without requiring cars to stop and back up into traffic. Mahalo also for your recommendations to restrict and enforce the no parking along the highway. State Parks continues to work with the County on these issues. Mahalo for your recommendation to reestablish parking at the end of the road. The improved main parking lot and turnaround are proposed in the master plan to help reduce the congestion and allow for cars to turn around more easily as you mention.

5. Mahalo for your recommendation to build a new road on pilings that would move outwards from the cliffs. Both the existing highway and Hā'ena Archaeological Complex, which covers the park area makai of the highway from Limahuli Stream to Kē'ē, are listed on the National Register of Historic Places and the Hā'ena Archaeological Complex is also listed on the State of Hawai'i Register of Historic Places. Your recommendation would significantly impact both of these historic resources and would be costly to construct. This alternative for rockfall mitigation is vetted in the Rockfall Study attached as Appendix B to the EIS as Design Alternative 6 and estimated to cost roughly \$15.5 million. Both the impacts to the historic sites and high construction cost deterred the project team from selecting this option. The Pedestrian Path located outside of the modeled rockfall hazard is the preferred route to Kē'ē. However, warning signs are proposed to be posted on the gate at the highway to advise people of the risk of the rockfall hazard should they decide to continue on the highway towards Kē'ē.

The email exchanges between us on September 2, 2015 are also included in the Final EIS. The questions you ask after the exchange refer to how the proposed visitor limit would be implemented, which has been revised in the EIS and attached in the "Visitor Limit" attachment.

Mahalo nui for your input and participation in the environmental review process. Your letter will be included in the Final EIS. If you would like a copy of the Final EIS or portions thereof, please let us know. Otherwise, the electronic copy of the Final EIS will be available on the Office of Environmental Quality Control website at:

[http://oeq2.doh.hawaii.gov/EA\\_EIS\\_Library/2018--KA-FEIS-Haena-State-Park-Master-Plan.pdf](http://oeq2.doh.hawaii.gov/EA_EIS_Library/2018--KA-FEIS-Haena-State-Park-Master-Plan.pdf) on May 25, 2018



Mr. Steve Drankin  
SUBJECT: COMMENTS ON THE HÄ'ENA STATE PARK MASTER PLAN DRAFT ENVIRONMENTAL  
IMPACT STATEMENT (EIS), HÄ'ENA, KAUAI, HAWAII  
Month XX, 2018  
Page 4

Aloha,

Kimi Mikami Yuen, LEED AP BD+C  
Principal

Attachments: Master Plan Summary  
Figure 1: Master Plan  
Draft EIS Public Meeting  
Visitor Limits  
Parking

cc: The Honorable David Y. Ige, Governor  
Office of Environmental Quality Control  
Board of Land and Natural Resources  
Division of State Parks

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**Nathalie Razo**

**From:** Allan Parachini <aparachini@parachinigroup.com>  
**Sent:** Monday, September 07, 2015 10:26 AM  
**To:** Kimi Yuen; Lauren A. Tanaka@hawaii.gov  
**Subject:** Revised and final version of our comments letter  
**Attachments:** Parachini\_Lobaco\_Comments on Haena Draft Plan.pdf

Sorry for the confusion. We initially sent a version that was not the final one. This is. Apologies for the misunderstanding.

Allan Parachini & Gina Lobaco  
2319 Komali'i Street  
Kilauea, HI 96754

September 6, 2015

Lauren Tanaka  
Division of State Parks  
1151 Punchbowl St., Rm. 310  
Honolulu, HI 96813

Kim Yuen  
PBR Hawaii  
1001 Bishop St. Suite 65  
Honolulu, HI 96813

Dear Ms. Tanaka and Ms. Yuen:

**SUBJECT: Ha'ena State Park Master Plan**

First, we are aware that many people in the community find the sheer size of the plan document daunting. A truly thorough review takes time and many seem to feel the comment period should be extended.

We agree with this sentiment as we would prefer to be able to invest some time in reviewing the document, which is simply not possible within the time frame provided. An extension of the comment period is also justified by the complexity of the plan, which in fact appears to include variations of the actual plan. Some of the more voluminous ancillary sections might have been better placed in a companion volume so the actual plan could be the focus of public review. The electronic version of the plan is among the least user-friendly publications we have ever encountered.

It's true that the planning process has been conducted openly and has included opportunities for public review and comment. But the version at hand as the supposed final plan invites scrutiny from a broader audience than may not have been able to focus on it previously. Under the circumstances, an extension of the comment period of at least 90 days is desirable.

But since you may not extend the deadline, here are our observations:

- 1) The plan's broad objectives of establishing user regulations to mitigate environmental damage done to the park's ecosystems by visitors over the years are justified and—to a large degree—well-reasoned.
- 2) That said, the plan has understandably raised concerns within the community that local people will encounter serious obstacles to using the park, which the plan in some respects sidesteps with observations like: "However, with implementation of the visitor limit and management objectives of this master plan, the hope by the local community is that there will be an increase in park use by residents as a place of employment, for volunteer projects and community work days, for cultural practices or simply to enjoy the park's resources and facilities."

Many readers of this document, no doubt will find that observation inconsistent with much of the rest of the plan since it includes numerous elements that would severely limit the ability of local residents to access and enjoy the park.

The plan does not focus much on operating hours, which provokes fundamental questions. If the visitor limit of 900 people is reached a 3 p.m., for example, do you really intend to bar residents—and visitors—

Page 2  
September 7, 2015  
Letter to Lauren Tanaka & Kim Yuen

from the park? Another unanswered issue is the extent to which the existing parking capacity is occupied by overnight vehicles associated with Kalalau Trail campers. The plan does not address ways to control parking for what amounts to dead storage while campers are on the trail.

- 3) The plan fails to address issues relating to enforcement of hiking permit requirements. In fact, the plan document is silent on an issue that could be seen as the elephant in the room: As envisioned, extensive staffing requirements will be required to operate the park in stark contrast to the current status of no permanent staff. Even with an entry fee (an issue of enormous sensitivity for locals) and parking fees it is difficult to imagine that the state will actually mount the resources necessary to make the park work.
- 4) The remote parking and shuttle issues are serious bones of contention. Does the plan actually think local people will drive to Princeville and board a shuttle to get to Ke'e? The plan suggests that shuttle fares would have to exceed \$10 per person to cover operating costs, a figure that would place visiting the park economically out of reach of many Kauai residents. The county's recent disappointing experience with the North Shore Shuttle raises serious questions about whether this transportation modality would be affordable and sustainable. Would surfboards or diving gear be accommodated on the shuttle? Would the shuttle actually operate late enough in the day to accommodate post-sunset departures at 7 p.m. or 8 p.m.?
- 5) Throughout the plan, despite repeated references to a "Princeville parking area," no description is offered that shows how such a facility would be developed. It is our understanding that aside from the fire/police building, a major development in Princeville by the Discovery Land Company is in the permitting stage. The plan implies that the management of Princeville would cooperate in developing such a parking lot, possibly at the Princeville Shopping Center. That facility is notoriously short of parking in its existing configuration; the center was recently purchased by the parent company of Foodland, which has signaled its intention to expand its operations on the site. The plan, essentially, glosses over the Princeville parking area, seeming to presume it would simply materialize. The plan provides no rational for this belief. Is a memorandum of understanding available?
- 6) The plan is silent on ending the periodic tension between the county and the state over extending the authorization for county lifeguards to work in a state park. The plan would increase the infrastructure of the state park, making it more important than ever to reach a permanent resolution of the authorization of county lifeguards to patrol Ke'e beach. The plan ignores this issue.
- 8) Other local residents have expressed hope that the remote Princeville parking lot could become a means of limiting vehicle traffic by tourists to the entire North Shore from Hanalei to Ke'e. Such an approach must be managed cautiously, as tourism is the engine of Kauai's economy. If visitors feel that they are being treated as an invader, tourism and all of the elements it serves on the North Shore—restaurants, shops and accommodation—could be seriously impacted.
- 9) The plan envisions a mandatory orientation for all park visitors. Frankly, this sounds overly regimented. As is the case at the Kilauea Lighthouse, for example, people may choose orientation, but should not be required to do so as a condition of admission. This objective is simply unrealistic and should be abandoned. Better to incentivize participation by offering different price points, giving a discount to those who take the orientation.

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Gina: [ginalobaco@gmail.com](mailto:ginalobaco@gmail.com) voice/text: 818-203-1726 office: 808-587-6245

September 7, 2015  
Letter to Lauren Tanaka & Kimi Yuen

10) No doubt visitor traffic toward Ke'e would cause even more congestion at Ha'ena Beach Park (Tunnels), further congesting Kuhio Highway and causing even more conflict over parking on roads near the park. A reasonable person could infer the plan envisions is a unified, restricted access complex incorporating county and state park operations. This would be a very hard pill for local residents to swallow. Because numerous private homes are located near Ha'ena Beach Park, moving an entry gate near there would not seem viable, not to mention the conflict that might ensue between state and county park operations.

11) Because it is possible to hike to Ha'ena State Park from the Ha'ena Beach Park, does the plan envision some kind of law enforcement presence to intercept and exclude people using this route? In fact, so many restrictions are proposed in the master plan that it is difficult to believe that a round-the clock law enforcement presence would be required. Many local people fear regulatory overreach that is inconsistent with Kauai's lifestyle.

12) The notion that federal requirements for equal access for local residents and visitors can be skirted with a wink and a nod by creating a volunteer support group is both transparent and unworkable. Much more effort must be invested in ways to better guarantee access for local people. This is the only major failure we see in the approach followed to get us to this point.

This letter has been written in haste to comply with the Sept. 8, 2015 deadline. It is nearly certain that issues of significance are not addressed in this letter simply because there has not been time for a truly close review of this process requires. We hope you will extend the comment period, but if you will not, please accept the observations above in the constructive spirit with which they are intended. We would like to have an opportunity to discuss possible solutions to the concerns we have outlined. Please feel free to be in touch with any questions.

Sincerely,

*Allan Parachini*

Allan Parachini

*Gina Lobaco*

Gina Lobaco



Month XX, 2018 - DRAFT

Mr. Allan Parachini & Ms. Gina Lobaco  
2319 Kamali Street  
Kilauea, HI 96754

**SUBJECT: COMMENTS ON THE HA'ENA STATE PARK MASTER PLAN  
DRAFT ENVIRONMENTAL IMPACT STATEMENT (EIS),  
HA'ENA, KAUAI, HAWAII**

Aloha Mr. Parachini and Ms. Lobaco,

Mahalo nui for your emailed comment dated September 6, 2015 regarding the Ha'ena State Park Master Plan Draft Environmental Impact Statement (EIS). We sincerely apologize for the delay in responding. Due to the feedback received on the Draft EIS, the State of Hawaii's Department of Land and Natural Resources, Division of State Parks (State Parks) has worked on revising the master plan with a reorganized Ha'ena State Park Community Advisory Committee (HSPCAC) to address the concerns voiced by the larger community. As a result, the master plan presented in the Final EIS has been updated based on the feedback received from the public meetings, comments received, and subsequent extensive collaboration with the HSPCAC. As the planning consultant for State Parks, we offer the following responses to your comments.

We recognize your comment regarding the length of the EIS comment period. The official 45-day public comment period on the DEIS began on July 23, 2015 and ended on September 8, 2015. However, State Parks held a public meeting on August 19, 2015 to gather more input on the DEIS and extended the DEIS public comment period until October 8, 2015. Comments on the DEIS received during this public comment period and the responses to the comments are incorporated in this FEIS and copies of those letters are included in EIS Section 13.0.

We also recognize your concerns as numbered per your letter:

1. Mahalo for supporting the protection and preservation aspects of the master plan that mitigate potential damage to the park's environmental resources.
2. We recognize your concerns regarding resident access to the park in relation to the proposed master plan. The revised master plan proposes the 900-person visitor limit as an initial number which can be adaptively managed and adjusted as appropriate, especially if there continues to be unwanted impacts at the park. If there continue to be issues, State Parks will work with the advisory committees on adjusting the number. As the State has more time to analyze user patterns, other options can be explored over time, and they are actively engaged in discussions regarding parking enforcement and increased fines along the roadway outside of the park as well. The visitor limits previously mentioned as a part of the park's adaptive management approach will be instituted only during peak hours of park use and will allow visitors to enter before and after peak hours without being counted against the visitor limit. Also, entry fees for state parks are established by Hawai'i Administrative Rules (HAR) 13-146-6, which states that Hawai'i residents are exempt from paying park entry fees if they can show a valid Hawai'i ID. Other categories of fee exempt park users, such as registered volunteers, may be established at a later time.

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Please see the "Visitor Limits" attachment from Section 2.5.4.3 of the Final EIS, which shows the verbatim changes from the Draft EIS for this section.

3. We recognize your concerns regarding enforcement of permits and budgeting for staff in the park. The timing of implementation of the proposed Master Plan is subject to CIP budget requests submitted by State Parks and approvals granted by the State Legislature. Therefore, it is not clear exactly when the proposed improvements will be made. Therefore, the Near-Term Plan described in EIS Section 2.5.1 will help State Parks implement some of the key management strategies with less funding, while funding is sought for the more extensive long-term improvements.
4. We recognize your concerns regarding a proposed third-party shuttle service. A proposed third party shuttle service has been analyzed as a part of the project's traffic impact assessment report, included in the EIS as Appendix F. The preferred scenario is to implement a third party shuttle from the Princeville facility at the start of Phase I, minimizing the need for visitor parking in the parking lot in the park. Please see the "Shuttle Service" attachment from Section 4.3.3 of the Final EIS, which shows the verbatim changes from the Draft EIS for this section.
5. We recognize your concern regarding the reference to the phrase "Princeville parking area". This reference has been removed from the one sentence it was located previously. The updated Section 1.9.8 of the Final EIS, with the verbatim changes as shown:  

"The main unresolved issues involve the shuttle service and the timing of implementation. For the preferred shuttle service described in Section 6.4.2.4, it is not clear whether the a third-party operator currently providing service to the park will continue provide the service or if State Parks or some other a government agency or combination of public agencies such as the County or USFWS will solicit a concession agreement or will start a similar service to serve the North Shore areas between the park and Princeville as has been requested by many community members in response to this project, that can serve the park from the remote Princeville parking area."

6. We recognize your comment regarding lifeguards in the park. The Hā'ena master plan has included County lifeguards throughout the outreach process, and will continue coordination regarding facilities and visitor volume needs as a part of continued inter-agency coordination efforts.

A new permanent location for the lifeguard tower has been identified with input from the Master Plan Advisory Committee and the Kē'e lifeguards. It is roughly 50 feet north of the highway pavement and 50 feet mauka of the 2009 certified shoreline to allow views from the end of the path to open up to the ocean and improve visibility for the lifeguards. When asked, the lifeguards agreed the proposed site will improve their ability to see key areas of the lagoon and Kē'e Channel compared to their current temporary location at the end of the highway pavement.

The overall employment at the park is recommended to be increased in other areas or may shift the requirements for lifeguards to the County beach park, which will help offset the loss.

8. We recognize your comment regarding the Princeville parking lot. The master plan will take a measured, cautious approach to parking and access through an adaptive management strategy.
9. We recognize your comment regarding education for park visitors. The mandatory orientation was discussed in a previous draft of the EIS, however, the revised master plan has removed this mandatory orientation and proposes all visitors be provided with park rules and information prior to entering the park. The orientation information could be made available on the State Parks website or tied to ticket purchase, particularly if advanced reservations become a requirement in the future. The orientation session would educate visitors on appropriate recreational activities and behavior, safety precautions as well as sensitivity to natural and cultural resources and to cultural activities that may be occurring in the park. In addition, emails could be distributed to park visitors prior to entry to inform them of safety precautions and updates on any special events or weather conditions. Additional information should be posted online or at the Welcome Hale. The Cultural Advisory Group should be consulted on appropriate cultural information to be included in the orientation session. Please see the "Visitor Orientation" attachment from Section 2.5.4.5 of the Final EIS, which shows the verbatim changes from the Draft EIS for this section.
10. We recognize your concerns regarding the impact of traffic on other parks in the north shore area. We recognize negative effects of the master plan may include the distribution of recreational demand to other facilities on the North Shore and island-wide, especially the nearby Hā'ena Beach Park. State Parks should monitor use of Hā'ena County Park to judge if the recreational demand is shifted from one facility to the other. If so, an adjustment to the number of visitors allowed per day to Hā'ena State Park might be considered as a mitigating measure. If a shuttle is employed, a mitigation measure may be to include a stop at Hā'ena Beach Park to alleviate traffic and congestion at the County park as well.
11. We recognize your concerns regarding hiking access from Hā'ena State Park to Hā'ena Beach Park. While currently there are no plans to limit hiking access via Hā'ena Beach Park, the master plan incorporates adaptive management strategies that can adjust access protocol based upon demand and amount of visitors.
12. We recognize your concerns regarding equal access for local residents and visitors. Entry fees for state parks are established by Hawai'i Administrative Rules (HAR) 13-146-6, which states that Hawai'i residents are exempt from paying park entry fees if they can show a valid Hawai'i ID. Other categories of fee exempt park users, such as registered volunteers, may be established at a later time.

Mahalo nui for your input and participation in the environmental review process. Your letter will be included in the Final EIS. If you would like a copy of the Final EIS or portions thereof, please let us know. Otherwise, the electronic copy of the Final EIS will be available on the Office of Environmental Quality Control website at [http://oeq2.doh.hawaii.gov/EA\\_EIS\\_Library/2018--KA-FEIS-Haena-State-Park-Master-Plan.pdf](http://oeq2.doh.hawaii.gov/EA_EIS_Library/2018--KA-FEIS-Haena-State-Park-Master-Plan.pdf) on 2018.



Aloha,

Kimi Mikami Yuen, LEED AP BD+C  
Principal

Attachments: Visitor Limits  
Shuttle Service  
Visitor Orientation

cc: The Honorable David Y. Ige, Governor  
Office of Environmental Quality Control  
Board of Land and Natural Resources  
Division of State Parks

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Revised and final version of our comments letter (with attachment) - KY.docx

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**Nathalie Razo**

**From:** NaPali Kayak <kauaiadventures@yahoo.com>  
**Sent:** Monday, September 07, 2015 9:45 PM  
**To:** Kimi Yuen  
**Cc:** NaPali Kayak  
**Subject:** Na Pali Kayak request 8/7

Aloha Lauren and Kimi,

Thank you for taking time to submit my request.

My name is Joshua Comstock co-owner of Na Pali Kayak along side Ivan Slack.  
We run kayak tours along Na Pali coast Late April - early October.

As you know, there are three company's that are permitted to operate kayak tours; Na Pali Kayak, Outfitters Kauai and Kayak Kauai. All three companies use similar SOP's (standard operating procedures) and one of the most important is access to Ke'e. After we launch our tour from Haena beach park (Maninilolo) bay approx 7:30 am, the driver shuttles to Ke'e to make VHF radio contact with one of the guides. If at that time any of the paddlers wish to leave the tour, usually do to seasickness or other issues, the guide will then safely escort them into Ke'e lagoon and return to the group. At this time the driver will load the Kayak and take them back to their car at Na Pali Kayak headquarters. Since Outfitters and Kayak Kauai shuttle from the south shore and east side, we have staggered launch times. I think its safe to say all three companies have passed Ke'e by 10:30 am

This has been a key safety procedure we have followed for over 20 years and takes only minutes.

To continue running our tour as safely as possible and prevent possible emergency situations we request continued access to Ke'e beach and lagoon.

If you have any questions please feel free to call.

Mahalo again for your time,  
I understand you are very busy but will you please provide a written response?  
Thank you,

Sincerely,

Joshua Comstock, Owner, Lead guide

Na Pali Kayak

"Challenge your body-feed your spirit-blow your mind" Na Pali Kayak 5-5075 Kuhio Hwy Hanalei HI  
96714 808-826-6900



Month XX, 2018 - DRAFT

Mr. Joshua Comstock  
Na Pali Kayak  
5-5075 Kuhio Highway  
Hanalei, HI 96714

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**SUBJECT: COMMENTS ON THE HĀ'ENA STATE PARK MASTER PLAN  
DRAFT ENVIRONMENTAL IMPACT STATEMENT (EIS),  
HĀ'ENA, KAUAI, HAWAII**

Aloha Mr. Comstock,

Mahalo nui for your emailed comment dated September 7, 2015 regarding the Hā'ena State Park Master Plan Draft Environmental Impact Statement (EIS). We sincerely apologize for the delay in responding. Due to the feedback received on the Draft EIS, the State of Hawai'i, Department of Land and Natural Resources, Division of State Parks (State Parks) has worked on revising the master plan with a reorganized Hā'ena State Park Community Advisory Committee (HSPCAC) to address the concerns voiced by the larger community. As a result, the master plan presented in the Final EIS has been updated based on the feedback received from the public meetings, comments received, and subsequent extensive collaboration with the HSPCAC. As the planning consultant for State Parks, we offer the following responses to your comments.

We appreciate your comments describing standard operating procedure for your company and the other ocean kayak tour companies. Emergency landings at Kē'ē will continue to be allowed. However, please note that the highway between the entry turnaround and Kē'ē is recommended to be closed to general traffic so coordination with State Parks on emergency access will be required but is not anticipated to affect your procedures during these emergencies situations.

Mahalo nui for your input and participation in the environmental review process. Your letter will be included in the Final EIS. If you would like a copy of the Final EIS or portions thereof, please let us know. Otherwise, the electronic copy of the Final EIS will be available on the Office of Environmental Quality Control website at [http://oeqc2.doh.hawaii.gov/EA\\_EIS\\_Library/2018-\\_-KA-FEIS-Haena-State-Park-Master-Plan.pdf](http://oeqc2.doh.hawaii.gov/EA_EIS_Library/2018-_-KA-FEIS-Haena-State-Park-Master-Plan.pdf) on 11/15/2018.

Aloha,

Kimi Mikami Yuen, LEED AP BD+C  
Principal

cc: The Honorable David Y. Ige, Governor  
Office of Environmental Quality Control  
Board of Land and Natural Resources  
Division of State Parks

O:\Job26\2627\01 DLNR-Haena State Park Master Plan\FEIS\DEIS Responses\Mail Merge\2015-09-07 Comstock Email-  
Na Pali Kayak request 87 - DSI.docx

Nathalie Razo

**From:** Robyn <stevenson\_505@hotmail.com>  
**Sent:** Monday, September 07, 2015 1:47 PM  
**To:** Kimi Yuen; lauren.a.tanaka@hawaii.gov  
**Subject:** Comment in opposition to Haena State Park Master Plan

A document of over 800 pages, years in the making and the DLNR provides 3 day notice of public meeting in school cafeteria facilitated by a presenter with a bullhorn. If nothing else, DLNR needs to extend the comment period and provide additional public meetings with real concrete information to share.

Our immediate concern is the fact that too many people with too little respect have over run the end of the road. For years this has been the responsibility of DLNR and they have made no attempt to correct it and now have a plan to limit visitors to 900 a day. But the reality is that there is no concrete working plan for this limit. If you shut down access where do you think they are going to go? The area from Ke'e to Haena will be log jammed with cars and people waiting to get into the park or parking in driveways and front yards of residence and walking in.

We are amazed that no attempt has been made to ticket the cars that are parked illegally in and surrounding the park. Throughout the report it mentions illegally parked cars. If cars were consistently ticketed for illegally parking, word will quickly get out and self regulation would occur. Parking regulations and speed limits need to be enforced throughout the area including Haena. With little respect or enforcement of current regulations, this plan has low expectation for success.

Richard and Robyn Stevenson  
Haena  
  
Love life, live aloha :~)  
Sent from my iPhone

Nathalie Razo

**From:** Robyn <stevenson\_505@hotmail.com>  
**Sent:** Monday, September 07, 2015 2:07 PM  
**To:** Kimi Yuen; lauren.a.tanaka@hawaii.gov  
**Subject:** Comment in opposition to Haena State Park ~ building of structures

Ke'e is known for its beautiful scenic natural and cultural experience. The moment DNLR begins building structures, it will forever change the landscape. Million of dollars in physical structures should not be part of the master plan. People come here to take in the ocean, sky, mountain and the land. DLNR will change the entire serene area they are charged to protect and enhance. Absolutely there should be no concessions allowed in this area!

Richard and Robyn Stevenson  
Haena  
  
Love life, live aloha :~)  
Sent from my iPhone



THOMAS WITTEN, ESQ.  
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Mr. and Ms. Richard and Robyn Stevenson

SUBJECT: COMMENTS ON THE HĀ'ENA STATE PARK MASTER PLAN DRAFT ENVIRONMENTAL  
IMPACT STATEMENT (EIS), HĀ'ENA, KAUA'I, HAWAII

Month XX, 2018

Page 2

impacts on neighboring beaches as you mentioned.

The proposed visitor limits will also be instituted only during peak hours of park use and will allow visitors to enter before and after without being counted against the visitor limit. Therefore, access will be allowed into the park outside those peak hours and will be adjusted as appropriate based on ongoing input from the community. Please see the attached Section 2.5.4.3 from the Final EIS on the revised visitor limit proposal.

We also acknowledge your concerns regarding parking enforcement and illegal parking not being enforced previously as well as your comment that proper regulation will be required for successful implementation. The revised master plan includes several parking improvements for enforcement, as well as park entry design with a turnaround to mitigate congestion. The new main parking lot expansion is intended to alleviate the strain on current parking demand along with facilities designed to support the recommended shuttle service. More details on the proposed park entry and parking improvements are attached in Section 2.5.1.1 and Section 2.5.1.2 from the Final EIS.

In response to your second emailed comment, we recognize your desire to preserve the natural state of the park and concerns with the originally proposed buildings and structures. The revised master plan includes significant changes and minimal physical improvements to preserve the natural beauty of the park. Most of the proposed buildings, including the visitor center, boardwalk, concessions and caretaker's cottage, have been removed in the revised master plan. Please also note that the educational structure has been revised to replicate a traditional hale, which will provide educational information to the public. The proposed hale includes a traditional design with no walls to replicate culturally appropriate structures. The master plan includes several aspects to restore the natural environment of the park as well. The attached Section 2.5.1.3 describing the Welcome Hale in more detail. Please also see the Master Plan Summary and Figure 1 from the Final EIS attached for reference with an overview of the revisions to the plan.

Mahalo nui for your input and participation in the environmental review process. Your letter will be included in the Final EIS. If you would like a copy of the Final EIS or portions thereof, please let us know. Otherwise, the electronic copy of the Final EIS will be available on the Office of Environmental Quality Control website at <http://oeqc2.doh.hawaii.gov/EA-EIS-Library/2018-KA-EIS-Haena-State-Park-Master-Plan.pdf> on 2018.

Aloha,

Kimi Mikami Yuen, LEED AP BD+C  
Principal

Attachments: Master Plan Summary  
State Environmental Review Law  
Agency and Community Group Engagement  
Park Entry  
Parking

Mr. Richard and Ms. Robyn Stevenson

P.O. Box 1435

Hanalei, HI 96714

SUBJECT: COMMENTS ON THE HĀ'ENA STATE PARK MASTER PLAN  
DRAFT ENVIRONMENTAL IMPACT STATEMENT (EIS),  
HĀ'ENA, KAUA'I, HAWAII

Aloha Mr. and Ms. Stevenson,

Mahalo nui for your two emailed comments dated September 7, 2015 regarding the Hā'ena State Park Master Plan Draft Environmental Impact Statement (EIS). We sincerely apologize for the delay in responding. Due to the feedback received on the Draft EIS, the State of Hawai'i, Department of Land and Natural Resources, Division of State Parks (State Parks) has worked on revising the master plan with a reorganized Hā'ena State Park Community Advisory Committee (HSPCAC) to address the concerns voiced by the larger community. As a result, the master plan presented in the Final EIS has been updated based on the feedback received from the public meetings, comments received, and subsequent extensive collaboration with the HSPCAC. As the planning consultant for State Parks, we offer the following responses to your comments.

In response to your first emailed comment, we recognize your concern that there was an inadequate notice period for the public meeting and request for additional feedback from the community. We also acknowledge your comment that previous management of the area was perceived to be disrespectful. The planning process for the Hā'ena State Park Master Plan involved a collaborative approach to support the development of the plan by consulting various local community groups and individuals, including a thirty-two member Master Plan Advisory Committee (MPAC) consisting of Hā'ena kūpuna and 'ohana members, cultural practitioners and scientific experts, business representatives, State and County agencies, and other North Shore community members to provide recommendations on the physical plan and park management.

The environmental review process has also included opportunities for public comment throughout the process. As you are aware, State Parks also held a public meeting on August 19, 2015 to gather more input and extended the Draft EIS public comment period to allow more time for feedback from the community before revising the master plan. Please see the attached Section 1.6 and Section 1.7 from the Final EIS describing community engagement and environmental review process. One of the key management recommendations is to establish a permanent Cultural Advisory Group and Community Advisory Committee. These are outlined in the attached Section 2.5.4.2 of the Final EIS with verbatim description of these groups.

We recognize your concerns with the potential impact on neighboring communities and beaches with proposed visitor limits causing congestion. The revised master plan proposes the 900-person visitor limit as an initial number which can be adaptively managed and adjusted as appropriate, especially if there continues to be unwanted impacts at the park and surrounding community. If there continue to be issues, State Parks will work with the advisory committee on adjusting the number and will also be conscious of unintended



Welcome Hale  
Cultural and Community Advisory Group  
Visitor Limits  
Figure 1: Master Plan

cc: The Honorable David Y. Ige, Governor  
Office of Environmental Quality Control  
Board of Land and Natural Resources  
Division of State Parks

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Comment in opposition to Haena State Park Master Plan - DS.docx

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## Nathalie Razo

**From:** susie ayers <susieayers@hotmail.com>  
**Sent:** Monday, September 07, 2015 5:19 PM  
**To:** Kimi Yuen  
**Subject:** FW: Ha'ena State Park Comments

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**From:** susieayers@hotmail.com  
**To:** lauren.a.tanaka@hawaii.gov  
**Subject:** Ha'ena State Park Comments  
**Date:** Mon, 7 Sep 2015 17:18:26 -1000

My mailing address is PO Box 293 Hanalei, HI 976714 - it was strongly requested to include a mailing address when commenting about this master plan. I would appreciate an email or letter back acknowledging your receipt of this letter.

I have lived in Hawaii almost all of my life, the last 30 years on Kauai, specifically in Ha'ena and Wainiha. I have a love affair with the north shore of this island and there is no other place I call home. I spend every possible precious free moment hiking, biking, kayaking, swimming, surfing, walking on the beach, watching sunset, moonrise, moonset and the stars on a clear night. Much of this is dependent upon access to Ke'e as it is now.

We have to be careful to make sure that the park does not end up being just or even primarily for visitors, without regard to the people who live here. Especially as access to so many other hikes, waterfalls, etc are being closed off one at a time for one reason or another whether it be a private dishonest owner just arriving from the mainland with different ideas from the way we live and think here, the state closing access because some mainland visitor once got hurt there, or just the fact that there is no parking or the trail or area is overrun by tourists so it's not longer inviting nor is there room for local residents.

I sometimes go the end of the road late at night for the special orange moonsets as it drops into the ocean. If the road is gated, this experience, too, gets robbed from us north shore residents, unless we drive for a minimum of 2 hours to the other side of the island to see it. Yeah, right.

This location is crucial for launching and/or landing kayaks for paddles along the coast, which I also enjoy as frequently as possible in the summer months. If we use any other beach further up the coast safety becomes an issue. The extra distance needed to be covered allows for more exposure time in the changeable elements. Someone could get tired, make poor judgements, the wind can get stronger and the waves get bigger. As it is now, it can be quite safe to launch and land at the end of the road and make for an enjoyable trip to and/or from.

Something clearly needs to be done about the congestion of rental cars at the end of the road. Particularly since we continue to advertise to the world inviting them to come, keep bringing more cars for them to drive around on roads that are already filled with cars beyond capacity and let them find parking where there is none. All the while the county/state puts up more cones, rocks and plastic pillars to block off what little parking is available.

Then there are the local residents who can no longer enjoy these places since they are overcrowded. I know my lifestyle has been severely altered by this situation; I feel as if I am being squeezed out like a toothpaste tube full of tourists and regulations.

As for the proposed state project, **it doesn't really matter whether anyone approves or disapproves of it unless there is some sort of shuttle.** This is the cornerstone yet there was no mention of any plan to implement any type of shuttle aside from a comment something like "the local community will have to figure something out."

Limiting the number of hikers on the trail is not the important issue. The major problem is the number of cars congesting the area from the end of the road all the way to Ha'ena Beach Park. The trail can handle the people more than the area can handle the cars.

How exactly do we limit the visitors on the trail, many of whom come to Kauai primarily to walk the famous Na Pali trail. Do they have to reserve a spot a year in advance? What about rain checks for trail closures once they have taken vacation time off work and paid for their airfare and hotel? Do they pay for these rights to hike? What if they cancel? Do they come to the end of the road intending to hike (of course everyone will arrive earlier and earlier like they do now for parking) and then find out whether the allowable amount has been exceeded?

Then, of course, the local residents. When we have time to hike, or want to hike on an unexpected day off, we just go and if it is already full we go home? Do we book a hike months or a year in advance, competing with visitors who are planning their vacations a year in advance? Again, I have been hiking the trail for 30 years on impulse, whenever I have a break from work, when I need some exercise close to home when I can bike to the trail head, or take advantage of a gorgeous early morning before work to hike in "my backyard." If the trail is full of tourists, we can't go. That doesn't sound like a "better plan" to me.

If this plan to limit the number of hikers is implemented, the limit pertains to visitors as well as local residents. There is the opportunity to be a volunteer and in exchange we can have unlimited access to hiking. That sounds like it is a possibility, a way around the rule. But then again, that can get changed at anytime and revoked or limited for residents as well, especially if there are way more volunteers that sign up in order to be able to hike. I don't trust that "promise."

Will the limit of people be only on the trail or on the beach? If there is a limit, does someone get to hike once someone else gets off the trail? Is there a line waiting to hike once there is a vacancy? Does someone get to enter the trail if someone gets off the trail and goes to enjoy the beach? Or is the limit pertaining to the number of people in the park (only up to Hanakapi'ai or does it count if you back pack into Kalalau?) - on the trail plus on the beach? Would we need to have a "reservation" or wait in line to go walk on the beach, to go swimming or watch the sunset?

**I am strongly in objection to having a gate that can close the park,** such as blocking the beach for moonsets and early morning kayak launches or landings. I think there was some mention made of allowing fishing - is that during the night hours or early morning hours? For kayaking, at any time of day/night, there will need to be vehicle access in order to drop off/pick up the kayak as well.

**Again, nothing matters unless there is a shuttle service to keep bulk of the cars away, however not restricting local vehicles for kayaking, fishing, etc.** There was mention that there would be handicap access

for those who can't walk. Similarly, there should also be access for fishing and kayaking. The shuttle service should be provided by the visitor industry - the hotels, etc that profit from this onslaught of tourists. Not provided by the local community. Details need to be worked out for that. Exactly what hui or hotels, etc will fund the shuttle project? Do the passengers pay to ride? It can't be ONLY for tourists, it has to be available for residents as well - remember, no discrimination as in limiting the number of hikers. Where does everyone park their car to catch the shuttle? Will the shuttle hold backpacking, hiking, beach gear, coolers? Where will it stop along the way for getting on/off or sightseeing for the visitors? Will it hang up local traffic to Hae'na/Wainiha? Will it turn around at the very end of the road? Will it carry bikes?

I don't particularly support the idea of a boardwalk - it is so "mainland" and "un-Kauai." (That's my best reasoning.) And I don't see the purpose of a huge visitor center. That money can be better spent on a shuttle. Bathrooms need to be provided, yes. What is there now seems to be adequate, unless the septic system is not. I don't know about that. In addition to a shuttle, there should be parking for a certain number of cars, for local residents who might not be riding the shuttle, fishing, parking for kayaking, for extended backpacking, etc.

**Above all, Kauai needs to STOP building more hotel/ vacation rental units AND STOP ALLOWING MORE CARS ON THE ISLAND!!!!**

I would like to see another community meeting on this topic where questions are allowed to be asked and discussed. I think the proposal as it stands has to be reassessed and changed. I am heartbroken that the situation at Ke'e has gotten so bad and I don't want to lose access to my precious magical "backyard" as there has been so much lost already. Please do your best to preserve this area for the locals and don't give up yet another Hawaiian jewel to the visitors.

Mahalo, Susie Ayers



THOMAS WITTEN, FASLA  
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R. SEAN DUNCAN, ASLA

President / Principal

RUSSELL Y. CHUNG, FASLA, LEED® AP BD+C  
Executive Vice President / Principal

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PLANNING • LANDSCAPE ARCHITECTURE • ENVIRONMENTAL STUDIES • ENTITLEMENTS • PERMITTING • GRAPHIC DESIGN

Ms. Susie Ayers  
SUBJECT: COMMENTS ON THE HĀ'ENA STATE PARK MASTER PLAN DRAFT ENVIRONMENTAL  
IMPACT STATEMENT (EIS), HĀ'ENA, KAUA'I, HAWAII  
Month XX, 2018  
Page 2

The Master Plan includes a combination of physical improvements and programmatic options that when applied in combination will have a positive impact on the existing roadway conditions.

Vehicle access beyond the main parking area to Kē'e beach is proposed to be reduced from the currently unrestricted conditions to special access only (ADA, lifeguards, and cultural practitioners). Restricting general vehicular access from the main parking area to Kē'e Beach will effectively eliminate illegal parking along the highway's shoulder, reduce the wear on the historic roadway's macadam surface, and reduce the number of visitors traveling in a potential rockfall hazard area. Please see the "Parking" and "Roadways and Traffic" attachments from the Final EIS, which show the verbatim changes from the Draft EIS for these sections.

We also recognize your comments on emphasizing shuttle service to achieve successful implementation of the revised master plan. The new main parking lot expansion is intended to alleviate the strain on current parking demand along with facilities designed to support the recommended shuttle service proposed. As you noted, the potential shuttle service is not proposed to be administered by State Parks in the revised master plan, however, it does include specific elements to support effective implementation with infrastructure design for the proposed park entry and main parking lot. The recommended shuttle service particulars have not yet been determined. A proposed third-party shuttle service has been analyzed as a part of the project's traffic impact assessment report, included in the EIS as Appendix F. The preferred scenario is to implement a third-party shuttle from the Princeville facility at the start of Phase I, minimizing the need for visitor parking in the parking lot in the park. Please see the "Shuttle Service" attachment from Section 4.3.3 of the Final EIS, which shows the verbatim changes from the Draft EIS for this section.

We also recognize your questions on managing the proposed visitors relating to hikers accessing trails and concern over communicating real time information on potential limits. As noted previously, the proposals include an adaptive management on the proposed visitor limits, which applies to a total number of visitors accessing the park through the park entry proposed near the new main parking lot. We acknowledge your comments expressing opposition to the originally proposed boardwalk and visitor center. The revised master plan includes significant changes and minimal physical improvements to preserve the natural beauty of the park. Most of the proposed buildings, including the visitor center and caretaker's cottage, have been removed in the revised master plan. The boardwalk has been modified in the revised master plan. The new pedestrian pathway follows along the first berm of the lot closest to the highway and is proposed to be slightly elevated so as not to impact the berm or any of the historic resources. Please see the revised Figure 1 Master Plan graphic and the "Master Plan Summary" attachment from Section 1.9.1 of the Final EIS, which show the verbatim changes from the Draft EIS in this section.

We also acknowledge your comments on the necessity of new restrooms. The proposed facilities are designed with the intention of improving and mitigating any impact on the sensitive areas at Kē'e with advanced wastewater treatment systems. In addition, we recognize comments on preserving the areas for local residents and limiting rental cars and hotel developments on the island, however, the comments are beyond the scope of the Final EIS. We also acknowledge your request for additional community meetings. The environmental review process has included opportunities for public comment throughout the process. In addition, State Parks held a public meeting on August 19, 2015 to gather more input and extended the Draft EIS public comment period to allow more time for feedback from the community before revising the master plan.

Month XX, 2018 - DRAFT

Ms. Susie Ayers  
P.O. Box 293  
Hanalei, HI 96714

SUBJECT: COMMENTS ON THE HĀ'ENA STATE PARK MASTER PLAN  
DRAFT ENVIRONMENTAL IMPACT STATEMENT (EIS),  
HĀ'ENA, KAUA'I, HAWAII

Aloha Ms. Ayers,

Mahalo nui for your emailed comment dated September 7, 2015 regarding the Hā'ena State Park Master Plan Draft Environmental Impact Statement (EIS). We sincerely apologize for the delay in responding. Due to the feedback received on the Draft EIS, the State of Hawai'i, Department of Land and Natural Resources, Division of State Parks (State Parks) has worked on revising the master plan with a reorganized Hā'ena State Park Community Advisory Committee (HSPCAC) to address the concerns voiced by the larger community. As a result, the master plan presented in the Final EIS has been updated based on the feedback received from the public meetings, comments received, and subsequent extensive collaboration with the HSPCAC. As the planning consultant for State Parks, we offer the following responses to your comments.

We recognize your comments regarding equal access to the park for residents as well as visitors, and access to the park late at night for events such as moonsets. Entry fees for state parks are established by Hawai'i Administrative Rules (HAR) 13-146-6, which states that Hawai'i residents are exempt from paying park entry fees if they can show a valid Hawai'i ID. Other categories of fee exempt park users, such as registered volunteers, may be established at a later time. The visitor limits are a part of the park's adaptive management approach and will be instituted only during peak hours of park use, allowing visitors to enter before and after peak hours without being counted against the visitor limit. There will also be exemptions from the visitor limit total for special user groups from the community, such as cultural practitioners. Please see the "Visitor Limits" attachment from Section 2.5.4.3 of the Final EIS, which shows the verbatim changes from the Draft EIS for this section.

We also recognize your comments relating to accessing Kē'e Beach for launching and landing kayaks. The revised master plan restricts vehicle access along the corridor between the proposed park entry turnaround and Kē'e Beach due to the rockfall hazard and will only be permitted for special user groups such as lifeguards and those with ADA parking placards.

We acknowledge your concerns with existing traffic congestion, parking, and overcrowding, as well as your comments on the impact of tourism and regulations to address this impact. The revised master plan calls for an adaptive management approach for both the parking and the proposed visitor limits, which will be adjusted based on an average number of visitors rather than a set limit per day. The main parking lot is proposed to be separated into a fee-paying lot and non-fee-paying lot, which will also be adjusted daily to allow flexibility depending on future demand for parking and the potential use of the proposed shuttle.

Ms. Susie Ayers  
SUBJECT: COMMENTS ON THE HÄ'ENA STATE PARK MASTER PLAN DRAFT ENVIRONMENTAL  
IMPACT STATEMENT (EIS), HÄ'ENA, KAUAI, HAWAII  
Month XX, 2018  
Page 3

Mahalo nui for your input and participation in the environmental review process. Your letter will be included in the Final EIS. If you would like a copy of the Final EIS or portions thereof, please let us know. Otherwise, the electronic copy of the Final EIS will be available on the Office of Environmental Quality Control website at: [http://oeqc2.doh.hawaii.gov/EA\\_EIS\\_Library/2018-KA-FEIS-Haena-State-Park-Master-Plan.pdf](http://oeqc2.doh.hawaii.gov/EA_EIS_Library/2018-KA-FEIS-Haena-State-Park-Master-Plan.pdf) on \_\_\_\_\_, 2018.

Aloha,

Kimi Mikami Yuen, LEED AP BD+C  
Principal

Attachments: Visitor Limits  
Parking  
Roadways and Traffic  
Shuttle Service  
Master Plan Summary  
Figure 1: Master Plan

cc: The Honorable David Y. Ige, Governor  
Office of Environmental Quality Control  
Board of Land and Natural Resources  
Division of State Parks

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Please share your comments on the Hä'ena State Park Master Plan Draft EIS.

(If you would like a written response letter, please include your mailing address.)

This plan ultimately depends on having a shuttle - unlike that it is plan the rest of it really is a route point  
I am strongly opposed to any kind of gate that would close the road + restrict vehicle traffic to local residents - for liability, kayak launch + pickup + for enjoying the end of the road beach views during early morning hours + late night hours that would likely be out of standard "park hours", as well as backpack drop off + pick ups.

Nicholas Swin Ayers

PO BOX

Honolulu HI 96814







Month XX, 2018 - DRAFT

Ms. Susie Ayers  
P.O. Box 293  
Hanalei, HI 96714

**SUBJECT: COMMENTS ON THE HĀ'ENA STATE PARK MASTER PLAN  
DRAFT ENVIRONMENTAL IMPACT STATEMENT (EIS),  
HĀ'ENA, KAUAI, HAWAII**

Aloha Ms. Ayers,

Mahalo nui for your comment card dated September 11, 2015 from the community meeting held on August 19, 2015 regarding the Hā'ena State Park Master Plan Draft Environmental Impact Statement (EIS). We sincerely apologize for the delay in responding. Due to the feedback received on the Draft EIS, the State of Hawai'i, Department of Land and Natural Resources, Division of State Parks (State Parks) has worked on revising the master plan with a reorganized Hā'ena State Park Community Advisory Committee (HSPCAC) to address the concerns voiced by the larger community. As a result, the master plan presented in the Final EIS has been updated based on the feedback received from the public meetings, comments received, and subsequent extensive collaboration with the HSPCAC. As the planning consultant for State Parks, we offer the following responses to your comments.

We recognize your comment regarding the inclusion of a shuttle in the master plan. A proposed third party shuttle service has been analyzed as a part of the project's traffic impact assessment report, included in the EIS as Appendix F. The preferred scenario is to implement a third party shuttle from the Princeville facility at the start of Phase I, minimizing the need for visitor parking in the parking lot in the park. Please see the "Shuttle Service" attachment from Section 4.3.3 of the Final EIS, which shows the verbatim changes from the Draft EIS for this section.

We also recognize your comment regarding the inclusion of a gate in the master plan, and possible access restrictions to residents as a result. A new main gate is recommended to be installed to reduce visitor exposure to the rockfall hazards. Only those with special access to Kē'e, such as the lifeguards and rescue personnel, those with valid ADA parking placards or plates, park staff, the Hula Complex and other cultural practitioners will be allowed along the limited access portion of the highway. Please see the "Park Entry" attachment from Section 2.5.1.1 of the Final EIS, which shows the verbatim changes from the Draft EIS for this section.

The revised master plan calls for an adaptive management approach for both the parking and the proposed visitor limits, which will be adjusted based on an average number of visitors rather than a set limit per day. The limits will also be instituted only during peak hours of park use and will allow visitors to enter before and after peak hours without being counted against the visitor limit. Please see the "Visitor Limits" attachment from Section 2.5.4.3 of the Final EIS, which show the verbatim changes from the Draft EIS for this section.

THOMAS WITTEN, FASIA  
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Nathalie Razo

**From:** Alison Chang <runmakua@yahoo.com>  
**Sent:** Tuesday, September 08, 2015 2:52 PM  
**To:** Kimi Yuen  
**Subject:** Ke'e Masterplan

Mahalo nui for your input and participation in the environmental review process. Your letter will be included in the Final EIS. If you would like a copy of the Final EIS or portions thereof, please let us know. Otherwise, the electronic copy of the Final EIS will be available on the Office of Environmental Quality Control website at: [http://oeq2.doh.hawaii.gov/EA\\_EIS\\_Library/2018-09-08-Ke'e-FEIS-Haena-State-Park-Master-Plan.pdf](http://oeq2.doh.hawaii.gov/EA_EIS_Library/2018-09-08-Ke'e-FEIS-Haena-State-Park-Master-Plan.pdf) on 09/08/2018.

Aloha,

Kimi Mikami Yuen, LEED AP BD+C  
Principal

**Attachments:** Shuttle Service  
Park Entry  
Visitor Limits

**cc:** The Honorable David Y. Ige, Governor  
Office of Environmental Quality Control  
Board of Land and Natural Resources  
Division of State Parks

Aloha Ms. Yuen,

My name is Alison Chuang. I was born and raised on Kauai, and have been living in Ha'ena for 22 years. My partner David LaCock has been living in Ha'ena for 40 years. Our five children were born in Ha'ena and are being raised here. Although we agree there are issues that need to be addressed at Ke'e, we all OPPOSE the proposed masterplan. Mostly because we do not believe that protection of a place and its culture will be solved by a set of restriction, regulation, and rules. It dangerously boxes in even those that are trusting in and asking for this plan. Please reconsider. There is great potential for solution thru baby steps instead of one singular great plan that seems overwhelming, confusingly worded, and thru it's language format may even contain unintended trickery. This plan also unmistakably may restrict visitors to Ke'e, but the consequence of that is an overflow to other precious resources in Ha'ena. It could be an opening of a can of worms.

On behalf of myself and my ohana we humbly oppose the Ke'e masterplan.

Mahalo Nui,  
Alison



Month XX, 2018 - DRAFT

Ms. Alison Chuang  
P.O. Box 484  
Hanalei, HI 96714

**SUBJECT: COMMENTS ON THE HĀ'ENA STATE PARK MASTER PLAN  
DRAFT ENVIRONMENTAL IMPACT STATEMENT (EIS),  
HĀ'ENA, KAUA'I, HAWAII**

Aloha Ms. Chuang,

Mahalo nui for your emailed comment dated September 8, 2015 regarding the Hā'ena State Park Master Plan Draft Environmental Impact Statement (EIS). We sincerely apologize for the delay in responding. Due to the feedback received on the Draft EIS, the State of Hawai'i, Department of Land and Natural Resources, Division of State Parks (State Parks) has worked on revising the master plan with a reorganized Hā'ena State Park Community Advisory Committee (HSPCAC) to address the concerns voiced by the larger community. As a result, the master plan presented in the Final EIS has been updated based on the feedback received from the public meetings, comments received, and subsequent extensive collaboration with the HSPCAC. As the planning consultant for State Parks, we offer the following responses to your comments.

We recognize your concerns with regulating access to the park and the potential impact on neighboring communities and beaches. We also acknowledge your suggestions for incremental "baby steps" for implementing the proposed master plan and concern with regulation as a solution. The revised master plan calls for an adaptive management approach as a primary management concept for State Parks to adjust management decisions over time and allow flexibility. We acknowledge your overall concerns with implementing the master plan. The revised master plan is designed to adapt to future conditions and includes management guidelines to reflect this adaptive approach to address community concerns. Please see the attached section on **Adaptive Management** from the Final EIS. Another key management recommendation is to establish a permanent Cultural Advisory Group and Community Advisory Committee, which is described in **Section 2.5.4.2** of the Final EIS and attached for your reference. We recognize your comment concerning unintended consequences that may impact other important resources in Hā'ena. The intention of these key management recommendations is to monitor conditions over time and adapt as the State has more time to analyze user patterns and explore other options over time, and they are actively engaged in discussions regarding parking enforcement and increased fines along the roadway outside of the park as well.

Mahalo nui for your input and participation in the environmental review process. Your letter will be included in the Final EIS. If you would like a copy of the Final EIS or portions thereof, please let us know. Otherwise, the electronic copy of the Final EIS will be available on the Office of Environmental Quality Control website at [http://oeqc2.doh.hawaii.gov/EA\\_EIS\\_Library/2018--KA-FEIS-Haena-State-Park-Master-Plan.pdf](http://oeqc2.doh.hawaii.gov/EA_EIS_Library/2018--KA-FEIS-Haena-State-Park-Master-Plan.pdf) on **Month XX, 2018**.

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Aloha,

Kimi Mikami Yuen, LEED AP BD+C  
Principal

Attachments: Adaptive Management  
Cultural and Community Advisory Groups

cc: The Honorable David Y. Ige, Governor  
Office of Environmental Quality Control  
Board of Land and Natural Resources  
Division of State Parks

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Masterplan - DS1.docx

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**Nathalie Razo**

**From:** Lauren.A.Tanaka@hawaii.gov  
**Sent:** Tuesday, September 08, 2015 2:10 PM  
**To:** Curt.A.Cottrell@hawaii.gov; Russell.P.Kumabe@hawaii.gov;  
Alan.B.Carpenter@hawaii.gov; Kimi Yuen  
**Subject:** Fw: Ha'ena State Park

----- Forwarded by Lauren A Tanaka/DLNR/StateHUS on 09/08/2015 02:09 PM -----

---

**From:** Audrey Venneman <audieslam@hawaiiinter.net>  
**To:** Lauren.A.Tanaka@hawaii.gov,  
**Date:** 09/06/2015 03:25 PM  
**Subject:** Ha'ena State Park

---

Dear Ms. Tanaka,

After reading the proposed master plan for Ha'ena State Park and attending the community meeting on 8-19-15, I feel I must strongly oppose the plan at this time. It seems that before any park plan can be considered a concrete solution to the parking problem, and car traffic leading out to the park needs to be in place. Kuhio Hwy. is already over run with illegally parked cars with little to know enforcement. I am not blaming KPD for this, as their hands are tied since it is not their policy to tow illegally parked cars. It seems to be no problem for tourists to pay parking tickets since the amount is no more than they pay to park at the beach on the mainland. The plan as it is written, only allows for parking for 100 cars and 900 people.

The overflow of people would now be turned loose on the residential and conservation community of Ha'ena. Again, this is a RESIDENTIAL neighborhood! There are no parking lots or public facilities at Makua. We already have people wanting to park in our driveways as well as wander through our yards to find a way to the beach. The justification for this I'm told is . . . a. Where's your Aloha? b. Tourism pays your salaries. c. We paid big money for this. d. But we've been driving for hours in traffic for our day on the north shore. The new Master Plan doesn't address any of this. Yet it will dump all of the cars beyond the 100 limit back on to Kuhio Hwy. where again THERE IS NO PARKING! The only vague allusion to a solution is a mention of a possible, yet not yet realized shuttle. This was just tried and shut down when the public had the choice they wanted their cars not public transportation.

I would truly love to see improvements to Ha'ena State Park. I have lived in the community for almost 30 yrs. and the only successful solution I can see for visitors and the neighborhood, is to restrict cars entering the area to permitted cars only, and create several large parking areas outside the area. They could be in the Princeville and Hanalei business districts with shuttles available throughout the day, with many stops to show off our many beautiful natural and cultural points of interest. Permit parking has proven to work in many areas where there are large number of cars because of tourism. It would even bring in revenue to help run the shuttles since there would be a fee for each vehicle permitted. Businesses such as UPS, Fed Ex, and small businesses like gardeners could purchase a permit that can be moved to different trucks as needed to provide services. Also, guest permits could be made available, as

well as parking on ones own property for guests.

In addition to the issues of parking and number of cars, I am also Horrified that unless you are counted into the 900, locals would be turned away from the park unless they are part of a special group i.e. volunteers, a hula halau, kalo farmers. What if I just want to enjoy my beautiful park one morning, just because I do TPOB 1365, Hanalei, HI 96714hat. There was talk at the meeting about not discriminating against tourists, what about those of us who live here?

Please understand, Ms. Tanaka I love my community and am crying as I write this for fear that it will be ruined by people with all the best intentions, and not enough advance planning. Before it's to late, please don't go through with this plan.

Respectfully,

Audrey Venneman  
5-7560 Kuhio Hwy  
P.O. box 1365  
Hanalei, Hi. 96714





THOMAS WITTEN, ESQ.  
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Ms. Audrey Venneman  
SUBJECT: COMMENTS ON THE HĀ'ENA STATE PARK MASTER PLAN DRAFT ENVIRONMENTAL  
IMPACT STATEMENT (EIS), HĀ'ENA, KAUA'I, HAWAII  
Month XX, 2018  
Page 2

We recognize your concerns regarding access to the park for local residents. The visitor limits previously mentioned as a part of the park's adaptive management approach will be instituted only during peak hours of park use and will allow visitors to enter before and after peak hours without being counted against the visitor limit. Also, entry fees for state parks are established by Hawai'i Administrative Rules (HAR) 13-146-6, which states that Hawai'i residents are exempt from paying park entry fees if they can show a valid Hawai'i ID. Other categories of fee exempt park users, such as registered volunteers, may be established at a later time.

Mahalo nui for your input and participation in the environmental review process. Your letter will be included in the Final EIS. If you would like a copy of the Final EIS or portions thereof, please let us know. Otherwise, the electronic copy of the Final EIS will be available on the Office of Environmental Quality Control website at [http://oeqc2.doh.hawaii.gov/EA\\_EIS\\_Library/2018-\\_-KA-FEIS-Haena-State-Park-Master-Plan.pdf](http://oeqc2.doh.hawaii.gov/EA_EIS_Library/2018-_-KA-FEIS-Haena-State-Park-Master-Plan.pdf) on , 2018.

Aloha,

Kimi Mikami Yuen, LEED AP BD+C  
Principal

Attachments: Parking  
Roadways and Traffic  
Shuttle Service

cc: The Honorable David Y. Ige, Governor  
Office of Environmental Quality Control  
Board of Land and Natural Resources  
Division of State Parks

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Fw: Hā'ena State Park - J51.docx

Month XX, 2018 - DRAFT  
Ms. Audrey Venneman  
P.O. Box 1365  
Hanalei, HI 96714  
SUBJECT: COMMENTS ON THE HĀ'ENA STATE PARK MASTER PLAN  
DRAFT ENVIRONMENTAL IMPACT STATEMENT (EIS),  
HĀ'ENA, KAUA'I, HAWAII

Aloha Ms. Venneman,

Mahalo nui for your emailed comment dated September 8, 2015 regarding the Hā'ena State Park Master Plan Draft Environmental Impact Statement (EIS). We sincerely apologize for the delay in responding. Due to the feedback received on the Draft EIS, the State of Hawai'i, Department of Land and Natural Resources, Division of State Parks (State Parks) has worked on revising the master plan with a reorganized Hā'ena State Park Community Advisory Committee (HSPCAC) to address the concerns voiced by the larger community. As a result, the master plan presented in the Final EIS has been updated based on the feedback received from the public meetings, comments received, and subsequent extensive collaboration with the HSPCAC. As the planning consultant for State Parks, we offer the following responses to your comments.

We recognize your concerns regarding parking and traffic issues related to the master plan. The revised master plan calls for an adaptive management approach for both the parking and the proposed visitor limits, which will be adjusted based on an average number of visitors rather than a set limit per day. The main parking lot is proposed to be separated into a fee-paying lot and non-fee-paying lot, which will also be adjusted daily to allow flexibility depending on future demand for parking and the potential use of the proposed shuttle.

The Master Plan includes a combination of physical improvements and programmatic options that when applied in combination will have a positive impact on the existing roadway conditions.

Vehicle access beyond the main parking area to Ke'e beach is proposed to be reduced from the currently unrestricted conditions to special access only (ADA, lifeguards, and cultural practitioners). Restricting general vehicular access from the main parking area to Ke'e Beach will effectively eliminate illegal parking along the highway's shoulder, reduce the wear on the historic roadway's macadam surface, and reduce the number of visitors traveling in a potential rockfall hazard area. Please see the "Parking" and "Roadways and Traffic" attachments from the Final EIS, which show the verbatim changes from the Draft EIS for these sections.

We recognize your concerns regarding shuttle service options. A proposed third party shuttle service has been analyzed as a part of the project's traffic impact assessment report, included in the EIS as Appendix F. The preferred scenario is to implement a third party shuttle from the Princeville facility at the start of Phase I, minimizing the need for visitor parking in the parking lot in the park. Please see the "Shuttle Service" attachment from Section 4.3.3 of the Final EIS, which shows the verbatim changes from the Draft EIS for this section.

Please share your comments on the Hā'ena State Park Master Plan Draft EIS.

(If you would like a written response letter, please include your mailing address.)

1. extend comment period by 30 days
2. require impact fees from hotels  
vacation rentals to offset costs  
of shuttle to Kē'e.
3. require Hawaii Visitors Bureau  
to contribute funds to finance shuttle  
and shuttle infrastructure.
4. Continue community advisory  
committee permanently.



Ms Catherine Van De Veer  
PO Box 1585  
Hanalei, HI 96714-1585



HONOLULU HI 968  
03 SEP 2015 PM 1 L



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PBR HAWAII & Associates  
Attn: Kimi Yuen  
1001 Bishop Street, Suite 650  
Honolulu, HI 96813

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Ms. Catherine Van De Veer  
SUBJECT: COMMENTS ON THE HĀ'ENA STATE PARK MASTER PLAN DRAFT ENVIRONMENTAL  
IMPACT STATEMENT (EIS), HĀ'ENA, KAUAI, HAWAII  
Month XX, 2018  
Page 2

Aloha,

Kimi Mikami Yuen, LEED AP BD+C  
Principal

Attachment: Cultural and Community Advisory Group

cc: The Honorable David Y. Ige, Governor  
Office of Environmental Quality Control  
Board of Land and Natural Resources  
Division of State Parks

O:\Job\262627\01 DLNR-Haena State Park Master Plan\EIS\DEIS Responses\Mail Merge\2015-09-08 Catherine Van de Veer - JSI.docx

SUBJECT: COMMENTS ON THE HĀ'ENA STATE PARK MASTER PLAN  
DRAFT ENVIRONMENTAL IMPACT STATEMENT (EIS),  
HĀ'ENA, KAUAI, HAWAII

Aloha Ms. Van De Veer,

Mahalo nui for your comment card dated September 8, 2015 from the community meeting held on August 19, 2015 regarding the Hā'ena State Park Master Plan Draft Environmental Impact Statement (EIS). We sincerely apologize for the delay in responding. Due to the feedback received on the Draft EIS, the State of Hawai'i, Department of Land and Natural Resources, Division of State Parks (State Parks) has worked on revising the master plan with a reorganized Hā'ena State Park Community Advisory Committee (HSPCAC) to address the concerns voiced by the larger community. As a result, the master plan presented in the Final EIS has been updated based on the feedback received from the public meetings, comments received, and subsequent extensive collaboration with the HSPCAC. As the planning consultant for State Parks, we offer the following responses to your comments.

We recognize your comment regarding the length of the EIS comment period. The official 45-day public comment period on the DEIS began on July 23, 2015 and ended on September 8, 2015. However, State Parks held a public meeting on August 19, 2015 to gather more input on the DEIS and extended the DEIS public comment period until October 8, 2015. Comments on the DEIS received during this public comment period and the responses to the comments are incorporated in this FEIS and copies of those letters are included in EIS Section 13.0.

We recognize your comment regarding fees from private parties and organizations to fund a proposed shuttle service. A third-party shuttle service is supported by the design of the master plan with a drop off area near the front of the park, however, funding for such a third-party service is not a part of the State's master plan scope.

We recognize your comment regarding the continuation of a community advisory committee. The Hā'ena State Park Community Advisory Committee, or HSPCAC, has been established and will provide ongoing support and consultation on general park issues including the implementation of the master plan. The group has adopted a charter and plans to meet regularly, particularly when State Parks or the future management entity undertake any improvement projects or changes in park policy. This is described in Section 2.5.4.2 of the EIS and the verbatim description of the group is included in the "Cultural and Community Advisory Group" attachment.

Mahalo nui for your input and participation in the environmental review process. Your letter will be included in the Final EIS. If you would like a copy of the Final EIS or portions thereof, please let us know. Otherwise, the electronic copy of the Final EIS will be available on the Office of Environmental Quality Control website at [http://oeqc2.doh.hawaii.gov/EA\\_EIS\\_Library/2018\\_KA-FEIS-Haena-State-Park-Master-Plan.pdf](http://oeqc2.doh.hawaii.gov/EA_EIS_Library/2018_KA-FEIS-Haena-State-Park-Master-Plan.pdf) on \_\_\_\_\_, 2018.

**Nathalie Razo**

**From:** Hoku Cabebe <k.hokuokalani@gmail.com>  
**Sent:** Tuesday, September 08, 2015 5:00 PM  
**To:** Kimi Yuen  
**Subject:** Fwd: Na Makua o Halele'a petition against plans for Ke'e  
**Attachments:** Kee petition.pdf

----- Forwarded message -----  
From: **Hoku Cabebe** <k.hokuokalani@gmail.com>  
Date: Tue, Sep 8, 2015 at 4:58 PM  
Subject: Na Makua o Halele'a petition against plans for Ke'e  
To: Lauren A. Tanaka <lauren@hawaii.gov>, kyun@pbprhawaii.com  
Cc: mayori@kauai.gov, councilmembers@kauai.gov, DUSTIN BARCA <barca4mayor@gmail.com>

Aloha,  
Attached is a petition from 'ohana of Halele'a who strongly oppose the current plans for Ke'e as introduced to us recently at the meeting in Hanalei. We are unified in our decision to oppose the development of sacred Ke'e. These signatures were gathered over the last 3 days. Please let me know how we can follow the plans from this stage as we are committed to protecting Ke'e.

Mahalo,  
Hoku Cabebe

September 4, 2015  
Aloha,

This petition is to the different entities involved in the new state plans for Ke'e and Ha'ena. We the makua of the generational descendants of Halele'a and our supporters are against the new plans by the state and all currently involved with these plans for the wahi pana and wahi kapu of Ke'e. We do not think that the current plans will accomplish the goals that we seek which is to restore our subsistence area and to instill the traditions left to us by our kupuna in our keiki. The current plans that have been put forth encourages a robust tourist destination in a conservation area with more development and no resolve to the car congestion from Princeville to Ke'e and appears to be a land and money grab by those who have benefited from grants and non profits for many, many years while the lineal descendants experience declines in health and cannot access our sustainable fishing and farming areas. We feel the plans further distance the kanaka maoli of this area from their rightful kuleana. We support a new plan that looks at the overall picture of the problems that Ke'e face as well as rightful and pono land ownership and stewardship by the original 'ohana of the area, not a open public bidding process. There are many other issues that need to be addressed in the plans so we ask that you please stop this process and let us evaluate, reorganize and restructure so pono can be restored to our beloved Ha'ena. The two weeks you have given us since the announcement of these plans is not enough.

Mahalo me ke aloha,

- 1) Lann Machado, Wainia, *Lann Machado*
- 2) Rina Speer, Anahola, *Rina Speer*
- 3) Kai Poi Pa, Hanalei, *Kai Poi Pa*
- 4) Mo'ohana Kawaka, Anahola, *Mo'ohana Kawaka*
- 5) Daelene Pa, Anahola, *Daelene Pa*
- 6) Ivalani Martin, Anahola, *Ivalani Martin*
- 7) Miki Oluwa, Wainia, *Miki Oluwa*
- 8) Eubank Oliver, HAENA, *Eubank Oliver*
- 9) Samiela Kawaka, Anahola, *Samiela Kawaka*
- 10) Noh Nuanu, Anahola, *Noh Nuanu*
- 11) Viana Maki (Hana), *Viana Maki*
- 12) Lexi Oluwa (Haena), *Lexi Oluwa*
- 13) Howard T. Yokota III, (HA'ENA), *Howard T. Yokota III*



September 4, 2015

Aloha,

This petition is to the different entities involved in the new state plans for Ke'e and Ha'ena. We the makua of the generational descendants of Halele'a and our supporters are against the new plans by the state and all currently involved with these plans for the wahi pana and wahi kapu of Ke'e. We do not think that the current plans will accomplish the goals that we seek which is to restore our subsistence area and to instill the traditions left to us by our kupuna in our keiki. The current plans that have been put forth encourages a robust tourist destination in a conservation area with more development and no resolve to the car congestion from Princeville to Ke'e and appears to be a land and money grab by those who have benefited from grants and non profits for many, many years while the lineal descendants experience declines in health and cannot access our sustainable fishing and farming areas. We feel the plans further distance the kanaka maoli of this area from their rightful kuleana. We support a new plan that looks at the overall picture of the problems that Ke'e face as well as rightful and pono land ownership and stewardship by the original 'ohana of the area, not a open public bidding process. There are many other issues that need to be addressed in the plans so we ask that you please stop this process and let us evaluate, reorganize and restructure so pono can be restored to our beloved Ha'ena. The two weeks you have given us since the announcement of these plans is not enough.

Mahalo me ke aloha,

- 14) Kathleen Sumno } 208-2413  
15) Dampy Oli Sumno }  
16) Noah Schwartz Kilaua  
17) Stephen McCarthy Sr. Wm Haena  
18) Miki L. Mican Lōi Kealia  
19) [Signature]  
20) Lance Taniguchi-Fu Kilaua  
21) Kailaloha Olandan HAINA  
22) [Signature]  
23) Daniel Gumbau Princeville 212-2187  
24) Elmer J. [Signature] Haialei  
25) Jesse Steele / Gene Hale / P.O. Box 1127 Haialei, HI 96714  
26) Kanaloa Black-kalele / [Signature] 212-51510

September 4, 2015

Aloha,

This petition is to the different entities involved in the new state plans for Ke'e and Ha'ena. We the makua of the generational descendants of Halele'a and our supporters are against the new plans by the state and all currently involved with these plans for the wahi pana and wahi kapu of Ke'e. We do not think that the current plans will accomplish the goals that we seek which is to restore our subsistence area and to instill the traditions left to us by our kupuna in our keiki. The current plans that have been put forth encourages a robust tourist destination in a conservation area with more development and no resolve to the car congestion from Princeville to Ke'e and appears to be a land and money grab by those who have benefited from grants and non profits for many, many years while the lineal descendants experience declines in health and cannot access our sustainable fishing and farming areas. We feel the plans further distance the kanaka maoli of this area from their rightful kuleana. We support a new plan that looks at the overall picture of the problems that Ke'e face as well as rightful and pono land ownership and stewardship by the original 'ohana of the area, not a open public bidding process. There are many other issues that need to be addressed in the plans so we ask that you please stop this process and let us evaluate, reorganize and restructure so pono can be restored to our beloved Ha'ena. The two weeks you have given us since the announcement of these plans is not enough.

Mahalo me ke aloha, [Signature] Sign addresses

- 27) Braden Ziegler / Br Z / Haialei, HI 96714 P.O. Box 1540  
28) Talia [Signature] Haialei HI 96714 P.O. Box 87  
29) Jaymie Kline / P.O. Box 1421 Hanalei HI 96714  
30) Mishia Anuehea Taylor P.O. Box 3715 Hanalei  
31) Sophia Levesque 20. Box 993 Hanalei HI 96750  
32) Koral McCluskey P.O. Box 1100 Hanalei, 96714  
33) Alysia Pualo-Chandler P.O. Box 1142 Hanalei, 96714  
34) Elijah Frank Eli [Signature] P.O. Box 1462 Hanalei, HI 96714  
35) Kateo Frank Kalo [Signature] P.O. Box 1462 Hanalei, HI 96714  
36) Eric [Signature] P.O. Box 141 Hanalei HI 96714  
37) Dean Barthel-Dair P.O. Box 421 Hanalei 96714  
38) Kaldan Paulini-Chandler P.O. Box 195 Hanalei, 96714 HI  
39) JADE CANDEARIA P.O. Box 1731 Hanalei 96714

September 4, 2015

Aloha,

This petition is to the different entities involved in the new state plans for Ke'e and Ha'e'ena. We the makua of the generational descendants of Halei'e'a and our supporters are against the new plans by the state and all currently involved with these plans for the wahi pana and wahi kapu of Ke'e. We do not think that the current plans will accomplish the goals that we seek which is to restore our subsistence area and to instill the traditions left to us by our kupuna in our keiki. The current plans that have been put forth encourages a robust tourist destination in a conservation area with more development and no resolve to the car congestion from Princeville to Ke'e and appears to be a land and money grab by those who have benefited from grants and non profits for many, many years while the lineal descendants experience declines in health and cannot access our sustainable fishing and farming areas. We feel the plans further distance the kanaka maoi of this area from their rightful kuleana. We support a new plan that looks at the overall picture of the problems that Ke'e face as well as rightful and pono land ownership and stewardship by the original 'ohana of the area, not a open public bidding process. There are many other issues that need to be addressed in the plans so we ask that you please stop this process and let us evaluate, reorganize and restructure so pono can be restored to our beloved Ha'e'ena. The two weeks you have given us since the announcement of these plans is not enough.

Mahalo me ke aloha,

- 40) KUNDU  
41) John Rivera Lihue  
42) Elizabeth Nuhina Ananda  
43) Keawe  
44) Nana Pa  
45) Aiki Peleketi  
46) Samantha Pa Lihue  
47) Wainiha  
48) Waiwaha  
49) Mandy Hadley  
50) Kina  
51) Wainiha  
52) Louise Hansen  
Mack Hansen

September 4, 2015

Aloha,

This petition is to the different entities involved in the new state plans for Ke'e and Ha'e'ena. We the makua of the generational descendants of Hale'e'a and our supporters are against the new plans by the state and all currently involved with these plans for the wahi pana and wahi kapu of Ke'e. We do not think that the current plans will accomplish the goals that we seek which is to restore our subsistence area and to instill the traditions left to us by our kupuna in our keiki'. The current plans that have been put forth encourages a robust tourist destination in a conservation area with more development and no resolve to the car congestion from Princeville to Ke'e and appears to be a land and money grab by those who have benefited from grants and non profits for many, many years while the lineal descendants experience declines in health and cannot access our sustainable fishing and farming areas. We feel the plans further distance the kanaka maoli of this area from their rightful kuleana. We support a new plan that looks at the overall picture of the problems that Ke'e face as well as rightful and pono land ownership and stewardship by the original 'ohana of the area, not a open public bidding process. There are many other issues that need to be addressed in the plans so we ask that you please stop this process and let us evaluate, reorganize and restructure so pono can be restored to our beloved Ha'e'ena. The two weeks you have given us since the announcement of these plans is not enough.

Mahalo me ke aloha.

- 53) Rylan Higa  
54) Justin McKenna  
55) Makana Contreras  
56) Roxanne Davis  
57) Nancie Martin  
58) SENA SCHEMER  
59) Charity Kaunamau  
60) Kelecha Langhin  
61) Mona Yarbery  
62) Windy Schrader  
63) Nina Yarbery  
64) Kahua Zick  
65) Deannise Dennis



September 4, 2015

Aloha,

This petition is to the different entities involved in the new state plans for Ke'e and Ha'ena. We the makua of the generational descendants of Halele'a and our supporters are against the new plans by the state and all currently involved with these plans for the wahi pana and wahi kapu of Ke'e. We do not think that the current plans will accomplish the goals that we seek which is to restore our subsistence area and to instill the traditions left to us by our kupuna in our keiki. The current plans that have been put forth encourages a robust tourist destination in a conservation area with more development and no resolve to the car congestion from Princeville to Ke'e and appears to be a land and money grab by those who have benefited from grants and non profits for many, many years while the lineal descendants experience declines in health and cannot access our sustainable fishing and farming areas. We feel the plans further distance the kanaka maoli of this area from their rightful kuleana. We support a new plan that looks at the overall picture of the problems that Ke'e face as well as rightful and pono land ownership and stewardship by the original 'ohana of the area, not an open public bidding process. There are many other issues that need to be addressed in the plans so we ask that you please stop this process and let us evaluate, reorganize and restructure so pono can be restored to our beloved Ha'ena. The two weeks you have given us since the announcement of these plans is not enough.

Mahalo me ke aloha,

- 66) Malia Vasallo Jaula Vasallo Kilauea  
67) Josh Vasallo ~~Josh Vasallo~~ Kilauea  
68) Alysius K. Chandler ~~Waiwaha~~ Haena Party 243 Hanalei sept 5. 2015  
69) Deep Country NRB Jack Correa  
70) Wainiha  
71) Lilani Waipa Joey Koehne  
72) Kulco Kamalani Kaleo Kamalani  
73) Alakai Correa Deep Country  
74) Tyson Gomez ~~Alakai Correa~~  
75) Jessica Drake Wainiha Drake  
76) Mahina Loughlin Wainiha Loughlin  
77) Tapa Loughlin Wainiha Loughlin  
78) Linda Debohan Wainiha Debohan

September 4, 2015

Aloha,

This petition is to the different entities involved in the new state plans for Ke'e and Ha'ena. We the Makua of the generational descendants of Halele'a and our supporters are against the new plans by the state and all currently involved with these plans for the wahi pana and wahi kapu of Ke'e. We do not think that the current plans will accomplish the goals that we seek which is to restore our subsistence area and to instill the traditions left to us by our kupuna in our keiki. The current plans that have been put forth encourages a robust tourist destination in a conservation area with more development and no resolve to the car congestion from Princeville to Ke'e and appears to be a land and money grab by those who have benefited from grants and non profits for many, many years while the lineal descendants experience declines in health and cannot access our sustainable fishing and farming areas. We feel the plans further distance the kanaka maoli of this area from their rightful kuleana. We support a new plan that looks at the overall picture of the problems that Ke'e face as well as rightful and pono land ownership and stewardship by the original 'ohana of the area, not an open public bidding process. There are many other issues that need to be addressed in the plans so we ask that you please stop this process and let us evaluate, reorganize and restructure so pono can be restored to our beloved Ha'ena. The two weeks you have given us since the announcement of these plans is not enough.

Mahalo me ke aloha,












- 79) Sonja Cabebe Sonja Cabebe Kilauea  
80) DUSTIN BARCA ~~Dustin Barca~~ Halele'a  
81) Stephanie Smith ~~Stephanie Smith~~ Kilauea  
82) Crystalyn ~~Crystalyn~~ Hanalei  
83) Paul Bryan ~~Paul Bryan~~ Hanalei  
84) Molly Jason ~~Molly Jason~~ Haena  
85) Brian Tangueli ~~Brian Tangueli~~ Haena  
86) YOGI LACOCK ~~Yogi Lacock~~ Haena  
87) Lawrence tbeta ~~Lawrence tbeta~~ Haena  
88) Remy Inarred ~~Remy Inarred~~ Haena  
89) MARCO RABOYAN JR. ~~Marco Raboyan Jr.~~ Haena

September 4, 2015

Aloha,

This petition is to the different entities involved in the new state plans for Ke'e and Ha'e'ena. We the Makua of the generational descendants of Hale'ale'a and our supporters are against the new plans by the state and all currently involved with these plans for the wahi pana and wahi kapu of Ke'e. We do not think that the current plans will accomplish the goals that we seek which is to restore our subsistence area and to instill the traditions left to us by our kupuna in our keiki. The current plans that have been put forth encourages a robust tourist destination in a conservation area with more development and no resolve to the car congestion from Princeville to Ke'e and appears to be a land and money grab by those who have benefited from grants and non profits for many, many years while the lineal descendants experience declines in health and cannot access our sustainable fishing and farming areas. We feel the plans further distance the kanaka maoli of this area from their rightful kuleana. We support a new plan that looks at the overall picture of the problems that Ke'e face as well as rightful and pono land ownership and stewardship by the original 'ohana of the area, not an open public bidding process. There are many other issues that need to be addressed in the plans so we ask that you please stop this process and let us evaluate, reorganize and restructure so pono can be restored to our beloved Ha'e'ena. The two weeks you have given us since the announcement of these plans is not enough.

Mahalo me ke aloha,

- 90) Kura L. Makoa  Haena, Kauai.
- 91) Kim Ross  Anahulu.
- 92) BLAKE ANAKAHEA  Belle Lualaba
- 93) KEONI ADVENTO  ~~Haena, HI.~~
- 94) Lauren Ross  HANAUI
- 95) Amber Stevenson  Analea, HI
- 96) Greg Sadorn  Kapala, HI,
- 97) Shante Sadorn  Lihue, HI
- 98) Skyler Sadorn  Lihue, HI.
- 99) Ting Buchner  Hanalei, HI.
- 100) Stephanie Downs  Wainane

September 4, 2015

Aloha.

This petition is to the different entities involved in the new state plans for Ke'e and Ha'e'ena. We the Makua of the generational descendants of Hale'a'e and our supporters are against the new plans by the state and all currently involved with these plans for the wahi pana and wahi kapu of Ke'e. We do not think that the current plans will accomplish the goals that we seek which is to restore our subsistence area and to instill the traditions left to us by our kupuna in our keiki. The current plans that have been put forth encourages a robust tourist destination in a conservation area with more development and no resolve to the car congestion from Princeville to Ke'e and appears to be a land and money grab by those who have benefited from grants and non profits for many, many years while the lineal descendants experience declines in health and cannot access our sustainable fishing and farming areas. We feel the plans further distance the kanaka maoli of this area from their rightful kuleana. We support a new plan that looks at the overall picture of the problems that Ke'e face as well as rightful and pono land ownership and stewardship by the original 'ohana of the area, not an open public bidding process. There are many other issues that need to be addressed in the plans so we ask that you please stop this process and let us evaluate, reorganize and restructure so pono can be restored to our beloved Ha'e'ena. The two weeks you have given us since the announcement of these plans is not enough.

Mahalo me ke aloha,

- 101) Clay Abobo / My ~~Wife~~  
Haena, Kamei  
Hanalei, Kauai
- 102) Thane To Ponima / King Pono  
Hanalei, Kauai
- 103) Joseph Ponima / Popo Jomo  
Hanalei, Kauai
- 104) Egetauversberg / Kwetzy Mer.  
Kilauea HI
- 105) Kuname mepvera / Kunu m  
Kilauea
- 106) Tiralei MAHUKI  
HANALEI, HI 96714
- 107) AINU ME CHAEC HAUMEA  
near Hanalei  
Hanalei 96714
- 108) Ezera K. Mahuki / Ezerah K. Mahuki  
L B  
P.O BOX 361 Hanalei
- 109) Love Bernstein / L B  
Po Box 129, Hanalei
- 110) Jacob T Naha / Jacob T Naha  
PO Box 23, Hanalei
- 111) Mholala Nona / Mholala Nona  
Box 23, Hanalei



September 4, 2015

Aloha,

This petition is to the different entities involved in the new state plans for Ke'e and Ha'e'ena. We the Makua of the generational descendants of Hale'e'a and our supporters are against the new plans by the state and all currently involved with these plans for the wahi pana and wahi kapu of Ke'e. We do not think that the current plans will accomplish the goals that we seek which is to restore our subsistence area and to instill the traditions left to us by our kupuna in our keiki. The current plans that have been put forth encourages a robust tourist destination in a conservation area with more development and no resolve to the car congestion from Princeville to Ke'e and appears to be a land and money grab by those who have benefitted from grants and non profits for many, many years while the lineal descendants experience declines in health and cannot access our sustainable fishing and farming areas. We feel the plans further distance the kanaka maoli of this area from their rightful kuleana. We support a new plan that looks at the overall picture of the problems that Ke'e face as well as rightful and pono land ownership and stewardship by the original 'ohana of the area, not an open public bidding process. There are many other issues that need to be addressed in the plans so we ask that you please stop this process and let us evaluate, reorganize and restructure so pono can be restored to our beloved Ha'e'ena. The two weeks you have given us since the announcement of these plans is not enough.

Mahalo me ke aloha,

- [illegible]

September 4, 2015

Aloha,

This petition is to the different entities involved in the new state plans for Ke'e and Ha'e'ena. We the Makua of the generational descendants of Halele'a and our supporters are against the new plans by the state and all currently involved with these plans for the wahi pana and wahi kapu of Ke'e. We do not think that the current plans will accomplish the goals that we seek which is to restore our subsistence area and to instill the traditions left to us by our kupuna in our keiki. The current plans that have been put forth encourages a robust tourist destination in a conservation area with more development and no resolve to the car congestion from Princeville to Ke'e and appears to be a land and money grab by those who have benefited from grants and non profits for many, many years while the lineal descendants experience declines in health and cannot access our sustainable fishing and farming areas. We feel the plans further distance the kanaka maoli of this area from their rightful kuleana. We support a new plan that looks at the overall picture of the problems that Ke'e face as well as rightful and pono land ownership and stewardship by the original 'ohana of the area, not an open public bidding process. There are many other issues that need to be addressed in the plans so we ask that you please stop this process and let us evaluate, reorganize and restructure so pono can be restored to our beloved Ha'e'ena. The two weeks you have given us since the announcement of these pla is not enough.

**Mahalo me ke aloha,**

- |      |                  |                  |           |
|------|------------------|------------------|-----------|
| 123) | Melanie Airon    | Melanie Airon    | Kiluea    |
| 124) | Jacob Airon      | Jacob Airon      | Kiluea    |
| 125) | Sarah Martin     | Sarah Martin     | Hanalei   |
| 126) | Jolene Hergert   | Jolene Hergert   | Kiluea    |
| 127) | David Laake      | David Laake      | Hanalei   |
| 128) | Allison Laake    | Allison Laake    | Hanalei   |
| 129) | Daisy Laake      | Daisy Laake      | Halelea   |
| 130) | Koa Cabebe       | Kathryn Baileyak | Hanalei   |
| 131) | Kathryn Baileyak | Karla J. Bailey  | Kiluea    |
| 132) | Karla J. Bailey  | Heave Colman     | Kahiliwai |
| 133) | Heave Colman     | Susann Maheloa   | Anahola   |
| 134) | Susann Maheloa   |                  |           |



Month XX, 2018-DRAFT

THOMAS WITTEN, FASIA  
Chairman / Principal

R. SEAN DUNCAN, ASIA  
President / Principal

RUSSELL Y. J. CHUNG, FASIA, LEED® AP BD+C  
Executive Vice President / Principal

VINCENT SHIGEKUNI  
Vice President / Principal

GRANT T. MURAKAMI, AIA®, LEED® AP BD+C  
Vice President / Principal

TOM SCHNELL, AICP  
Principal

KIMI MIKAMI YUEN, LEED® AP BD+C  
Principal

W. FRANK BRADY, FASIA  
Chairman Emeritus

ANN MIKADO BERNHARDT, PhD  
Project Director

RAMAN R. M. TAMM  
Cultural Sustainability Planner

RAYMOND T. HIGA, ASIA  
Senior Associate

GATE CULLISON, AICP  
Senior Associate

MARC SHIMATSU, ASIA  
Senior Associate

DACHENG DONG, LEED® AP  
Senior Associate

SCOTT MURAKAMI, ASIA, LEED® AP  
Associate

MICHAEL MCHILLEN, ASIA, LEED® AP  
Associate

NATHALIE BAGO  
Associate

HONOLULU OFFICE  
1001 Bishop Street, Suite 650  
Honolulu, Hawaii 96813-3484  
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Fax: (808) 523-1402  
E-mail: syadming@pbrhawaii.com

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PLANNING • LANDSCAPE ARCHITECTURE • ENVIRONMENTAL STUDIES • ENTITLEMENTS / PERMITTING • GRAPHIC DESIGN

Ms. Hoku Cabebe  
SUBJECT: COMMENTS ON THE HÄ'ENA STATE PARK MASTER PLAN DRAFT ENVIRONMENTAL  
IMPACT STATEMENT (EIS), HÄ'ENA, KAUA'I, HAWAII  
Month XX, 2018  
Page 2

Aloha,

Kimi Mikami Yuen, LEED AP BD+C  
Principal

Attachments: Master Plan Summary  
Figure 1: Master Plan

cc: The Honorable David Y. Ige, Governor  
Office of Environmental Quality Control  
Board of Land and Natural Resources  
Division of State Parks

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SUBJECT: COMMENTS ON THE HÄ'ENA STATE PARK MASTER PLAN  
DRAFT ENVIRONMENTAL IMPACT STATEMENT (EIS),  
HÄ'ENA, KAUA'I, HAWAII

Aloha Ms. Cabebe,

Mahalo nui for your email dated September 8, 2015 with the petition signed by the 'ohana of Halele'a regarding the Hä'ena State Park Master Plan Draft Environmental Impact Statement (EIS). We sincerely apologize for the delay in responding. As a member of the reorganized Hä'ena State Park Community Advisory Committee (HSPCAC), you know the State of Hawai'i, Department of Land and Natural Resources, Division of State Parks (State Parks) has worked on revising the master plan with the HSPCAC to address the concerns voiced by the larger community. As a result, the master plan presented in the Final EIS has been updated based on the feedback received from the public meetings, comments received, and subsequent extensive collaboration with the HSPCAC. As the planning consultant for State Parks, we offer the following responses to your comments.

We appreciate you and the other signatories of the petition for voicing your objection to the previous version of the master plan. We needed to hear the voices of the next generation of Halele'a 'ohana and we thank you for your input. The plan has been greatly simplified with less development including the elimination of the Education and Cultural Center and Caretaker's Cottage. It also encourages the development of a North Shore shuttle to reduce car congestion. Please see the revised Master Plan Summary from Section 1.9.1 and Figure 1 showing the updated master plan graphic from the Final EIS. The full master plan report is available for download at the State Parks Hä'ena State Park website: <http://dlmr.hawaii.gov/dsp/parks/kaui/haena-state-park/>.

As previously proposed, the visitor limits would not include cultural practitioners, lo'i workers, and hunters. State Parks wants to encourage local residents to return to the park and so your continued input is welcomed should access become an issue.

The plan has been revised based on the input received and the public comment period for the Draft EIS was extended for additional month to allow more time for public comment.

Mahalo nui for your dedication to Hä'ena State Park and your participation in the reorganized HSPCAC. Please share this response with those who signed the petition but did not leave an address. Your email and the petition will be included in the Final EIS. If you would like a copy of the Final EIS or portions thereof, please let us know. Otherwise, the electronic copy of the Final EIS will be available on the Office of Environmental Quality Control website at: [http://oeq2.deh.hawaii.gov/EA\\_EIS\\_Library/2018--KA-EIS-Haena-State-Park-Master-Plan.pdf](http://oeq2.deh.hawaii.gov/EA_EIS_Library/2018--KA-EIS-Haena-State-Park-Master-Plan.pdf) on , 2018.



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Ms. Koral McCarthy  
SUBJECT: COMMENTS ON THE HĀ'ENA STATE PARK MASTER PLAN DRAFT ENVIRONMENTAL  
IMPACT STATEMENT (EIS), HĀ'ENA, KAUAI, HAWAII  
Month XX, 2018  
Page 2

Aloha,

Kimi Mikami Yuen, LEED AP BD+C  
Principal

Attachments: Master Plan Summary  
Figure 1: Master Plan

cc: The Honorable David Y. Ige, Governor  
Office of Environmental Quality Control  
Board of Land and Natural Resources  
Division of State Parks

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SUBJECT: COMMENTS ON THE HĀ'ENA STATE PARK MASTER PLAN  
DRAFT ENVIRONMENTAL IMPACT STATEMENT (EIS),  
HĀ'ENA, KAUAI, HAWAII

Aloha Ms. McCarthy,

Mahalo nui for the petition dated September 4, 2015 which you signed along with members of the 'ohana of Halele'a regarding the Hā'ena State Park Master Plan Draft Environmental Impact Statement (EIS). We sincerely apologize for the delay in responding. As a member of the reorganized Hā'ena State Park Community Advisory Committee (HSPCAC), you know the State of Hawai'i, Department of Land and Natural Resources, Division of State Parks (State Parks) has worked on revising the master plan with the HSPCAC to address the concerns voiced by the larger community. As a result, the master plan presented in the Final EIS has been updated based on the feedback received from the public meetings, comments received, and subsequent extensive collaboration with the HSPCAC. As the planning consultant for State Parks, we offer the following responses to your comments.

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Ms. Talia Abubo  
SUBJECT: COMMENTS ON THE HĀ'ENA STATE PARK MASTER PLAN DRAFT ENVIRONMENTAL  
IMPACT STATEMENT (EIS), HĀ'ENA, KAUA'I, HAWAII  
Month XX, 2018  
Page 2

Aloha,

Kimi Mikami Yuen, LEED AP BD+C  
Principal

Attachments: Master Plan Summary  
Figure 1: Master Plan

cc: The Honorable David Y. Ige, Governor  
Office of Environmental Quality Control  
Board of Land and Natural Resources  
Division of State Parks

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SUBJECT: COMMENTS ON THE HĀ'ENA STATE PARK MASTER PLAN  
DRAFT ENVIRONMENTAL IMPACT STATEMENT (EIS),  
HĀ'ENA, KAUA'I, HAWAII

Aloha Ms. Abubo,

Mahalo for the September 4, 2015 petition, which you signed along with members of the 'ohana of Halele'a regarding the Hā'ena State Park Master Plan Draft Environmental Impact Statement (EIS). We sincerely apologize for the delay in responding. The Department of Land and Natural Resources, Division of State Parks (State Parks) has been working with a reorganized Hā'ena State Park Community Advisory Committee (HSPCAC) to revise the master plan based on the concerns voiced by the larger community. Ms. Hoku Cabebe and Ms. Koral McCarthy, who also signed the petition, have been participating as members of the HSPCAC and the master plan presented in the Final EIS has been updated based on the feedback. As the planning consultant for State Parks, we offer the following responses to your comments.

We appreciate you and the other signatories of the petition for voicing your objection to the previous version of the master plan. We needed to hear the voices of the next generation of Halele'a 'ohana and we thank you for your input. The plan has been greatly simplified with less development including the elimination of the Education and Cultural Center and Caretaker's Cottage. It also encourages the development of a North Shore shuttle to reduce car congestion. Please see the revised Master Plan Summary from Section 1.9.1 and Figure 1 showing the updated master plan graphic from the Final EIS. The full master plan report is available for download at the State Parks Hā'ena State Park website: <http://dlnr.hawaii.gov/dsp/parks/kaui/haena-state-park/>.

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<http://oeq2.doh.hawaii.gov/EA-EIS/Library/2018--KA-FEIS-Haena-State-Park-Master-Plan.pdf> on , 2018





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Mr. Beau Blair  
SUBJECT: COMMENTS ON THE HÄ'ENA STATE PARK MASTER PLAN DRAFT ENVIRONMENTAL  
IMPACT STATEMENT (EIS), HÄ'ENA, KAUA'I, HAWAII  
Month XX, 2018  
Page 2

Aloha,

Kimi Mikami Yuen, LEED AP BD+C  
Principal

Attachments: Master Plan Summary  
Figure 1: Master Plan

cc: The Honorable David Y. Ige, Governor  
Office of Environmental Quality Control  
Board of Land and Natural Resources  
Division of State Parks

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SUBJECT: COMMENTS ON THE HÄ'ENA STATE PARK MASTER PLAN  
DRAFT ENVIRONMENTAL IMPACT STATEMENT (EIS),  
HÄ'ENA, KAUA'I, HAWAII

Aloha Mr. Blair,

Mahalo for the September 4, 2015 petition, which you signed along with members of the 'ohana of Halele'a regarding the Hä'ena State Park Master Plan Draft Environmental Impact Statement (EIS). We sincerely apologize for the delay in responding. The Department of Land and Natural Resources, Division of State Parks (State Parks) has been working with a reorganized Hä'ena State Park Community Advisory Committee (HSPCAC) to revise the master plan based on the concerns voiced by the larger community. Ms. Hoku Cabebe and Ms. Koral McCarthy, who also signed the petition, have been participating as members of the HSPCAC and the master plan presented in the Final EIS has been updated based on the feedback. As the planning consultant for State Parks, we offer the following responses to your comments.

We appreciate you and the other signatories of the petition for voicing your objection to the approved version of the master plan. We needed to hear the voices of the next generation of Halele'a 'ohana and we thank you for your input. The plan has been greatly simplified with less development including the elimination of the Education and Cultural Center and Caretaker's Cottage. It also encourages the development of a North Shore shuttle to reduce car congestion. Please see the revised Master Plan Summary from Section 1.9.1 and Figure 1 showing the updated master plan graphic from the Final EIS. The full master plan report is available for download at the State Parks Hä'ena State Park website: <http://dlmr.hawaii.gov/dsp/parks/kaui/haena-state-park/>.

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Ms. Love Bernheim  
SUBJECT: COMMENTS ON THE HĀ'ENA STATE PARK MASTER PLAN DRAFT ENVIRONMENTAL  
IMPACT STATEMENT (EIS), HĀ'ENA, KAUA'I, HAWAII  
Month XX, 2018  
Page 2

Aloha,

Kimi Mikami Yuen, LEED AP BD+C  
Principal

Attachments: Master Plan Summary  
Figure 1: Master Plan

cc: The Honorable David Y. Ige, Governor  
Office of Environmental Quality Control  
Board of Land and Natural Resources  
Division of State Parks

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Love - KY.docx

SUBJECT: COMMENTS ON THE HĀ'ENA STATE PARK MASTER PLAN  
DRAFT ENVIRONMENTAL IMPACT STATEMENT (EIS),  
HĀ'ENA, KAUA'I, HAWAII

Aloha Ms. Bernheim,

Mahalo for the September 4, 2015 petition, which you signed along with members of the 'ohana of Halele'a regarding the Hā'ena State Park Master Plan Draft Environmental Impact Statement (EIS). We sincerely apologize for the delay in responding. The Department of Land and Natural Resources, Division of State Parks (State Parks) has been working with a reorganized Hā'ena State Park Community Advisory Committee (HSPCAC) to revise the master plan based on the concerns voiced by the larger community. Ms. Hoku Cabebe and Ms. Koral McCarthy, who also signed the petition, have been participating as members of the HSPCAC and the master plan presented in the Final EIS has been updated based on the feedback. As the planning consultant for State Parks, we offer the following responses to your comments.

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Month XX, 2018 - DRAFT

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Ms. Mohala Bond  
SUBJECT: COMMENTS ON THE HĀ'ENA STATE PARK MASTER PLAN DRAFT ENVIRONMENTAL  
IMPACT STATEMENT (EIS), HĀ'ENA, KAUA'I, HAWAII  
Month XX, 2018  
Page 2

Aloha,

Kimi Mikami Yuen, LEED AP BD+C  
Principal

Attachments: Master Plan Summary  
Figure 1: Master Plan

cc: The Honorable David Y. Ige, Governor  
Office of Environmental Quality Control  
Board of Land and Natural Resources  
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SUBJECT: COMMENTS ON THE HĀ'ENA STATE PARK MASTER PLAN  
DRAFT ENVIRONMENTAL IMPACT STATEMENT (EIS),  
HĀ'ENA, KAUA'I, HAWAII

Aloha Ms. Bond,

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Ms. Jade Candelaria  
SUBJECT: COMMENTS ON THE HĀ'ENA STATE PARK MASTER PLAN DRAFT ENVIRONMENTAL  
IMPACT STATEMENT (EIS), HĀ'ENA, KAUA'I, HAWAII  
Month XX, 2018  
Page 2

Aloha,

Kimi Mikami Yuen, LEED AP BD+C  
Principal

Attachments: Master Plan Summary  
Figure 1: Master Plan

cc: The Honorable David Y. Ige, Governor  
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Board of Land and Natural Resources  
Division of State Parks

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SUBJECT: COMMENTS ON THE HĀ'ENA STATE PARK MASTER PLAN  
DRAFT ENVIRONMENTAL IMPACT STATEMENT (EIS),  
HĀ'ENA, KAUA'I, HAWAII

Aloha Ms. Candelaria,

Mahalo for the September 4, 2015 petition, which you signed along with members of the 'ohana of Halele'a regarding the Hā'ena State Park Master Plan Draft Environmental Impact Statement (EIS). We sincerely apologize for the delay in responding. The Department of Land and Natural Resources, Division of State Parks (State Parks) has been working with a reorganized Hā'ena State Park Community Advisory Committee (HSPCAC) to revise the master plan based on the concerns voiced by the larger community. Ms. Hoku Cabebe and Ms. Koral McCarthy, who also signed the petition, have been participating as members of the HSPCAC and the master plan presented in the Final EIS has been updated based on the feedback. As the planning consultant for State Parks, we offer the following responses to your comments.

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Mr. Aloysius Chandler  
SUBJECT: COMMENTS ON THE HÄ'ENA STATE PARK MASTER PLAN DRAFT ENVIRONMENTAL  
IMPACT STATEMENT (EIS), HÄ'ENA, KAUA'I, HAWAII  
Month XX, 2018  
Page 2

Aloha,

Kimi Mikami Yuen, LEED AP BD+C  
Principal

Attachments: Master Plan Summary  
Figure 1: Master Plan

cc: The Honorable David Y. Ige, Governor  
Office of Environmental Quality Control  
Board of Land and Natural Resources  
Division of State Parks

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Aloysius - KY.docx

SUBJECT: COMMENTS ON THE HÄ'ENA STATE PARK MASTER PLAN  
DRAFT ENVIRONMENTAL IMPACT STATEMENT (EIS),  
HÄ'ENA, KAUA'I, HAWAII

Aloha Mr. Chandler,

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Ms. Deannise Dennis  
SUBJECT: COMMENTS ON THE HĀ'ENA STATE PARK MASTER PLAN DRAFT ENVIRONMENTAL  
IMPACT STATEMENT (EIS), HĀ'ENA, KAUA'I, HAWAII  
Month XX, 2018  
Page 2

Aloha,

Kimi Mikami Yuen, LEED AP BD+C  
Principal

Attachments: Master Plan Summary  
Figure 1: Master Plan

cc: The Honorable David Y. Ige, Governor  
Office of Environmental Quality Control  
Board of Land and Natural Resources  
Division of State Parks

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Dennis - KY.docx

SUBJECT: COMMENTS ON THE HĀ'ENA STATE PARK MASTER PLAN  
DRAFT ENVIRONMENTAL IMPACT STATEMENT (EIS),  
HĀ'ENA, KAUA'I, HAWAII

Aloha Ms. Dennis,

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Month XX, 2018 - DRAFT

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Mr. Elijah Frank  
SUBJECT: COMMENTS ON THE HĀ'ENA STATE PARK MASTER PLAN DRAFT ENVIRONMENTAL  
IMPACT STATEMENT (EIS), HĀ'ENA, KAUA'I, HAWAII  
Month XX, 2018  
Page 2

Aloha,

Kimi Mikami Yuen, LEED AP BD+C  
Principal

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Figure 1: Master Plan

cc: The Honorable David Y. Ige, Governor  
Office of Environmental Quality Control  
Board of Land and Natural Resources  
Division of State Parks

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- KY.docx

SUBJECT: COMMENTS ON THE HĀ'ENA STATE PARK MASTER PLAN  
DRAFT ENVIRONMENTAL IMPACT STATEMENT (EIS),  
HĀ'ENA, KAUA'I, HAWAII

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Month XX, 2018 - DRAFT

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Ms. Kaleo Frank  
SUBJECT: COMMENTS ON THE HĀ'ENA STATE PARK MASTER PLAN DRAFT ENVIRONMENTAL  
IMPACT STATEMENT (EIS), HĀ'ENA, KAUA'I, HAWAII  
Month XX, 2018  
Page 2

Aloha,

Kimi Mikami Yuen, LEED AP BD+C  
Principal

Attachments: Master Plan Summary  
Figure 1: Master Plan

cc: The Honorable David Y. Ige, Governor  
Office of Environmental Quality Control  
Board of Land and Natural Resources  
Division of State Parks

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SUBJECT: COMMENTS ON THE HĀ'ENA STATE PARK MASTER PLAN  
DRAFT ENVIRONMENTAL IMPACT STATEMENT (EIS),  
HĀ'ENA, KAUA'I, HAWAII

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Month XX, 2018 - DRAFT

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Chantz Kaaumoana  
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IMPACT STATEMENT (EIS), HÄ'ENA, KAUA'I, HAWAII  
Month XX, 2018  
Page 2

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DRAFT ENVIRONMENTAL IMPACT STATEMENT (EIS),  
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Ms. Jasmine Kleimein  
SUBJECT: COMMENTS ON THE HĀ'ENA STATE PARK MASTER PLAN DRAFT ENVIRONMENTAL  
IMPACT STATEMENT (EIS), HĀ'ENA, KAUA'I, HAWAII  
Month XX, 2018  
Page 2

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Kimi Mikami Yuen, LEED AP BD+C  
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Jasmine - KY.docx

SUBJECT: COMMENTS ON THE HĀ'ENA STATE PARK MASTER PLAN  
DRAFT ENVIRONMENTAL IMPACT STATEMENT (EIS),  
HĀ'ENA, KAUA'I, HAWAII

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Month XX, 2018 - DRAFT

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Ms. Sophia Levesque  
SUBJECT: COMMENTS ON THE HĀ'ENA STATE PARK MASTER PLAN DRAFT ENVIRONMENTAL  
IMPACT STATEMENT (EIS), HĀ'ENA, KAUA'I, HAWAII  
Month XX, 2018  
Page 2

Aloha,

Kimi Mikami Yuen, LEED AP BD+C  
Principal

Attachments: Master Plan Summary  
Figure 1: Master Plan

cc: The Honorable David Y. Ige, Governor  
Office of Environmental Quality Control  
Board of Land and Natural Resources  
Division of State Parks

O:\Job2\262701 DLNR-Haena State Park Master Plan\EIS\DEIS Responses\Mail Merge\2/PETITION - Levesque, Ms.  
Sophia - KY.docx

SUBJECT: COMMENTS ON THE HĀ'ENA STATE PARK MASTER PLAN  
DRAFT ENVIRONMENTAL IMPACT STATEMENT (EIS),  
HĀ'ENA, KAUA'I, HAWAII

Aloha Ms. Levesque,

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Ezera Mahuki  
SUBJECT: COMMENTS ON THE HĀ'ENA STATE PARK MASTER PLAN DRAFT ENVIRONMENTAL  
IMPACT STATEMENT (EIS), HĀ'ENA, KAUA'I, HAWAII  
Month XX, 2018  
Page 2

Aloha,

Kimi Mikami Yuen, LEED AP BD+C  
Principal

Attachments: Master Plan Summary  
Figure 1: Master Plan

cc: The Honorable David Y. Ige, Governor  
Office of Environmental Quality Control  
Board of Land and Natural Resources  
Division of State Parks

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KY.docx

SUBJECT: COMMENTS ON THE HĀ'ENA STATE PARK MASTER PLAN  
DRAFT ENVIRONMENTAL IMPACT STATEMENT (EIS),  
HĀ'ENA, KAUA'I, HAWAII

Aloha Ezera Mahuki,

Mahalo for the September 4, 2015 petition, which you signed along with members of the 'ohana of Halele'a regarding the Hā'ena State Park Master Plan Draft Environmental Impact Statement (EIS). We sincerely apologize for the delay in responding. The Department of Land and Natural Resources, Division of State Parks (State Parks) has been working with a reorganized Hā'ena State Park Community Advisory Committee (HSPCAC) to revise the master plan based on the concerns voiced by the larger community. Ms. Hoku Cabebe and Ms. Koral McCarthy, who also signed the petition, have been participating as members of the HSPCAC and the master plan presented in the Final EIS has been updated based on the feedback. As the planning consultant for State Parks, we offer the following responses to your comments.

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Month XX, 2018 - DRAFT

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Mr. Jacob Maka  
SUBJECT: COMMENTS ON THE HĀ'ENA STATE PARK MASTER PLAN DRAFT ENVIRONMENTAL  
IMPACT STATEMENT (EIS), HĀ'ENA, KAUA'I, HAWAII  
Month XX, 2018  
Page 2

Aloha,

Kimi Mikami Yuen, LEED AP BD+C  
Principal

Attachments: Master Plan Summary  
Figure 1: Master Plan

cc: The Honorable David Y. Ige, Governor  
Office of Environmental Quality Control  
Board of Land and Natural Resources  
Division of State Parks

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- KY.docx

SUBJECT: COMMENTS ON THE HĀ'ENA STATE PARK MASTER PLAN  
DRAFT ENVIRONMENTAL IMPACT STATEMENT (EIS),  
HĀ'ENA, KAUA'I, HAWAII

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Month XX, 2018 - DRAFT

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Ms. Nancy Martin  
SUBJECT: COMMENTS ON THE HĀ'ENA STATE PARK MASTER PLAN DRAFT ENVIRONMENTAL  
IMPACT STATEMENT (EIS), HĀ'ENA, KAUA'I, HAWAII  
Month XX, 2018  
Page 2

Aloha,

Kimi Mikami Yuen, LEED AP BD+C  
Principal

Attachments: Master Plan Summary  
Figure 1: Master Plan

cc: The Honorable David Y. Ige, Governor  
Office of Environmental Quality Control  
Board of Land and Natural Resources  
Division of State Parks

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Nancy - KY.docx

SUBJECT: COMMENTS ON THE HĀ'ENA STATE PARK MASTER PLAN  
DRAFT ENVIRONMENTAL IMPACT STATEMENT (EIS),  
HĀ'ENA, KAUA'I, HAWAII

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Mr. Aloysius Puulei-Chandler  
SUBJECT: COMMENTS ON THE HĀ'ENA STATE PARK MASTER PLAN DRAFT ENVIRONMENTAL  
IMPACT STATEMENT (EIS), HĀ'ENA, KAUAI, HAWAII  
Month XX, 2018  
Page 2

Month XX, 2018 - DRAFT

Mr. Aloysius Puulei-Chandler  
P.O. Box 1142  
Hanalei, HI 96714

**SUBJECT:** COMMENTS ON THE HĀ'ENA STATE PARK MASTER PLAN  
DRAFT ENVIRONMENTAL IMPACT STATEMENT (EIS),  
HĀ'ENA, KAUAI, HAWAII

Aloha Mr. Puulei-Chandler,

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*Visiting Assistant Professor of Philosophy*

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MARC SHIMATSU, ASLA

DACHENG DONG

SCOTT MURAKAMI, ASIA, LEE

**MICAH McMILLEN, ASLA, LEED® AP**  
*A sustainable*

**NATHALIE RAZO**  
*Associate*

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Month XX, 2018 - DRAFT

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Kalalau Puulei-Chandler  
SUBJECT: COMMENTS ON THE HĀ'ENA STATE PARK MASTER PLAN DRAFT ENVIRONMENTAL  
IMPACT STATEMENT (EIS), HĀ'ENA, KAUA'I, HAWAII  
Month XX, 2018  
Page 2

Aloha,

Kimi Mikami Yuen, LEED AP BD+C  
Principal

Attachments: Master Plan Summary  
Figure 1: Master Plan

cc: The Honorable David Y. Ige, Governor  
Office of Environmental Quality Control  
Board of Land and Natural Resources  
Division of State Parks

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Kalalau - KY.docx

SUBJECT: COMMENTS ON THE HĀ'ENA STATE PARK MASTER PLAN  
DRAFT ENVIRONMENTAL IMPACT STATEMENT (EIS),  
HĀ'ENA, KAUA'I, HAWAII

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Month XX, 2018 - DRAFT

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PLANNING • LANDSCAPE ARCHITECTURE • ENVIRONMENTAL STUDIES • ENTITLEMENTS / PERMITTING • GRAPHIC DESIGN

Mr. Eric Rafter  
SUBJECT: COMMENTS ON THE HÄ'ENA STATE PARK MASTER PLAN DRAFT ENVIRONMENTAL  
IMPACT STATEMENT (EIS), HÄ'ENA, KAUA'I, HAWAII  
Month XX, 2018  
Page 2

Aloha,

Kimi Mikami Yuen, LEED AP BD+C  
Principal

Attachments: Master Plan Summary  
Figure 1: Master Plan

cc: The Honorable David Y. Ige, Governor  
Office of Environmental Quality Control  
Board of Land and Natural Resources  
Division of State Parks

O:\a26\2627\01 DLNR-Haena State Park Master Plan\EIS\DEIS Responses\Mail Merge\2PETITION - Rafter, Mr. Eric  
- KY.docx

SUBJECT: COMMENTS ON THE HÄ'ENA STATE PARK MASTER PLAN  
DRAFT ENVIRONMENTAL IMPACT STATEMENT (EIS),  
HÄ'ENA, KAUA'I, HAWAII

Aloha Mr. Rafter,

Mahalo for the September 4, 2015 petition, which you signed along with members of the 'ohana of Halele'a regarding the Hä'ena State Park Master Plan Draft Environmental Impact Statement (EIS). We sincerely apologize for the delay in responding. The Department of Land and Natural Resources, Division of State Parks (State Parks) has been working with a reorganized Hä'ena State Park Community Advisory Committee (HSPCAC) to revise the master plan based on the concerns voiced by the larger community. Ms. Hoku Cabebe and Ms. Koral McCarthy, who also signed the petition, have been participating as members of the HSPCAC and the master plan presented in the Final EIS has been updated based on the feedback. As the planning consultant for State Parks, we offer the following responses to your comments.

We appreciate you and the other signatories of the petition for voicing your objection to the approved version of the master plan. We needed to hear the voices of the next generation of Halele'a 'ohana and we thank you for your input. The plan has been greatly simplified with less development including the elimination of the Education and Cultural Center and Caretaker's Cottage. It also encourages the development of a North Shore shuttle to reduce car congestion. Please see the revised Master Plan Summary from Section 1.9.1 and Figure 1 showing the updated master plan graphic from the Final EIS. The full master plan report is available for download at the State Parks Hä'ena State Park website: <http://dlmr.hawaii.gov/dsp/parks/kaui/haena-state-park/>.

As previously proposed, the visitor limits would not include cultural practitioners, lo'i workers, and hunters. State Parks wants to encourage local residents to return to the park and so your continued input is welcomed should access become an issue.

The plan has been revised based on the input received and the public comment period for the Draft EIS was extended for additional month to allow more time for public comment.

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Sena Scramur  
SUBJECT: COMMENTS ON THE HĀ'ENA STATE PARK MASTER PLAN DRAFT ENVIRONMENTAL  
IMPACT STATEMENT (EIS), HĀ'ENA, KAUA'I, HAWAII  
Month XX, 2018  
Page 2

Aloha,

Kimi Mikami Yuen, LEED AP BD+C  
Principal

Attachments: Master Plan Summary  
Figure 1: Master Plan

cc: The Honorable David Y. Ige, Governor  
Office of Environmental Quality Control  
Board of Land and Natural Resources  
Division of State Parks

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SUBJECT: COMMENTS ON THE HĀ'ENA STATE PARK MASTER PLAN  
DRAFT ENVIRONMENTAL IMPACT STATEMENT (EIS),  
HĀ'ENA, KAUA'I, HAWAII

Aloha Sena Scramur,

Mahalo for the September 4, 2015 petition, which you signed along with members of the 'ohana of Halele'a regarding the Hā'ena State Park Master Plan Draft Environmental Impact Statement (EIS). We sincerely apologize for the delay in responding. The Department of Land and Natural Resources, Division of State Parks (State Parks) has been working with a reorganized Hā'ena State Park Community Advisory Committee (HSPCAC) to revise the master plan based on the concerns voiced by the larger community. Ms. Hoku Cabebe and Ms. Koral McCarthy, who also signed the petition, have been participating as members of the HSPCAC and the master plan presented in the Final EIS has been updated based on the feedback. As the planning consultant for State Parks, we offer the following responses to your comments.

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Jesse Steele  
SUBJECT: COMMENTS ON THE HĀ'ENA STATE PARK MASTER PLAN DRAFT ENVIRONMENTAL  
IMPACT STATEMENT (EIS), HĀ'ENA, KAUA'I, HAWAII  
Month XX, 2018  
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Aloha,

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Principal

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KY.docx

SUBJECT: COMMENTS ON THE HĀ'ENA STATE PARK MASTER PLAN  
DRAFT ENVIRONMENTAL IMPACT STATEMENT (EIS),  
HĀ'ENA, KAUA'I, HAWAII

Aloha Jesse Steele,

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Ms. Misha Taylor  
SUBJECT: COMMENTS ON THE HÄ'ENA STATE PARK MASTER PLAN DRAFT ENVIRONMENTAL  
IMPACT STATEMENT (EIS), HÄ'ENA, KAUA'I, HAWAII  
Month XX, 2018  
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Misha - KY.docx

SUBJECT: COMMENTS ON THE HÄ'ENA STATE PARK MASTER PLAN  
DRAFT ENVIRONMENTAL IMPACT STATEMENT (EIS),  
HÄ'ENA, KAUA'I, HAWAII

Aloha Ms. Taylor,

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Month XX, 2018 - DRAFT

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Mr. Brandon Ziegler  
SUBJECT: COMMENTS ON THE HĀ'ENA STATE PARK MASTER PLAN DRAFT ENVIRONMENTAL  
IMPACT STATEMENT (EIS), HĀ'ENA, KAUA'I, HAWAII  
Month XX, 2018  
Page 2

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Kimi Mikami Yuen, LEED AP BD+C  
Principal

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Division of State Parks

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Brandon - KY.docx

SUBJECT: COMMENTS ON THE HĀ'ENA STATE PARK MASTER PLAN  
DRAFT ENVIRONMENTAL IMPACT STATEMENT (EIS),  
HĀ'ENA, KAUA'I, HAWAII

Aloha Mr. Ziegler,

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**Nathalie Razo**

**From:** Hoku Cabebe <k.hokuokalani@gmail.com>  
**Sent:** Thursday, October 08, 2015 12:39 PM  
**To:** Lauren Tanaka; Kimi Yuen  
**Subject:** Follow up letter for State Plans for Ha'ena  
**Attachments:** October 8 Haena.docx

October 8, 2015

Aloha,

This is a follow up letter in regards to the petition sent by na makua of the generational descendents of Halele'a and our supporters in regards to the Ha'ena state plans. We mahalo you for extending the comment period for 30 days. It did allow us a little more time to go thru the document but of course we did not have enough time and resources needed to fully examine the document or have an opportunity to speak to all those who have assisted with the plans in the short time allowed for community review and input. The little research and the conversations with a few of the advisory members conducted in the extended time heightens our original concerns that this plan does not address the real problems that Ha'ena and the kanaka maoli of Ha'ena face and only looks to commodify the special and sacred resources our ahupua'a holds. In the tradition of our kupuna we would like to refocus the plan to a solid plan that restores the original 'ohana of this area to their rightful kuleana as caretakers and decision makers for the ahupua'a of Ha'ena with no opportunity for outside entities to come in and commodify our sacred and special resources as well as turn sacred and culturally sensitive areas into a developed State Park or private playground for the elite. The main problem is overcrowding and over use of a sacred place primarily by visitors with little to no connection to the area. Turning Ke'e into a developed State Park does not lower the impact to our sacred place. Building a second restroom does not lower the impact. Building a visitor center does not lower the impact and capping visitors and closing access seriously violates our rights and kuleana to our sacred places.

We still feel these plans should be halted and any state plans for Ha'ena and Ke'e should encompass a plan that includes all of Halele'a as what happens in one ahupua'a is surely to affect the other ahupua'a in a moku. However we feel immediate remedies that may be easier to implement would be making the 'ohana of Ha'ena and the Hui Maka'ainana o Ha'ena the sole care takers of the area which they have already been doing, more signage and additional no parking areas to reduce traffic and overuse with enforcement by the 'ohana and Hui of Ha'ena. Preferably a boot system that locks cars in violation.

Violators would pay a fee to have boot removed. Income would be kept by the 'ohana and Hui to assist with upkeep and enforcement. Education to the visitors bureau and all affected by the limited access due to preservation and conservation, restoration of the parking area, the addition of a poi mill and a hale halawai for 'ohana gatherings and cultural classes and additional research into the original and rightful land ownership and kuleana of Ha'ena.

Mahalo for taking time to hear our requests. We look forward to working together to restore pono to our beloved Ha'ena.

Me ka ha'aha'a,

The signees of the petition



THOMAS WITTEN, FASIA  
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Ms. Hoku Cabebe  
SUBJECT: COMMENTS ON THE HÄ'ENA STATE PARK MASTER PLAN DRAFT ENVIRONMENTAL  
IMPACT STATEMENT (EIS), HÄ'ENA, KAUA'I, HAWAII  
Month XX, 2018  
Page 2

Aloha,

Kimi Mikami Yuen, LEED AP BD+C  
Principal  
  
cc: The Honorable David Y. Ige, Governor  
Office of Environmental Quality Control  
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Hoku - KY.docx

Month XX, 2018-DRAFT  
  
Ms. Hoku Cabebe  
P O Box 243  
Hanalei, HI 96714  
  
SUBJECT: COMMENTS ON THE HÄ'ENA STATE PARK MASTER PLAN  
DRAFT ENVIRONMENTAL IMPACT STATEMENT (EIS),  
HÄ'ENA, KAUA'I, HAWAII

Aloha Ms. Cabebe,

Mahalo nui for your follow up letter dated October 8, 2015 regarding the Hä'ena State Park Master Plan Draft Environmental Impact Statement (EIS). We understand that in the last 30 days you were able to speak with some of the original advisory committee members and that you continued to feel concern for what was proposed in the Draft EIS. As mentioned in our other response to the petition, we greatly appreciate your participation in the reorganized Hä'ena State Park Community Advisory Committee (HSPCAC), which continued to meet to revise the master plan after the close of the extended Draft EIS comment period. We also recognize your concern of having outsiders manage and potentially commodify the park. State Parks has expanded the curatorship agreements with Hui Maka'āinana o Makana (the "Hui") to care for more areas of the park including more of the lo'i system and the Allerton caretaker's Cottage, and the County of Kaua'i has similarly entered into an agreement with the Hui to manage the Ka Ulu A Paoa Heiau.

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Mahalo nui for your additional input and continued participation in the HSPCAC. Please share this response with those who signed the petition but did not leave an address. Your letter will be included in the Final EIS. As noted, if you would like a copy of the Final EIS or portions thereof, please let us know. Otherwise, the electronic copy of the Final EIS will be available on the Office of Environmental Quality Control website at [http://oese2.doh.hawaii.gov/EA\\_HIS\\_Library/2018--KA-EIS-Haena-State-Park-Master-Plan.pdf](http://oese2.doh.hawaii.gov/EA_HIS_Library/2018--KA-EIS-Haena-State-Park-Master-Plan.pdf) on Month XX, 2018



Month XX, 2018 - DRAFT

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Ms. Koral McCarthy  
SUBJECT: COMMENTS ON THE HĀ'ENA STATE PARK MASTER PLAN DRAFT ENVIRONMENTAL  
IMPACT STATEMENT (EIS), HĀ'ENA, KAUA'I, HAWAII  
Month XX, 2018  
Page 2

Aloha,

Kimi Mikami Yuen, LEED AP BD+C  
Principal

cc: The Honorable David Y. Ige, Governor  
Office of Environmental Quality Control  
Board of Land and Natural Resources  
Division of State Parks

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SUBJECT: COMMENTS ON THE HĀ'ENA STATE PARK MASTER PLAN  
DRAFT ENVIRONMENTAL IMPACT STATEMENT (EIS),  
HĀ'ENA, KAUA'I, HAWAII

Aloha Ms. McCarthy,

Mahalo nui for your follow up letter dated October 8, 2015 regarding the Hā'ena State Park Master Plan Draft Environmental Impact Statement (EIS). We understand that in the last 30 days you were able to speak with some of the original advisory committee members and that you continued to feel concern for what was proposed in the Draft EIS. As mentioned in our other response to the petition, we greatly appreciate your participation in the reorganized Hā'ena State Park Community Advisory Committee (HSPCAC), which continued to meet to revise the master plan after the close of the extended Draft EIS comment period. We also recognize your concern of having outsiders manage and potentially commodify the park. State Parks has expanded the curatorship agreements with Hui Maka'ānana o Makana (the "Hui") to care for more areas of the park including more of the lo'i system and the Allerton Caretaker's Cottage, and the County of Kaua'i has similarly entered into an agreement with the Hui to manage the Ka Ulu A Paoo Heiau.

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Month XX, 2018 - DRAFT

Mr. Beau Blair  
(No Address Given)

SUBJECT: COMMENTS ON THE HÄ'ENA STATE PARK MASTER PLAN  
DRAFT ENVIRONMENTAL IMPACT STATEMENT (EIS),  
HÄ'ENA, KAUA'I, HAWAII

Aloha Mr. Blair,

Mahalo nui for your follow up letter dated October 8, 2015 regarding the Hä'ena State Park Master Plan Draft Environmental Impact Statement (EIS). We understand that in the 30 days since your last correspondence you were able to speak with some of the original advisory committee members and that you continued to feel concern for what was proposed in the Draft EIS. The reorganized Hä'ena State Park Community Advisory Committee (HSPCAC), which included Hoku Cabebe and Koral McCarthy, met several times to work on revising the master plan after the close of the extended Draft EIS comment period. This revised plan is the subject of the Final EIS.

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Aloha,

Kimi Mikami Yuen, LEED AP BD+C  
Principal

cc: The Honorable David Y. Ige, Governor  
Office of Environmental Quality Control  
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Month XX, 2018 - DRAFT

Ms. Love Bernheim  
P.O. Box 129  
Hanalei, HI 96714

**SUBJECT: COMMENTS ON THE HĀ'ENA STATE PARK MASTER PLAN DRAFT ENVIRONMENTAL IMPACT STATEMENT (EIS), HĀ'ENA, KAUA'I, HAWAII**

Aloha Ms. Bernheim,

Mahalo nui for your follow up letter dated October 8, 2015 regarding the Hā'ena State Park Master Plan Draft Environmental Impact Statement (EIS). We understand that in the 30 days since your last correspondence you were able to speak with some of the original advisory committee members and that you continued to feel concern for what was proposed in the Draft EIS. The reorganized Hā'ena State Park Community Advisory Committee (HSPCAC), which included Hoku Cabebe and Koral McCarthy, met several times to work on revising the master plan after the close of the extended Draft EIS comment period. This revised plan is the subject of the Final EIS.

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E-mail: [sysadmin@pbrhawaii.com](mailto:sysadmin@pbrhawaii.com)

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Aloha,

Kimi Mikami Yuen, LEED AP BD+C  
Principal

cc: The Honorable David Y. Ige, Governor  
Office of Environmental Quality Control  
Board of Land and Natural Resources  
Division of State Parks

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Month XX, 2018 - DRAFT

Ms. Mohala Bond  
P.O. Box 23  
Hanalei, HI 96714

**SUBJECT: COMMENTS ON THE HĀ'ENA STATE PARK MASTER PLAN DRAFT ENVIRONMENTAL IMPACT STATEMENT (EIS), HĀ'ENA, KAUA'I, HAWAII**

Aloha Ms. Bond,

Mahalo nui for your follow up letter dated October 8, 2015 regarding the Hā'ena State Park Master Plan Draft Environmental Impact Statement (EIS). We understand that in the 30 days since your last correspondence you were able to speak with some of the original advisory committee members and that you continued to feel concern for what was proposed in the Draft EIS. The reorganized Hā'ena State Park Community Advisory Committee (HSPCAC), which included Hoku Cabebe and Koral McCarthy, met several times to work on revising the master plan after the close of the extended Draft EIS comment period. This revised plan is the subject of the Final EIS.

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Aloha,

Kimi Mikami Yuen, LEED AP BD+C  
Principal

cc: The Honorable David Y. Ige, Governor  
Office of Environmental Quality Control  
Board of Land and Natural Resources  
Division of State Parks

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Month XX, 2018 - DRAFT

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Ms. Jade Candelaria  
SUBJECT: COMMENTS ON THE HĀ'ENA STATE PARK MASTER PLAN DRAFT ENVIRONMENTAL  
IMPACT STATEMENT (EIS), HĀ'ENA, KAUA'I, HAWAII  
Month XX, 2018  
Page 2

Aloha,

Kimi Mikami Yuen, LEED AP BD+C  
Principal

cc: The Honorable David Y. Ige, Governor  
Office of Environmental Quality Control  
Board of Land and Natural Resources  
Division of State Parks

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Jade - KY.docx

SUBJECT: COMMENTS ON THE HĀ'ENA STATE PARK MASTER PLAN  
DRAFT ENVIRONMENTAL IMPACT STATEMENT (EIS),  
HĀ'ENA, KAUA'I, HAWAII

Aloha Ms. Candelaria,

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Month XX, 2018 - DRAFT

Mr. Aloysius Chandler  
P.O. Box 243  
Hanalei, HI 96714

**SUBJECT: COMMENTS ON THE HĀ'ENA STATE PARK MASTER PLAN DRAFT ENVIRONMENTAL IMPACT STATEMENT (EIS), HĀ'ENA, KAUA'I, HAWAII**

Aloha Mr. Chandler,

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Aloha,

Kimi Mikami Yuen, LEED AP BD+C  
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cc: The Honorable David Y. Ige, Governor  
Office of Environmental Quality Control  
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Month XX, 2018 - DRAFT

Ms. Deannise Dennis  
P.O. Box 125  
Hanalei, HI 96714

**SUBJECT: COMMENTS ON THE HĀ'ENA STATE PARK MASTER PLAN DRAFT ENVIRONMENTAL IMPACT STATEMENT (EIS), HĀ'ENA, KAUA'I, HAWAII**

Aloha Ms. Dennis,

Mahalo nui for your follow up letter dated October 8, 2015 regarding the Hā'ena State Park Master Plan Draft Environmental Impact Statement (EIS). We understand that in the 30 days since your last correspondence you were able to speak with some of the original advisory committee members and that you continued to feel concern for what was proposed in the Draft EIS. The reorganized Hā'ena State Park Community Advisory Committee (HSPCAC), which included Hoku Cabebe and Koral McCarthy, met several times to work on revising the master plan after the close of the extended Draft EIS comment period. This revised plan is the subject of the Final EIS.

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Kimi Mikami Yuen, LEED AP BD+C  
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cc: The Honorable David Y. Ige, Governor  
Office of Environmental Quality Control  
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Month XX, 2018 - DRAFT

Mr. Elijah Frank  
P.O. Box 1462  
Hanalei, HI 96714

**SUBJECT: COMMENTS ON THE HĀ'ENA STATE PARK MASTER PLAN DRAFT ENVIRONMENTAL IMPACT STATEMENT (EIS), HĀ'ENA, KAUA'I, HAWAII**

Aloha Mr. Frank,

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Aloha,

Kimi Mikami Yuen, LEED AP BD+C  
Principal

cc: The Honorable David Y. Ige, Governor  
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Division of State Parks

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Month XX, 2018 - DRAFT

Ms. Kaleo Frank  
P.O. Box 1462  
Hanalei, HI 96714

**SUBJECT: COMMENTS ON THE HĀ'ENA STATE PARK MASTER PLAN DRAFT ENVIRONMENTAL IMPACT STATEMENT (EIS), HĀ'ENA, KAUA'I, HAWAII**

Aloha Ms. Frank,

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Aloha,

Kimi Mikami Yuen, LEED AP BD+C  
Principal

cc: The Honorable David Y. Ige, Governor  
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Month XX, 2018 - DRAFT

Chantz Kaamoana  
3167 Kalihiwai Valley Road  
Kilauea, HI 96754

**SUBJECT: COMMENTS ON THE HĀ'ENA STATE PARK MASTER PLAN DRAFT ENVIRONMENTAL IMPACT STATEMENT (EIS), HĀ'ENA, KAUA'I, HAWAII**

Aloha Chantz Kaamoana,

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Aloha,

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Month XX, 2018 - DRAFT

Ms. Jasmine Kleimein  
P.O. Box 1421  
Hanalei, HI 96714

**SUBJECT: COMMENTS ON THE HĀ'ENA STATE PARK MASTER PLAN DRAFT ENVIRONMENTAL IMPACT STATEMENT (EIS), HĀ'ENA, KAUA'I, HAWAII**

Aloha Ms. Kleimein,

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Month XX, 2018 - DRAFT

Ms. Sophia Levesque  
P.O. Box 993  
Hanalei, HI 96714

**SUBJECT: COMMENTS ON THE HĀ'ENA STATE PARK MASTER PLAN DRAFT ENVIRONMENTAL IMPACT STATEMENT (EIS), HĀ'ENA, KAUA'I, HAWAII**

Aloha Ms. Levesque,

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Aloha,

Kimi Mikami Yuen, LEED AP BD+C  
Principal

cc: The Honorable David Y. Ige, Governor  
Office of Environmental Quality Control  
Board of Land and Natural Resources  
Division of State Parks

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Month XX, 2018 - DRAFT

Ezera Mahuki  
P.O. Box 361  
Hanalei, HI 96714

**SUBJECT: COMMENTS ON THE HĀ'ENA STATE PARK MASTER PLAN DRAFT ENVIRONMENTAL IMPACT STATEMENT (EIS), HĀ'ENA, KAUA'I, HAWAII**

Aloha Ezera Mahuki,

Mahalo nui for your follow up letter dated October 8, 2015 regarding the Hā'ena State Park Master Plan Draft Environmental Impact Statement (EIS). We understand that in the 30 days since your last correspondence you were able to speak with some of the original advisory committee members and that you continued to feel concern for what was proposed in the Draft EIS. The reorganized Hā'ena State Park Community Advisory Committee (HSPCAC), which included Hoku Cabebe and Koral McCarthy, met several times to work on revising the master plan after the close of the extended Draft EIS comment period. This revised plan is the subject of the Final EIS.

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Aloha,

Kimi Mikami Yuen, LEED AP BD+C  
Principal

cc: The Honorable David Y. Ige, Governor  
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Board of Land and Natural Resources  
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Month XX, 2018 - DRAFT

Mr. Jacob Maka  
P.O. Box 23  
Hanalei, HI 96714

**SUBJECT: COMMENTS ON THE HĀ'ENA STATE PARK MASTER PLAN DRAFT ENVIRONMENTAL IMPACT STATEMENT (EIS), HĀ'ENA, KAUA'I, HAWAII**

Aloha Mr. Maka,

Mahalo nui for your follow up letter dated October 8, 2015 regarding the Hā'ena State Park Master Plan Draft Environmental Impact Statement (EIS). We understand that in the 30 days since your last correspondence you were able to speak with some of the original advisory committee members and that you continued to feel concern for what was proposed in the Draft EIS. The reorganized Hā'ena State Park Community Advisory Committee (HSPCAC), which included Hoku Cabebe and Koral McCarthy, met several times to work on revising the master plan after the close of the extended Draft EIS comment period. This revised plan is the subject of the Final EIS.

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Aloha,

Kimi Mikami Yuen, LEED AP BD+C  
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cc: The Honorable David Y. Ige, Governor  
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Division of State Parks

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Month XX, 2018 - DRAFT

Ms. Nancy Martin  
P.O. Box 1965  
Kapaa, HI 96746

**SUBJECT: COMMENTS ON THE HĀ'ENA STATE PARK MASTER PLAN DRAFT ENVIRONMENTAL IMPACT STATEMENT (EIS), HĀ'ENA, KAUA'I, HAWAII**

Aloha Ms. Martin,

Mahalo nui for your follow up letter dated October 8, 2015 regarding the Hā'ena State Park Master Plan Draft Environmental Impact Statement (EIS). We understand that in the 30 days since your last correspondence you were able to speak with some of the original advisory committee members and that you continued to feel concern for what was proposed in the Draft EIS. The reorganized Hā'ena State Park Community Advisory Committee (HSPCAC), which included Hoku Cabebe and Koral McCarthy, met several times to work on revising the master plan after the close of the extended Draft EIS comment period. This revised plan is the subject of the Final EIS.

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Aloha,

Kimi Mikami Yuen, LEED AP BD+C  
Principal

cc: The Honorable David Y. Ige, Governor  
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Month XX, 2018 - DRAFT

Mr. Aloysius Puulei-Chandler  
P.O. Box 1142  
Hanalei, HI 96714

**SUBJECT: COMMENTS ON THE HĀ'ENA STATE PARK MASTER PLAN DRAFT ENVIRONMENTAL IMPACT STATEMENT (EIS), HĀ'ENA, KAUA'I, HAWAII**

Aloha Mr. Puulei-Chandler,

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cc: The Honorable David Y. Ige, Governor  
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Month XX, 2018 - DRAFT

Kalalau Puulei-Chandler  
P.O. Box 243  
Hanalei, HI 96714

**SUBJECT: COMMENTS ON THE HĀ'ENA STATE PARK MASTER PLAN  
DRAFT ENVIRONMENTAL IMPACT STATEMENT (EIS),  
HĀ'ENA, KAUA'I, HAWAII**

Aloha Kalalau Puulei-Chandler,

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Aloha,

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cc: The Honorable David Y. Ige, Governor  
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Month XX, 2018 - DRAFT

Mr. Eric Rafter  
P.O. Box 141  
Hanalei, HI 96714

**SUBJECT: COMMENTS ON THE HĀ'ENA STATE PARK MASTER PLAN DRAFT ENVIRONMENTAL IMPACT STATEMENT (EIS), HĀ'ENA, KAUA'I, HAWAII**

Aloha Mr. Rafter,

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Mr. Eric Rafter  
SUBJECT: COMMENTS ON THE HĀ'ENA STATE PARK MASTER PLAN DRAFT ENVIRONMENTAL IMPACT STATEMENT (EIS), HĀ'ENA, KAUA'I, HAWAII  
Month XX, 2018  
Page 2

Aloha,

Kimi Mikami Yuen, LEED AP BD+C  
Principal

cc: The Honorable David Y. Ige, Governor  
Office of Environmental Quality Control  
Board of Land and Natural Resources  
Division of State Parks

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Month XX, 2018 - DRAFT

Sena Scramur  
P.O. Box 891  
Hanalei, HI 96714

**SUBJECT: COMMENTS ON THE HĀ'ENA STATE PARK MASTER PLAN DRAFT ENVIRONMENTAL IMPACT STATEMENT (EIS), HĀ'ENA, KAUA'I, HAWAII**

Aloha Sena Scramur,

Mahalo nui for your follow up letter dated October 8, 2015 regarding the Hā'ena State Park Master Plan Draft Environmental Impact Statement (EIS). We understand that in the 30 days since your last correspondence you were able to speak with some of the original advisory committee members and that you continued to feel concern for what was proposed in the Draft EIS. The reorganized Hā'ena State Park Community Advisory Committee (HSPCAC), which included Hoku Cabebe and Koral McCarthy, met several times to work on revising the master plan after the close of the extended Draft EIS comment period. This revised plan is the subject of the Final EIS.

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Aloha,

Kimi Mikami Yuen, LEED AP BD+C  
Principal

cc: The Honorable David Y. Ige, Governor  
Office of Environmental Quality Control  
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Division of State Parks

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Month XX, 2018 - DRAFT

Jesse Steele  
P.O. Box 1127  
Hanalei, HI 96714

**SUBJECT: COMMENTS ON THE HĀ'ENA STATE PARK MASTER PLAN DRAFT ENVIRONMENTAL IMPACT STATEMENT (EIS), HĀ'ENA, KAUA'I, HAWAII**

Aloha Jesse Steele,

Mahalo nui for your follow up letter dated October 8, 2015 regarding the Hā'ena State Park Master Plan Draft Environmental Impact Statement (EIS). We understand that in the 30 days since your last correspondence you were able to speak with some of the original advisory committee members and that you continued to feel concern for what was proposed in the Draft EIS. The reorganized Hā'ena State Park Community Advisory Committee (HSPCAC), which included Hoku Cabebe and Koral McCarthy, met several times to work on revising the master plan after the close of the extended Draft EIS comment period. This revised plan is the subject of the Final EIS.

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Aloha,

Kimi Mikami Yuen, LEED AP BD+C  
Principal

cc: The Honorable David Y. Ige, Governor  
Office of Environmental Quality Control  
Board of Land and Natural Resources  
Division of State Parks

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Month XX, 2018 - DRAFT

Ms. Misha Taylor  
3715 Onao Road  
Koloa, HI 96756

**SUBJECT: COMMENTS ON THE HĀ'ENA STATE PARK MASTER PLAN DRAFT ENVIRONMENTAL IMPACT STATEMENT (EIS), HĀ'ENA, KAUA'I, HAWAII**

Aloha Ms. Taylor,

Mahalo nui for your follow up letter dated October 8, 2015 regarding the Hā'ena State Park Master Plan Draft Environmental Impact Statement (EIS). We understand that in the 30 days since your last correspondence you were able to speak with some of the original advisory committee members and that you continued to feel concern for what was proposed in the Draft EIS. The reorganized Hā'ena State Park Community Advisory Committee (HSPCAC), which included Hoku Cabebe and Koral McCarthy, met several times to work on revising the master plan after the close of the extended Draft EIS comment period. This revised plan is the subject of the Final EIS.

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cc: The Honorable David Y. Ige, Governor  
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Month XX, 2018 - DRAFT

Mr. Brandon Ziegler  
P.O. Box 1540  
Hanalei, HI 96714

**SUBJECT: COMMENTS ON THE HĀ'ENA STATE PARK MASTER PLAN DRAFT ENVIRONMENTAL IMPACT STATEMENT (EIS), HĀ'ENA, KAUA'I, HAWAII**

Aloha Mr. Ziegler,

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Kimi Mikami Yuen, LEED AP BD+C  
Principal

cc: The Honorable David Y. Ige, Governor  
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Month XX, 2018-DRAFT

Ms. Talia Abubo  
P.O. Box 87  
Hanalei, HI 96714

**SUBJECT: COMMENTS ON THE HĀ'ENA STATE PARK MASTER PLAN  
DRAFT ENVIRONMENTAL IMPACT STATEMENT (EIS),  
HĀ'ENA, KAUA'I, HAWAII**

Aloha Ms. Abubo,

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Aloha,  
  
Kimi Mikami Yuen, LEED AP BD+C  
Principal  
  
cc: The Honorable David Y. Ige, Governor  
Office of Environmental Quality Control  
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Division of State Parks

---

**Nathalie Razo**

**From:** Jaybird Franey <jahbird@gmail.com>  
**Sent:** Tuesday, September 08, 2015 1:23 PM  
**To:** Kimi Yuen  
**Subject:** Fwd: Haena draft plan public input

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

From: **Jaybird Franey** <jahbird@gmail.com>

Date: Tue, Sep 8, 2015 at 1:17 PM

Subject: Haena draft plan public input

To: [Lauren.a.tanaka@hawaii.gov](mailto:Lauren.a.tanaka@hawaii.gov), [K.yuen@pbr.hawaii.com](mailto:K.yuen@pbr.hawaii.com)

To whom it may concern,

I am a twenty year resident of Hawaii and a professional guide and travel writer. I am fortunate to have visited many state managed conservation sites across the islands, and I feel particularly drawn to comment regarding the Haena general plan as shared at the Hanalei School meeting on August 19th, 2015. Im sure you are aware that the first mistake made at this meeting was not having a speaker system to amplify the voice of your soft spoken representatives. This immediately caused unnecessary tension in the crowd and diluted your message. The second and very costly mistake was to not allow public input on the spot. Many locals are now distrusting your intentions for real public input. During your presentation you made numerous references to note cards that can be taken and mailed in for comment. I personally watched your representative at the front door deny peoples request for these cards, forcing them to stay to the end of the meeting to line up and get one. This was disingenuous to your message, and I saw many older residents denied these note cards because they had to leave early.

I was on Kauai for several weeks after the meeting, and witnessed the major impacts of the unregulated Haena tourist traffic on the local community. I spoke as well with many longtime residents who gave me their honest opinion that what they fear is your regulating an area they already cannot access easily due to the maked out roadway and parking areas. As thoughtful as many parts of the master plan are, it is undeniable that the local community already feels slighted by the process.

That being said, most prefer no action over the actions proposed. The plan would definitely address a huge number of issues. However, I would like to point out that small changes would create a better affect in regaining public trust and securing local access. I am wondering if the State can think in small steps. I have personally observed the peak season mayhem of mid-August at Haena. The main issue is lack of education for our visitors, and the continued loss of space for locals to access these areas during peak hours. Cars are parked in every direction they can get away with, because there is now clear outlining of the parking spaces and at worse case scenarios I witnessed cars parked along the roadway all the way back to the popular surf area called "Cannons" which is just after the Haena county park.

Tourist issue simple solution would be to better outline parking areas. Install signage to slow down traffic as early as the dry cave. Secondly create better orientation, either through a visitors center or even a small radio broadcast in the end of road area, signage tells visitors to tune in to the station. It tells the history of the area and how to go about safe parking using existing lots and roadside parking.

Local issue simple solution. Open up a local resident lot, separate from tourists. The areas that locals used to drive thru to park, behind new bathrooms was blocked off many years ago. It was fishermen access traditionally, and letting them back in would be a great step in building trust.

It is hard to ignore that the bathrooms are too close to the ocean to be acceptable. Tourists from all over the planet bring their pathogens and that should be pumped and removed from the area regularly. It is also hard to ignore the rock fall danger on the current park road. Now that it was pointed out at the meeting, it seems that continuing to allow such huge numbers of people to traverse the rock fall impact zone is just begging for a catastrophe. Remember "Sacred Falls" circa 1998. It can happen again at anytime along that road. The inland pedestrian walkway would be a priority in this case, and in doing so you will have to better define the parking area near the "helicopter landing zone". Perhaps a system of stalls reserved for residents could be built into this lot. State ID required, or perhaps stickers issued to residents with proper ID.

Finally, it is grand to encourage the community to volunteer and help with the care taking of Haena. However, during the meeting it was presented in an odd fashion. There was talk about locals "earning" access through volunteering. This seems ludicrous to many a longtime local I spoke with. To have to volunteer to insure access to public lands supported by our taxes has many angered, and really does not honor the fact that the locals are being pushed out by tourists and tourism being drawn to the park. It seems that any plans implemented from this time forward should reduce tourist access while increasing local access.

It is not a bad idea to limit the tourist numbers per day. Many vehicles could be replaced easily with a shuttle from offsite. Perhaps you could work with a local non-profit like "Waipa" to provide a hikers parking for those taking the trail, getting the few hundred cars that are carrying hikers off the end of the road parking would certainly solve some immediate over crowding issues. Plus it would get hikers closer to the trailhead ideally, instead of walking an extra mile from where they parked down the road.

There are many things to consider, your task is great. Good luck. As a reference here are a few places I visited over the last two years that run good crowd control and information programs.

Iolani Palace, Oahu  
Waimea Valley, Oahu  
Hanauma Bay, Oahu  
Honaunau, City of Refuge, Hawaii Island  
Haleakala Park, Maui

All of these sites have dealt with similar issues as you face with Haena. yo might visit or consult with them as you move forward.

Mahalo nui loa for your time in hearing my testimony.  
John W Franey



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PLANNING • LANDSCAPE ARCHITECTURE • ENVIRONMENTAL STUDIES • ENTITLEMENTS • PERMITTING • GRAPHIC DESIGN

Mr. Jaybird Franey  
SUBJECT: COMMENTS ON THE HĀ'ENA STATE PARK MASTER PLAN DRAFT ENVIRONMENTAL  
IMPACT STATEMENT (EIS), HĀ'ENA, KAUA'I, HAWAII  
Month XX, 2018  
Page 2

We recognize your comment stating most prefer no action over the actions proposed. The "no change" (or No Action) alternative was rejected outright due to factors that include the potential for continued degradation of cultural and natural resources, the worsening traffic and parking congestion that would occur if nothing were done, and the potential risk of rockfalls and threats to public safety.

We recognize and appreciate your suggestion for the education of visitors to the park, this has been incorporated as a part of the master plan in Section 2.5.4. Providing educational information to visitors at the park entry, and providing educational signage at the park will help to minimize impacts to the park's varied natural, cultural, historic, and scenic resources as visitors will learn about appropriate behavior, protocol, and activities permitted in the park, having the beneficial secondary effect of better protection of those resources and reduced user conflicts which will in turn improve mutual understanding, respect, and the feeling of aloha shared by all who visit the park. Please see the "Visitor Orientation" attachment from Section 2.5.4.5 of the Final EIS, which shows the verbatim changes to this section from the Draft EIS

We recognize your concerns regarding bathrooms and wastewater near the ocean. The proposed Master Plan recommends installing an integrated water/wastewater/drainage system to maximize the efficiency and use of on-site water resources. It includes collecting rainwater and using treated wastewater for non-potable water uses to minimize demand for potable water, as well as restoring the 'auwai wherever possible and improving the drainage of surface runoff to irrigate surrounding garden areas or the lot if it can be appropriately filtered.

On-site wastewater disposal can potentially impact groundwater resources if not treated properly. Based on strong community preference, the Master Plan proposes that any new wastewater systems include a treatment system that brings wastewater to an R-2 water quality level at a minimum and to reuse the effluent as much as possible to minimize impacts to the sensitive natural and cultural resources at the park.

We also recognize your concerns regarding rockfall hazards at the park. A Rockfall Hazard Assessment was performed by AECOM during the months of August and September, 2008 and updated in 2013 with a supplemental rockfall analysis and computer simulation in the area between the main parking lot and Wai a Kanaloa. The health and safety impacts of rockfalls are proposed to be mitigated by siting all of the major visitor facilities and paths, including the Pedestrian Path to Kē'e, outside of the 0% chance of modeled rockfalls as mapped by AECOM in their Rockfall Hazard Assessment report (EIS Appendix B). Specifically, the Welcome Hale, Pedestrian Path, highway closure with signage and gates, and the main parking lot/shuttle improvements should be considered elements of rockfall mitigation and therefore prioritized in capital improvement project funding as they will shift the park's major visitor traffic away from the area of potential rockfall hazard. In addition, warning signs should be installed at appropriate locations at both ends of the highway and between the turnaround and Kē'e. Safety warnings should also be given during the visitor orientation session prior to park entry.



Mr. Jaybird Franey  
SUBJECT: COMMENTS ON THE HÄ'ENA STATE PARK MASTER PLAN DRAFT ENVIRONMENTAL  
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Mahalo for your suggestion of encouraging volunteerism at the park. The restoration and proper management of the park can improve the mental and physical well-being of those from the area or those with ancestral ties to the area or who participate in cultural activities here as there is a deep connection between them and this place. The Master Plan encourages the local community, Hä'ena families, and cultural and scientific experts to continue participating in the ongoing implementation and care for the park via the Cultural Advisory Group and broader community advisory group, as well as participation in future events and activities at the park such as educational programs and volunteer work days. As you stated in your comment, these volunteer opportunities will strengthen the sense of community responsibility and caring for the park.

We appreciate your comment supporting a limit to the number of visitors to the park. The revised master plan calls for an adaptive management approach for both the parking and the proposed visitor limits, which will be adjusted based on an average number of visitors rather than a set limit per day. As the State has more time to analyze user patterns, other options can be explored over time, and they are actively engaged in discussions regarding parking enforcement and increased fines along the roadway outside of the park as well. Please see the "Visitor Limits" attachment from Section 2.5.4.3 of the Final EIS, which shows the verbatim changes from the Draft EIS for this section

Mahalo nui for your input and participation in the environmental review process. Your letter will be included in the Final EIS. If you would like a copy of the Final EIS or portions thereof, please let us know. Otherwise, the electronic copy of the Final EIS will be available on the Office of Environmental Quality Control website at [http://oeqc2.doh.hawaii.gov/EA\\_EIS\\_Library/2018-09-14-FEIS-Haena-State-Park-Master-Plan.pdf](http://oeqc2.doh.hawaii.gov/EA_EIS_Library/2018-09-14-FEIS-Haena-State-Park-Master-Plan.pdf) on 09/14/2018.

Aloha,

Kimi Mikami Yuen, LEED AP BD+C  
Principal

Attachments: Roadways and Traffic  
Parking  
Visitor Orientation  
Visitor Limits

cc: The Honorable David Y. Ige, Governor  
Office of Environmental Quality Control  
Board of Land and Natural Resources  
Division of State Parks

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Nathalie Razo

From: Jeff Ayeroff <[jeff@ayeroff.com](mailto:jeff@ayeroff.com)>  
Sent: Tuesday, September 08, 2015 7:48 PM  
To: Kimi Yuen  
Subject: the "plan for Haena"

as the owner of 5480 Weke Road in Hanalei, I strongly object to the plan you are contemplating for the solution to the obvious over crowding on the North Shore. The answer is not to make a Disneyesque bottleneck forcing tourists and regulars to flood the other available beaches. It would be more advisable to do a shuttle service, enforce the parking, raise taxes and ticket offenders and tow cars away. Making the North shore less natural, is never an answer for Kauai.... Please do not approve the current plan, we can and should do better. Jeff Ayeroff



Mr. Jeff Ayeroff  
SUBJECT: COMMENTS ON THE HĀ'ENA STATE PARK MASTER PLAN DRAFT ENVIRONMENTAL  
IMPACT STATEMENT (EIS), HĀ'ENA, KAUA'I, HAWAII  
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Month XX, 2018 - DRAFT

Mr. Jeff Ayeroff  
5480 Weke Road  
Hanalei, HI 96714

SUBJECT: COMMENTS ON THE HĀ'ENA STATE PARK MASTER PLAN  
DRAFT ENVIRONMENTAL IMPACT STATEMENT (EIS),  
HĀ'ENA, KAUA'I, HAWAII

Aloha Mr. Ayeroff,

Mahalo nui for your emailed comment dated September 8, 2015 regarding the Hā'ena State Park Master Plan Draft Environmental Impact Statement (EIS). We sincerely apologize for the delay in responding. Due to the feedback received on the Draft EIS, the State of Hawai'i, Department of Land and Natural Resources, Division of State Parks (State Parks) has worked on revising the master plan with a reorganized Hā'ena State Park Community Advisory Committee (HSPCAC) to address the concerns voiced by the larger community. As a result, the master plan presented in the Final EIS has been updated based on the feedback received from the public meetings, comments received, and subsequent extensive collaboration with the HSPCAC. As the planning consultant for State Parks, we offer the following responses to your comments.

We recognize your concerns regarding the impact park visitor limitation will have on other North Shore locations. We agree that a combination of a shuttle service, parking limits, and keeping the park as natural as possible will enhance the park's environmental and cultural resources while reducing strain and impact of visitor traffic and congestion to the North Shore area. We recognize negative effects of the master plan may include the distribution of recreational demand to other facilities on the North Shore and island-wide, especially the nearby Hā'ena Beach Park. State Parks should monitor use of Hā'ena County Park to judge if the recreational demand is shifted from one facility to the other. If so, an adjustment to the number of visitors allowed per day to Hā'ena State Park might be considered as a mitigating measure. If a shuttle is employed, a mitigation measure may be to include a stop at Hā'ena Beach Park to alleviate traffic and congestion at the County park as well.

The revised master plan calls for an adaptive management approach for both the parking and the proposed visitor limits, which will be adjusted based on an average number of visitors rather than a set limit per day. The main parking lot is proposed to be separated into a fee-paying lot and non-fee-paying lot, which will also be adjusted daily to allow flexibility depending on future demand for parking and the potential use of a proposed shuttle service. Please see the "Parking" attachment from the Final EIS, which shows the verbatim changes from the Draft EIS for these sections.

We recognize your concern regarding keeping the park as natural as possible. Only a few new structures are proposed, including a Welcome Hale that is envisioned as an open traditional Hawaiian hale and located near the improved main parking lot. Please see the revised Figure 1 Master Plan graphic and the "Master Plan Summary" attachment from Section 1.9.1 of the Final EIS, which show the verbatim changes from the Draft EIS in this section.

Mahalo nui for your input and participation in the environmental review process. Your letter will be included in the Final EIS. If you would like a copy of the Final EIS or portions thereof, please let us know. Otherwise, the electronic copy of the Final EIS will be available on the Office of Environmental Quality Control website at [http://oeq2.doh.hawaii.gov/EA\\_EIS\\_Library/2018\\_HA-FEIS-Haena-State-Park-Master-Plan.pdf](http://oeq2.doh.hawaii.gov/EA_EIS_Library/2018_HA-FEIS-Haena-State-Park-Master-Plan.pdf) on 2018.

Aloha,

Kimi Mikami Yuen, LEED AP BD+C  
Principal

Attachments: Parking  
Master Plan Summary  
Figure 1: Master Plan

cc: The Honorable David Y. Ige, Governor  
Office of Environmental Quality Control  
Board of Land and Natural Resources  
Division of State Parks

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**Nathalie Razo**

**From:** Jenna Haynie <haynie240@yahoo.com>  
**Sent:** Tuesday, September 08, 2015 4:58 PM  
**To:** Lauren A. Tanaka@hawaii.gov; Kimi Yuen  
**Subject:** Comment: Ha'ena State Park Master Plan

Dear Government Officials and PBR Planning,  
Thank you for endeavoring to develop a conscientious and comprehensive master plan which balances conservation, recreation, cultural integrity, and public safety. And thank you very much for an opportunity where the public can express their input on this amazing place.

The Ha'ena State Park and Napali Coast State Wilderness Park are a Treasure, similar to the Hanauma Bay State Park, yet so much more! A unique spot offering beauty, wildness, cultural value, and recreational joy. Residents and visitors come to this place astounded by, enjoying and appreciating the raw wonder of the Napali, the beach, the fish, honu, monk seals, reef..., for cultural reasons, and recreation.

The public meeting in Hanalei introducing the master plan did not seem to address the following:

- \* The public would like to be more involved in creating a master plan.
- \* Residents ability to access the area at dawn and dusk for the beauty, nature, recreation as well as cultural reasons. How will they be able to gain fair access with a gate...?
- \* Many come just to enjoy the Napali Trail and access is through Ha'ena State Park. They do utilize the bathrooms and shower but their main focus is the Trail not Ha'ena State Park.  
The main focus at the meeting seemed to be cultural intention. And while this is very important, perhaps it is the Napali Trail and recreation that are the main attractors of this place. These activities need to have attention too which can bring wonderful opportunities for people to learn about Hawaiian culture.
- \* Traffic and parking in Ha'ena extends along right of ways because there is not enough parking at the State Park . Solutions may include allowing shuttles in addition to a limit of the number of cars **at any given time**. Tourism and Kauai population will continue to increase in the future. Thus having a higher environmentally sustainable limit at any one time **not** per day may make sense.
- \* Inviting donation (like they did at the Kilauea Lighthouse) or charging a nominal fee (like at Hanauma Bay) could offset the costs of maintenance. If charging fees, perhaps also offer a cheaper annual fee that residents could afford.

I could not find where the Master Plan is available for viewing. This site had it listed at the top of their information but I could not download it. <http://dlnr.hawaii.gov/dsp/announcements/public-input-sought-on-draft-master-plan-eis-for-haena-state-park/>

Mahalo nui loa for all you are doing to make a wonderful Master Plan, and for seriously taking into consideration the public's input.

With Gratitude,  
Jenna Haynie  
Hanalei



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Ms. Jenna Haynie  
SUBJECT: COMMENTS ON THE HĀ'ENA STATE PARK MASTER PLAN DRAFT ENVIRONMENTAL  
IMPACT STATEMENT (EIS), HĀ'ENA, KAUA'I, HAWAII  
Month XX, 2018  
Page 2

We recognize your concerns regarding cultural aspects of the master plan in relation to recreational activities at the park. An objective of the Master Plan is to balance outdoor recreational uses with the protection and preservation of the park's natural and cultural features in order to enrich the Hā'ena park experience for all.

We recognize your comments regarding parking concerns at the park. The main parking lot is proposed to be separated into a fee-paying lot and non-fee-paying lot, which will also be adjusted daily to allow flexibility depending on future demand for parking and the potential use of the proposed shuttle. Please see the "Parking" attachment from Section 2.5.1.2 of the Final EIS, which shows the verbatim changes from the Draft EIS for this section.

We recognize your comment regarding charging a nominal fee to help offset maintenance costs. Entry fees for state parks are established by Hawai'i Administrative Rules (HAR) 13-146-6, at the rate of \$5/car or \$1/person. HAR 13-146-6 also states that Hawai'i residents are exempt from paying park entry fees if they can show a valid Hawai'i ID. Other categories of fee exempt park users (such as registered volunteers) may be established at a later time.

Mahalo nui for your input and participation in the environmental review process. Your letter will be included in the Final EIS. If you would like a copy of the Final EIS or portions thereof, please let us know. Otherwise, the electronic copy of the Final EIS will be available on the Office of Environmental Quality Control website at [http://oeqc2.doh.hawaii.gov/EA\\_EIS\\_Library/2018\\_KA-FEIS-Haena-State-Park-Master-Plan.pdf](http://oeqc2.doh.hawaii.gov/EA_EIS_Library/2018_KA-FEIS-Haena-State-Park-Master-Plan.pdf) on 11/15/2018.

Aloha,

Kimi Mikami Yuen, LEED AP BD+C  
Principal

Attachments: Cultural and Community Advisory Group  
Visitor Limits  
Parking

cc: The Honorable David Y. Ige, Governor  
Office of Environmental Quality Control  
Board of Land and Natural Resources  
Division of State Parks

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Mr. and Mrs. Pierce Brosnan

September 8, 2015

Kimi Yuen, Senior Associate

PBR Hawaii

1001 Bishop Street

Suite 650

Honolulu, HI 96813

Aloha Ms. Yuen,

As long time residents of Haena, we are writing to voice our concerns about the current Haena State Park Master Plan Draft EIS.

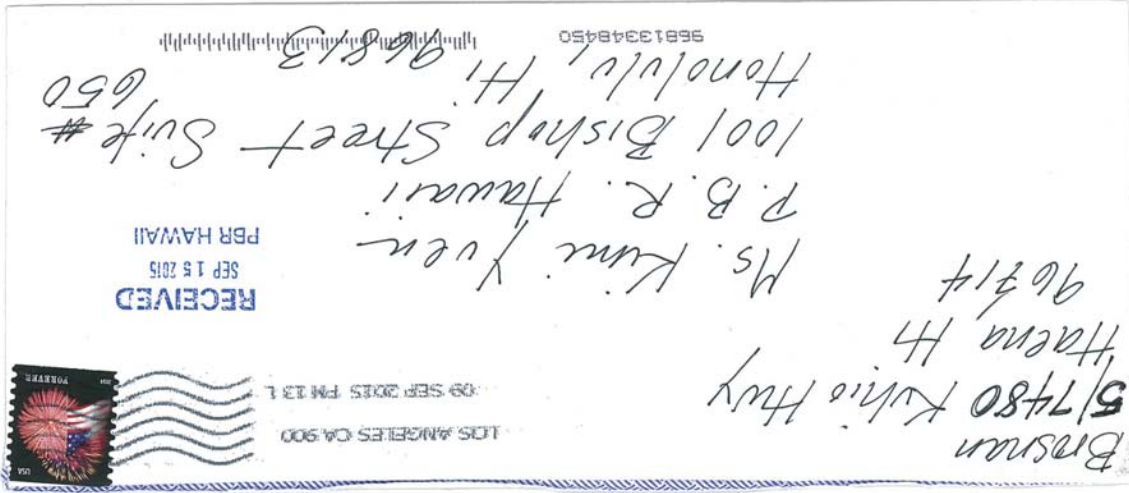
While we agree with limiting the amount of vehicles that visit Haena State Park daily, we do not feel comfortable with the current plan moving forward in light of the restricted access to residents. Additionally, we are concerned that restricting access to Ke'e will simply result in causing another problem in our community by over-crowding Makua Bay.

We believe that much could be solved by creating short term (4 hour) parking near the Lifeguard tower at Ke'e Beach Park and long term parking (overnight) for hikers in the large dirt lot (across from the Waikapalae & Waikanaloe wet caves). Paid parking, parking enforcement, hourly shuttles to and from the park and perhaps a toll booth with Park Rangers who encourage the visitor community (by handing out a pamphlet with every paid parking receipt) to be environmentally sensitive to our one-of-a-kind State Park could all assist in elevating the experience of visiting this cultural site while also protecting Haena State Park.

Thank you for your consideration of the above.

*Pierce Brosnan*  
Keely and Pierce Brosnan

5-7480 Kuhio Hwy  
Haena, HI 96714





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Mr. and Mrs. Pierce and Keely Brosnan  
SUBJECT: COMMENTS ON THE HĀ'ENA STATE PARK MASTER PLAN DRAFT ENVIRONMENTAL  
IMPACT STATEMENT (EIS), HĀ'ENA, KAUA'I, HAWAII  
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the different options with the advisory committee. More information on the proposed fee structure for parking is attached in Section 2.5.1.2 from the Final EIS.

In response to your comments regarding an hourly shuttle and parking enforcement, the new main parking lot is intended to alleviate the strain on current parking demand along with facilities designed to support the recommended shuttle service proposed. While the potential shuttle service is not proposed to be administered by State Parks in the revised master plan, it does include specific elements to support effective implementation with infrastructure design for the proposed park entry and main parking lot to support a recommended shuttle service with shuttle stop structures, as described in Section 2.5.1.1 and Section 2.5.1.2 from the Final EIS.

We acknowledge your suggestion for distribution of information through pamphlets on the cultural sites and environmentally sensitive areas of the park. The revised plan also includes proposals to provide information to all visitors prior to entry with availability at the Welcome Hale and online. The attached sections from the Final EIS on Visitor Orientation and Welcome Hale described the proposed provisions for information, which will educate visitors to the park on appropriate behavior for preserving the natural and cultural resources within the park.

Mahalo nui for your input and participation in the environmental review process. Your letter will be included in the Final EIS. If you would like a copy of the Final EIS or portions thereof, please let us know. Otherwise, the electronic copy of the Final EIS will be available on the Office of Environmental Quality Control website at [http://ceq2.doh.hawaii.gov/EA\\_EIS\\_Library/2018\\_KA-FEIS-Haena-State-Park-Master-Plan.pdf](http://ceq2.doh.hawaii.gov/EA_EIS_Library/2018_KA-FEIS-Haena-State-Park-Master-Plan.pdf) on 10/10/2018.

Aloha,

Kimi Mikami Yuen, LEED AP BD+C  
Principal

Attachments: Park Entry  
Parking  
Visitor Limits  
Welcome Hale  
Visitor Orientation

cc: The Honorable David Y. Ige, Governor  
Office of Environmental Quality Control  
Board of Land and Natural Resources  
Division of State Parks

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Mr. Pierce and Mrs. Keely Brosnan  
5-7480 Kuhio Highway  
Haena, HI 96714

SUBJECT: COMMENTS ON THE HĀ'ENA STATE PARK MASTER PLAN  
DRAFT ENVIRONMENTAL IMPACT STATEMENT (EIS),  
HĀ'ENA, KAUA'I, HAWAII

Aloha Mr. and Mrs. Brosnan,

Mahalo nui for your comment letter dated September 8, 2015 received via email and postal mail regarding the Hā'ena State Park Master Plan Draft Environmental Impact Statement (EIS). We sincerely apologize for the delay in responding. Due to the feedback received on the Draft EIS, the State of Hawai'i, Department of Land and Natural Resources, Division of State Parks (State Parks) has worked on revising the master plan with a reorganized Hā'ena State Park Community Advisory Committee (HSPCAC) to address the concerns voiced by the larger community. As a result, the master plan presented in the Final EIS has been updated based on the feedback received from the public meetings, comments received, and subsequent extensive collaboration with the HSPCAC. As the planning consultant for State Parks, we offer the following responses to your comments.

Mahalo for your support of the vehicle limit aspects of the master plan. We recognize your concerns with local resident access and the potential impact on neighboring communities and beaches. The revised master plan proposes the 900-person visitor limit as an initial number which can be adaptively managed and adjusted as appropriate, especially if there continues to be unwanted impacts at the park and surrounding community. If there continue to be issues, State Parks will work with the advisory committee on adjusting the number and will also be conscious of unintended impacts on neighboring beaches similar to your concern regarding Makua Bay.

The proposed visitor limits will also be instituted only during peak hours of park use and will allow visitors to enter before and after without being counted against the visitor limit. Therefore, access will be allowed into the park outside those peak hours and will be adjusted as appropriate based on ongoing input from the community. There will also be exemptions from the visitor limit total for permitted overnight camping hikers and/or other special user groups. Please see the attached Section 2.5.4.3 from the Final EIS on the revised visitor limit proposal.

We also acknowledge your suggestions for short and long-term parking, parking fees and shuttle service. While there is no distinction between residents and nonresidents in the visitor limits, the main parking lot is proposed to be separated into a fee-paying lot and non-fee-paying lot. As the State has more time to analyze user patterns, other options can be explored over time, and they are actively engaged in discussions regarding parking enforcement and increased fines along the roadway outside of the park as well. Currently, entry fees for all state parks are established by Hawai'i Administrative Rules (HAR) 13-146-6, at the rate of \$5/car or \$1/person. HAR 13-146-6 also states that Hawai'i residents are exempt from paying park entry fees if they can show a valid Hawai'i ID. Similar fees could be instituted at Hā'ena State Park. However, State Parks will continue to work on

**Nathalie Razo**

**From:** Lukasz Gottwald <dluke@drduke.com>  
**Sent:** Tuesday, September 08, 2015 5:01 PM  
**To:** Kimi Yuen  
**Subject:** Haena Plan Proposition

To whom it may concern,

The proposed plan is a really bad idea...

How are you gonna tell locals they can't drive to to places they have driven their whole lives?

The real issue is tourists and rental cars, Kauai residents should not be punished...

I hope you will reconsider !

Thanks !

L



Month XX, 2018 - DRAFT

Mr. Lukasz Gottwald  
Via Email: dluke@drduke.com

**SUBJECT: COMMENTS ON THE HÄ'ENA STATE PARK MASTER PLAN  
DRAFT ENVIRONMENTAL IMPACT STATEMENT (EIS),  
HÄ'ENA, KAUAI, HAWAII**

Aloha Mr. Gottwald,

Mahalo nui for your emailed comment dated September 8, 2015 regarding the Hä'ena State Park Master Plan Draft Environmental Impact Statement (EIS). We sincerely apologize for the delay in responding. Due to the feedback received on the Draft EIS, the State of Hawai'i, Department of Land and Natural Resources, Division of State Parks (State Parks) has worked on revising the master plan with a reorganized Hä'ena State Park Community Advisory Committee (HSPCAC) to address the concerns voiced by the larger community. As a result, the master plan presented in the Final EIS has been updated based on the feedback received from the public meetings, comments received, and subsequent extensive collaboration with the HSPCAC. As the planning consultant for State Parks, we offer the following responses to your comments.

We recognize your concerns with the Hä'ena State Park Master Plan from the perspective of local resident access and potential limitations on the number of visitors. We also acknowledge your comment concerning the impact of tourists and rental cars on the park. The draft version of the Master Plan has been revised to reflect feedback received from the community. Please see the attached **Master Plan Summary** from the Final EIS for reference to review the revisions to the plan.

Mahalo nui for your input and participation in the environmental review process. Your letter will be included in the Final EIS. If you would like a copy of the Final EIS or portions thereof, please let us know. Otherwise, the electronic copy of the Final EIS will be available on the Office of Environmental Quality Control website at [http://oepc2.doh.hawaii.gov/EA\\_EIS\\_Library/2018--KA-FEIS-Haena-State-Park-Master-Plan.pdf](http://oepc2.doh.hawaii.gov/EA_EIS_Library/2018--KA-FEIS-Haena-State-Park-Master-Plan.pdf) on 2018.

Aloha,

Kimi Mikami Yuen, LEED AP BD+C  
Principal

Attachments: Master Plan Summary

cc: The Honorable David Y. Ige, Governor  
Office of Environmental Quality Control  
Board of Land and Natural Resources  
Division of State Parks

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**Nathalie Razo**

**From:** Kaua'i Voice <aloha@kauaivoice.com>  
**Sent:** Tuesday, September 08, 2015 10:42 AM  
**To:** Lauren.A.Tanaka@hawaii.gov; Kimi Yuen  
**Subject:** Testimony for Ha'ena Master Plan

Aloha Ha'ena Master Plan Committee,

Mahalo nui for taking the time and effort to read all of our testimonies and utilize the priceless input of the community for the highest and best outcome for the Ha'ena Master Plan.

As someone who not only lives in Ha'ena but also is very active in protecting Kaua'i from further desecration, I continue to stand by my motto: protect what you love!

We ALL love Ha'ena. It truly is one of the most beautiful and sacred places on Earth. But this sacred spot does not only include Ha'ena, but ALL of Kaua'i. We have a very big problem here and therefore need very real solutions.

As we are aware, we have 67,000 residents and 1,372,682 visitors per year. This number alone should shock everyone. During the presentation you all gave at the Hanalei School, the basis for the Ha'ena Master Plan was to have an actual plan, the DLNR admitted to operating WITHOUT a plan all these years.

Yes: the Kanaka Ma'oli, the native Hawaiians, whos homeland we are graced to live upon, should head this Committee.

Yes: there is a huge problem that will only increase as the amount of visitors increase each year.

Yes: this situation is immense and takes all the Kaua'i ohana to fix it.

What is painful to see everyday is the sheer amounts of tourists to Ke'e. Hardly any room for locals to park. Hawaiians have constitutional right to access any part of Hawai'i for ceremonial or cultural purposes. Yet they have no where to park. The urban sprawl has made its way to Ha'ena and it is disgusting. Used baby diapers and trash strewn about. Hordes of sunscreen laden tourists naively frolicking on sacred ancient burial ground. WAY too many cars on our delicate archaic roads harming our fragile ecosystem.

As I continue to say in each of my testimonies, economy must never trump ecology!

Just because it is "good for tourism" does NOT mean it is good for the island and people of Kaua'i!

The truth is, ALL of Kaua'i is sacred and needs to be cared for by all the people, as was in ancient times. All of the residents of the North Shore love Kaua'i dearly and want our precious home island preserved for all present and future generations.

This issue goes far beyond shuttles and trashcans and transcends the greed of the few into the good for the whole.

Please note that We The People of Kaua'i stay vigilant. We stay awake and aware, and we will continue to use our voices and our wisdom.



All of Kaua'i is in jeopardy, and there needs to be laws in place to protect sacred Kaua'i from further desecration, whether it is from tourism, environmental chemical polluters, or even the military.

I speak on behalf of all present and future generations: PROTECT WHAT YOU LOVE!

<http://www.kauaivoice.com/#/Haena-Master-Plan-Community-Meeting/c17ij/55d687380c/f2174523e2c7e5>

Many of my colleagues have submitted very detailed ideas of how to handle the situation and I applaud everyone for finally bringing this most important issue to light.

Please, I implore you, HELP SAVE HA'ENA! It is the right thing to do.

We The People will be watching and will continue to use our voice.

What I suggest how to handle this problem is more community involvement. Here are just a few of my ideas:

- 1). Ha'ena Hui is formally started
- 2). REGULATE cars past Princeville. All hotels MUST provide shuttles and pay to repair these sacred sites since their visitors are destroying them.
- 3). STICKERS. Hawaiian cars have a special sticker that allows them access to everything. Kama 'aina stickers would show that people live here, are involved in the community, and their tax money is going to regulate this problem.
- 4). Tourist rental cars have NO sticker. NO STICKER means NO PARKING & NO ENTRANCE past Hanalei. Period. Either tourists park in Princeville and take the shuttle or don't go.
- 5). Hawaiian voices continue to speak up and claim their rightful heritage.
- 6). Kaua'i STOPS putting the good of the tourist above the good of the people.
- 7). This regulation should be less by the government and more by the We The People.
- 8). Embracing ancient Hawaiian ways of land stewardship and restoring the konohiki.

I understand that this is just the beginning and there is much work to do. Let us always remember:

**Ua Mau ke Ea o ka 'Āina i ka Pono:** The life of the land is perpetuated in righteousness".

Blessings of aloha to all of Kaua'i,

Mahana Mari

**KAUA'I VOICE**  
*Independent Island News*

**Protect what you LOVE!**

Editor-in-Chief: **Mahana Mari**

[www.KauaiVoice.com](http://www.KauaiVoice.com)

[aloha@KauaiVoice.com](mailto:aloha@KauaiVoice.com)

[facebook.com/KauaiVoice](https://facebook.com/KauaiVoice)



Month XX, 2018 - DRAFT

Ms. Mahana Mari  
P.O. Box 223231  
Princeville, HI 96722

**SUBJECT: COMMENTS ON THE HA'ENA STATE PARK MASTER PLAN DRAFT ENVIRONMENTAL IMPACT STATEMENT (EIS), HA'ENA, KAUAI, HAWAII**

Aloha Ms. Mari,

Mahalo nui for your emailed comment dated September 8, 2015 regarding the Ha'ena State Park Master Plan Draft Environmental Impact Statement (EIS). We sincerely apologize for the delay in responding. Due to the feedback received on the Draft EIS, the State of Hawai'i, Department of Land and Natural Resources, Division of State Parks (State Parks) has worked on revising the master plan with a reorganized Ha'ena State Park Community Advisory Committee (HSPCAC) to address the concerns voiced by the larger community. As a result, the master plan presented in the Final EIS has been updated based on the feedback received from the public meetings, comments received, and subsequent extensive collaboration with the HSPCAC. As the planning consultant for State Parks, we offer the following responses to your comments.

We appreciate your support of a potential limit on the number of visitors to the park. The revised master plan proposes the 900-person visitor limit as an initial number which can be adaptively managed and adjusted as appropriate, especially if there continues to be unwanted impacts at the park. If there continue to be issues, State Parks will work with the advisory committees on adjusting the number. **Please see the "Visitor Limits" attachment from Section 2.5.4.3 of the Final EIS, which shows the verbatim changes from the Draft EIS for this section.**

We recognize your concerns regarding the sacredness of Ha'ena State Park and the sacredness of the island of Kaua'i. Mahalo for your support of protecting, restoring, and perpetuating cultural aspects of Ha'ena State park. Preservation, restoration, and cultural use and reactivation of the park's historic and archaeological resources while providing quality opportunities for outdoor recreation are at the forefront of the proposed Master Plan.

The master plan has been designed to accommodate future third-party shuttle service programs. The development of these proposed programs will be an on-going coordination effort with private companies and County agencies.

We also recognize your concerns regarding the involvement of Hawaiian community groups, and traditional Hawaiian land stewardship. One of the key management recommendations is to establish a permanent Cultural Advisory Group and Community Advisory Committee. **These are described in Section 2.5.4.2 of the EIS and the verbatim description of these groups is included in the "Cultural and Community Advisory Group" attachment.**

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Project Director

RAMONA E. ALI, MAI  
Cultural Sustainability Planner

RAYMOND T. HIGA, ASIA  
Senior Associate

GATE COLLISON, AIA®  
Senior Associate

MARC SHIMIZU, ASIA  
Senior Associate

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We recognize your comments regarding traditional Hawaiian land stewardship and cultural practices. The master plan supports restoration of traditional cultural practices and methods. The primary physical mitigation measure of the master plan is to avoid cultural resources when locating new improvements and, where appropriate, enhance existing cultural and historic resources with restoration, interpretation, and cultural reuse. For example, new development in the Agricutural Complex is limited to facilities that support community gardening, such as a baseyard for equipment storage, which is located in previously disturbed areas where lo'i cannot be restored due to the condition of the soils.

Beneficial impacts to the cultural environment are expected from enabling cultural practices in the park through lo'i restoration and kalo cultivation; hula; traditional subsistence fishing; and caretaking of the Hula Complex and cemeteries. As a means to preserve access to cultural resources, perpetuate tradition, and provide essential maintenance of resources, State Parks has entered into a partnership with the Hui to curate the Agricutural and Hula Complexes. Additional partnerships will be encouraged to help manage other cultural resources within the park. In addition, the plan recommends that State Parks undertake separate efforts to work with cultural practitioners and the CAG to develop appropriate protocol for the park's cultural and historic resources, such as the Hula Complex, Agricutural Complex, and other archaeological/historic sites.

Mahalo nui for your input and participation in the environmental review process. Your letter will be included in the Final EIS. If you would like a copy of the Final EIS or portions thereof, please let us know. Otherwise, the electronic copy of the Final EIS will be available on the Office of Environmental Quality Control website at [http://oeqc2.doh.hawaii.gov/EA\\_EIS\\_Library/2018\\_KA-FEIS-Haena-State-Park-Master-Plan.pdf](http://oeqc2.doh.hawaii.gov/EA_EIS_Library/2018_KA-FEIS-Haena-State-Park-Master-Plan.pdf) on 10/26/2018.

Aloha,

Kimi Mikami Yuen, LEED AP BD+C  
Principal

Attachments: Visitor Limits  
Cultural and Community Advisory Group

cc: The Honorable David Y. Ige, Governor  
Office of Environmental Quality Control  
Board of Land and Natural Resources  
Division of State Parks

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**Nathalie Razo**

**From:** Melissa Norman <melismn@gmail.com>  
**Sent:** Tuesday, September 08, 2015 10:50 AM  
**To:** Kimi Yuen  
**Subject:** Haena State Park Master Plan Draft EIS

Aloha Ms. Yuen,

I am NOT in favor of the plan moving forward in light of the restricted access to residents as well as the resulting damage to Makua bay.

I believe that much could be solved through parking enforcement, shuttles and encouraging the visitor community to be eco-sensitive.

Thank you,

Melissa Norman  
5-7848 Kuhio Hwy  
Hanalei, Hawaii 96714



Month XX, 2018 - DRAFT

Ms. Melissa Norman  
5-7848 Kuhi Highway  
Hanalei, HI 96714

**SUBJECT: COMMENTS ON THE HĀ'ENA STATE PARK MASTER PLAN  
DRAFT ENVIRONMENTAL IMPACT STATEMENT (EIS),  
HĀ'ENA, KAUAI, HAWAII**

Aloha Ms. Norman,

Mahalo nui for your emailed comment dated September 8, 2015 regarding the Hā'ena State Park Master Plan Draft Environmental Impact Statement (EIS). We sincerely apologize for the delay in responding. Due to the feedback received on the Draft EIS, the State of Hawai'i, Department of Land and Natural Resources, Division of State Parks (State Parks) has worked on revising the master plan with a reorganized Hā'ena State Park Community Advisory Committee (HSPCAC) to address the concerns voiced by the larger community. As a result, the master plan presented in the Final EIS has been updated based on the feedback received from the public meetings, comments received, and subsequent extensive collaboration with the HSPCAC. As the planning consultant for State Parks, we offer the following responses to your comments.

We recognize your concerns with the Hā'ena State Park Master Plan from the perspective of local residents concerning potential restricted access and the potential impact on neighboring communities and beaches. The draft version of the master plan has been revised to reflect feedback received from the community and includes significant changes. The revised master plan proposes the 900-person visitor limit as an initial number which can be adaptively managed and adjusted as appropriate, especially if there continues to be unwanted impacts at the park and the surrounding community. If there continue to be issues, State Parks will work with the advisory committee on adjusting the number and will also be conscious of unintended impacts on neighboring beaches like your concern regarding damage to Makua Bay.

The proposed visitor limits will also be instituted only during peak hours of park use and will allow visitors to enter before and after without being counted against the visitor limit. Therefore, access will be allowed into the park outside those peak hours and will be adjusted as appropriate based on ongoing input from the community. There will also be exemptions from the visitor limit total for special user groups. Please see the attached **Section 2.5.4.3** from the Final EIS on the revised visitor limits proposed.

In response to your comments regarding parking enforcement and shuttle service, the parking improvements are intended to address parking enforcement with a parking fee structure for entry and facilities designed to support the recommended shuttle service. While the potential shuttle service is not proposed to be administered by State Parks in the revised master plan, it does include specific elements to support effective implementation with infrastructure design for the proposed park entry and main parking lot to support a recommended shuttle service with shuttle stop structures, as described in **Section 2.5.1.1** and **Section 2.5.1.2** from the Final EIS.

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Ms. Melissa Norman  
SUBJECT: COMMENTS ON THE HĀ'ENA STATE PARK MASTER PLAN DRAFT ENVIRONMENTAL  
IMPACT STATEMENT (EIS), HĀ'ENA, KAUAI, HAWAII  
Month XX, 2018  
Page 2

We also acknowledge your suggestion for informing visitors about the environmentally sensitive areas of the park. The revised plan includes proposals to provide information to all visitors prior to entry with availability at the Welcome Hale and online. The attached sections from the Final EIS on **Visitor Orientation** and **Welcome Hale** described the proposed provisions for information, which will educate visitors to the park on appropriate behavior for preserving the natural and cultural resources within the park.

Mahalo nui for your input and participation in the environmental review process. Your letter will be included in the Final EIS. If you would like a copy of the Final EIS or portions thereof, please let us know. Otherwise, the electronic copy of the Final EIS will be available on the Office of Environmental Quality Control website at [http://oeq2.doh.hawaii.gov/EA\\_EIS\\_Library/2018-1-KA-FEIS-Haena-State-Park-Master-Plan.pdf](http://oeq2.doh.hawaii.gov/EA_EIS_Library/2018-1-KA-FEIS-Haena-State-Park-Master-Plan.pdf) on 2018.

Aloha,

Kimi Mikami Yuen, LEED AP BD+C  
Principal

Attachments: Park Entry  
Parking  
Visitor Limits  
Welcome Hale  
Visitor Orientation

cc: The Honorable David Y. Ige, Governor  
Office of Environmental Quality Control  
Board of Land and Natural Resources  
Division of State Parks

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**Nathalie Razo**

**From:** Mitchin <haynie240@msn.com>  
**Sent:** Tuesday, September 08, 2015 3:29 PM  
**To:** Kimi Yuen; Lauren.A.Tanaka@hawaii.gov  
**Subject:** Haena State Park Plan

Dear Planners at PBR and Government Officials,

I attended the meeting in Hanalei concerning Haena State Park Plan. I feel the "conceptual" plan that was presented is extremely flawed. The main flaw is that it does not recognize nor plan for the simple access to the Napali State Park. Yes, Haena State Park is visited by a very large number of people every day but the mass majority of those people are not there to visit Haena State Park they are there to access the Napali Trail

I feel the plan needs to have unencumbered access to the Napali State Park and the Napali Trail. I feel that the Haena State Park needs to needs to work with the Napali State Park to provide this access. This would then make it easier to improve the Haena Park and save the heritage sites, cultural importance, and educate visitors about Haena State Park. This is a huge opportunity to make Haena State Park a shining example of what the Hawaiian Culture is all about with an attraction(Napali) that brings the visitors.

Thank you for your consideration.

Mitch Haynie  
Hanalei, HI



Month XX, 2018 - DRAFT

Mr. Mitch Haynie  
P.O. Box 11553  
Hanalei, HI 96714

**SUBJECT: COMMENTS ON THE HĀ'ENA STATE PARK MASTER PLAN  
DRAFT ENVIRONMENTAL IMPACT STATEMENT (EIS),  
HĀ'ENA, KAUA'I, HAWAII**

Aloha Mr. Haynie,

Mahalo nui for your emailed comment dated September 8, 2015 regarding the Hā'ena State Park Master Plan Draft Environmental Impact Statement (EIS). We sincerely apologize for the delay in responding. Due to the feedback received on the Draft EIS, the State of Hawai'i, Department of Land and Natural Resources, Division of State Parks (State Parks) has worked on revising the master plan with a reorganized Hā'ena State Park Community Advisory Committee (HSPCAC) to address the concerns voiced by the larger community. As a result, the master plan presented in the Final EIS has been updated based on the feedback received from the public meetings, comments received, and subsequent extensive collaboration with the HSPCAC. As the planning consultant for State Parks, we offer the following responses to your comments.

We recognize your concerns regarding access to the Napali Trail and Napali State Park as well as consideration for users of the trail. We acknowledge that many visitors accessing parking at Hā'ena State Park are using the park as an access point to enter the Kalalau Trail. The proposed visitor limits in the revised master plan does not distinguish between individuals based on use of the park. However, the proposed plan excludes overnight hikers with valid permits using the Kalalau Trail from the total visitor limit. In addition, the revised master plan proposes that visitor limits will only be instituted during peak hours of park use and will allow visitors to enter before and after without being counted against the visitor limit. Therefore, access will be allowed into the park and parking lot outside of those peak hours and will be adjusted as appropriate based on ongoing input from the community.

The revised master plan proposes the 900-person visitor limit as an initial number which can be adaptively managed and adjusted as appropriate, especially if there continues to be unwanted impacts at the park and surrounding community. If there continue to be issues, State Parks will work with the advisory committee on adjusting the number. The attached **Section 2.5.4.3** from the Final EIS describe the revised visitor limits proposed.

We also acknowledge your comments on the opportunity to highlight the cultural sites within Hā'ena State Park for visitors accessing the Kalalau Trail. The revised plan also includes proposals to provide information to all visitors prior to entry as well as availability online. The revised proposals recommend options for informing visitors of appropriate behavior to preserve the natural and cultural resources in the park. Please see the attached **Section 2.5.4.5** from the Final EIS describing the proposed visitor orientation.

Mahalo nui for your input and participation in the environmental review process. Your letter will be included in the Final EIS. If you would like a copy of the Final EIS or portions thereof, please let us know. Otherwise, the electronic copy of the Final EIS will be available

THOMAS WITTEN, FASLA  
Chairman / Principal

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President / Principal

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SCOTT MURAKAMI, ASLA, LEED® AP  
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Mr. Mitch Haynie  
SUBJECT: COMMENTS ON THE HÅ'ENA STATE PARK MASTER PLAN DRAFT ENVIRONMENTAL  
IMPACT STATEMENT (EIS), HÅ'ENA, KAUAI, HAWAII  
Month XX, 2018  
Page 2

on the Office of Environmental Quality Control website at:  
[http://oeqc2.doh.hawaii.gov/EA\\_EIS\\_Library/2018-09-08-KA-FEIS-Haena-State-Park-Master-Plan.pdf](http://oeqc2.doh.hawaii.gov/EA_EIS_Library/2018-09-08-KA-FEIS-Haena-State-Park-Master-Plan.pdf) on 09/08/2018.

Aloha,

Kimi Mikami Yuen, LEED AP BD+C  
Principal

Attachments: Visitor Limits  
Visitor Orientation

cc: The Honorable David Y. Ige, Governor  
Office of Environmental Quality Control  
Board of Land and Natural Resources  
Division of State Parks

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Haena State Park Plan - DSI.docx

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**Nathalie Razo**

**From:** Neal at Hawaii Life <neal@hawaiilife.com>  
**Sent:** Tuesday, September 08, 2015 12:18 PM  
**To:** Kimi Yuen  
**Subject:** Haena plan

The plan is a disaster , plain and simple, the results would be a detriment to our community and would negatively impact other natural resources in the area

How bout shuttles from Princeville

Parking enforcement

Higher taxes for rental cars

With limits on how many rental cars can be allowed on the island with the limited infrastructure currently

Please do not approve the current plan on the table as it is written

Neal Norman  
808.651.1777  
Director I Hawaii Life I

[www.hil.com](http://www.hil.com) [www.nealnorman.com](http://www.nealnorman.com)

Sent from my iPhone



Month XX, 2018 - DRAFT

Mr. Neal Norman  
P.O. Box 752  
Kilauea, HI 96754

**SUBJECT: COMMENTS ON THE HĀ'ENA STATE PARK MASTER PLAN  
DRAFT ENVIRONMENTAL IMPACT STATEMENT (EIS),  
HĀ'ENA, KAUA'I, HAWAII**

Aloha Mr. Norman,

Mahalo nui for your emailed comment dated September 8, 2015 regarding the Hā'ena State Park Master Plan Draft Environmental Impact Statement (EIS). We sincerely apologize for the delay in responding. Due to the feedback received on the Draft EIS, the State of Hawai'i, Department of Land and Natural Resources, Division of State Parks (State Parks) has worked on revising the master plan with a reorganized Hā'ena State Park Community Advisory Committee (HSPCAC) to address the concerns voiced by the larger community. As a result, the master plan presented in the Final EIS has been updated based on the feedback received from the public meetings, comments received, and subsequent extensive collaboration with the HSPCAC. As the planning consultant for State Parks, we offer the following responses to your comments.

We recognize your concerns with the Hā'ena State Park Master Plan Draft EIS and acknowledge your suggestions for shuttle service and parking enforcement. There have been several changes to the revised master plan. The draft version of the Master Plan has been revised to reflect feedback received from the community. Please see the **Master Plan Summary** from the Final EIS attached for reference with an overview of the revisions to the plan.

Mahalo for your suggestions for shuttle service from Princeville. While the potential shuttle service is not proposed to be administered by State Parks in the revised master plan, it does include specific elements to support effective implementation with infrastructure design for the proposed park entry and main parking lot to support a recommended shuttle service with shuttle stop structures, as described in **Section 2.5.1.1** and **Section 2.5.1.2** from the Final EIS.

Acknowledging your suggestions for parking enforcement, the revised master plan includes an entry fee structure for managing parking. The main parking lot is proposed to be separated into a fee-paying lot and non-fee-paying lot, which can be adaptively managed and adjusted daily as appropriate to allow flexibility depending on future demand for parking and the potential use of the proposed shuttle. The attached **Section 2.5.1.2** describes the revised master plan parking aspects in the Final EIS. We also acknowledge your comments on limiting rental cars on the island and raising taxing on rental cars, however these comments are beyond the scope of the Final EIS.

THOMAS WITTEN, FASLA  
Chairman / Principal

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Mr. Neal Norman  
SUBJECT: COMMENTS ON THE HĀ'ENA STATE PARK MASTER PLAN DRAFT ENVIRONMENTAL  
IMPACT STATEMENT (EIS), HĀ'ENA, KAUA'I, HAWAII  
Month XX, 2018  
Page 2

Mahalo nui for your input and participation in the environmental review process. Your letter will be included in the Final EIS. If you would like a copy of the Final EIS or portions thereof, please let us know. Otherwise, the electronic copy of the Final EIS will be available on the Office of Environmental Quality Control website at [http://oeq2.doh.hawaii.gov/EA\\_EIS\\_Library/2018-04-FA-EIS-Haena-State-Park-Master-Plan.pdf](http://oeq2.doh.hawaii.gov/EA_EIS_Library/2018-04-FA-EIS-Haena-State-Park-Master-Plan.pdf) on 04/18/2018.

Aloha,

Kimi Mikami Yuen, LEED AP BD+C  
Principal

Attachments: Master Plan Summary  
Park Entry  
Parking

cc: The Honorable David Y. Ige, Governor  
Office of Environmental Quality Control  
Board of Land and Natural Resources  
Division of State Parks

**Nathalie Razo**

**From:** Patricia Nickum <pnickum@rockymountainhardware.com>  
**Sent:** Tuesday, September 08, 2015 11:24 AM  
**To:** Kimi Yuen  
**Subject:** Haena State Park Master Plan Draft EIS

Aloha Ms. Yuen,

I am also NOT in favor of the plan moving forward in light of the restricted access to residents as well as the resulting damage to Makua bay.

I believe that much could be solved through parking enforcement, shuttles and encouraging the visitor community to be eco-sensitive.

Thank you,  
Patsy Nickum  
5-7820 Kuhio Highway  
Haena

Patsy Nickum  
1020 Airport Way  
Hailey, ID 83333  
(208)788-2013  
[rockymountainhardware.com](http://rockymountainhardware.com)



Month XX, 2018 - DRAFT

Ms. Patsy Nickum  
5-7820 Kuhio Highway  
Hanalei, HI 96714

**SUBJECT: COMMENTS ON THE HÄENA STATE PARK MASTER PLAN DRAFT ENVIRONMENTAL IMPACT STATEMENT (EIS), HÄ'ENA, KAUAI, HAWAII**

Aloha Ms. Nickum,

Mahalo nui for your emailed comment dated September 8, 2015 regarding the Hä'ena State Park Master Plan Draft Environmental Impact Statement (EIS). We sincerely apologize for the delay in responding. Due to the feedback received on the Draft EIS, the State of Hawai'i, Department of Land and Natural Resources, Division of State Parks (State Parks) has worked on revising the master plan with a reorganized Hä'ena State Park Community Advisory Committee (HSPCAC) to address the concerns voiced by the larger community. As a result, the master plan presented in the Final EIS has been updated based on the feedback received from the public meetings, comments received, and subsequent extensive collaboration with the HSPCAC. As the planning consultant for State Parks, we offer the following responses to your comments.

We recognize your concerns with local resident access and the potential impact on neighboring communities and beaches. The revised master plan proposes the 900-person visitor limit as an initial number which can be adaptively managed and adjusted as appropriate, especially if there continues to be unwanted impacts at the park. If there continue to be issues, State Parks will work with the advisory committees on adjusting the number and will also be conscious of unintended impacts on neighboring beaches like your comments regarding damage to Makua Bay.

The proposed visitor limits will also be instituted only during peak hours of park use and will allow visitors to enter before and after without being counted against the visitor limit. Therefore, access will be allowed into the park outside those peak hours and will be adjusted as appropriate based on ongoing input from the community. Please see the attached **Section 2.5.4.3** from the Final EIS on the revised visitor limit proposal.

We also acknowledge your suggestions for parking enforcement and shuttle service, as well as providing information on the environmentally sensitive areas of the park. While the potential shuttle service is not proposed to be administered by State Parks in the revised master plan, it does include specific elements to support effective implementation with infrastructure design for the proposed park entry and main parking lot to support a recommended shuttle service with shuttle stop structures, as described in the sections on **Park Entry** and **Parking** from the Final EIS. The revised plan also includes proposals to provide information to all visitors prior to entry with availability at the Welcome Hale and online. The attached **Section 2.5.4.5** and **Section 2.5.1.3** from the Final EIS describe the proposed provisions for public information, which will educate visitors to the park on appropriate behavior for preserving the natural resources within the park.

Mahalo nui for your input and participation in the environmental review process. Your

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Month XX, 2018 - DRAFT

Ms. Robin Cottle  
5-5851 Kuhio Highway  
Hanalei, HI 96714

**SUBJECT: COMMENTS ON THE HĀ'ENA STATE PARK MASTER PLAN  
DRAFT ENVIRONMENTAL IMPACT STATEMENT (EIS),  
HĀ'ENA, KAUA'I, HAWAII**

Aloha Ms. Cottle,

Mahalo nui for your emailed comment dated September 8, 2015 regarding the Hā'ena State Park Master Plan Draft Environmental Impact Statement (EIS). We sincerely apologize for the delay in responding. Due to the feedback received on the Draft EIS, the State of Hawai'i, Department of Land and Natural Resources, Division of State Parks (State Parks) has worked on revising the master plan with a reorganized Hā'ena State Park Community Advisory Committee (HSPCAC) to address the concerns voiced by the larger community. As a result, the master plan presented in the Final EIS has been updated based on the feedback received from the public meetings, comments received, and subsequent extensive collaboration with the HSPCAC. As the planning consultant for State Parks, we offer the following responses to your comments.

We recognize your concerns with overcrowding and the impact on the ecosystem around Ke'e Beach. We also acknowledge your suggestions for parking enforcement and shuttle service, as well as regulating access with entrance fees and educating the public on the culturally and environmentally sensitive areas of the park.

In response to your comments regarding shuttle service, the proposed park entry and main parking lot includes facilities designed to support the recommended shuttle service. While the potential shuttle service is not proposed to be administered by State Parks in the revised master plan, it does include specific elements to support effective implementation with infrastructure design for the proposed park entry and main parking lot to support a recommended shuttle service with shuttle stop structures. Please review **Section 2.5.1.1** and **Section 2.5.1.2** from the Final EIS describing proposed facilities at the main parking lot for shuttle stops.

Acknowledging your suggestions for entrance fees and parking enforcement, the revised plan includes proposed main parking lot design with controlled entry and flexibility depending on future demand for parking and the potential use of the proposed shuttle. Entry fees for state parks are established by Hawai'i Administrative Rules (HAR) 13-146-6, at the rate of \$5/car or \$1/person. HAR 13-146-6 also states that Hawai'i residents are exempt from paying park entry fees if they can show a valid Hawai'i ID. Similar fees could be instituted at Hā'ena State Park, however, State Parks will continue to work on the different options with the advisory committee. More details on parking is attached in **Section 2.5.1.2** from the Final EIS.

We also acknowledge your suggestion for distribution of information through pamphlets on the cultural sites and environmentally sensitive areas of the park. The revised plan also includes proposals to provide information to all visitors prior to entry with availability at

Ms. Robin Cottle  
SUBJECT: COMMENTS ON THE HĀ'ENA STATE PARK MASTER PLAN DRAFT ENVIRONMENTAL  
IMPACT STATEMENT (EIS), HĀ'ENA, KAUA'I, HAWAII  
Month XX, 2018  
Page 2

the Welcome Hale and online. The attached sections from the Final EIS on **Visitor Orientation** and **Welcome Hale** described the proposed provisions for information, which will educate visitors to the park on appropriate behavior for preserving the natural and cultural resources within the park.

Mahalo nui for your input and participation in the environmental review process. Your letter will be included in the Final EIS. If you would like a copy of the Final EIS or portions thereof, please let us know. Otherwise, the electronic copy of the Final EIS will be available on the Office of Environmental Quality Control website at [http://oeqpc2.doh.hawaii.gov/EA\\_EIS\\_Library/2018--KA-FEIS-Haena-State-Park-Master-Plan.pdf](http://oeqpc2.doh.hawaii.gov/EA_EIS_Library/2018--KA-FEIS-Haena-State-Park-Master-Plan.pdf) on **Month XX, 2018**.

Aloha,

Kimi Mikami Yuen, LEED AP BD+C  
Principal

Attachments: Park Entry  
Parking  
Welcome Hale  
Visitor Limits  
Visitor Orientation

cc: The Honorable David Y. Ige, Governor  
Office of Environmental Quality Control  
Board of Land and Natural Resources  
Division of State Parks

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Nathalie Razo

**From:** RYAN SIEBRING <siebring@me.com>  
**Sent:** Tuesday, September 08, 2015 5:18 PM  
**To:** Kimi Yuen  
**Subject:** Hana Ke'e plan - Don't approve!

Aloha,

I grew up in Haena and Ke'e is special to me and my ohana.

The current proposal is not a plan I support nor think is a good solution.

The main issue - the number of parking stalls has dimensioned substantially over the years. At the same time, the number of rental cars has increased dramatically.

My solution is simple and way cheaper to implement then the current proposal.

- 1) expand parking area slightly around the bathrooms.
- 2) Create parking fee's (meters) for non residents.
- 3) Create Free parking stalls for residents.
- 4) Funds generated from fees can support the job of the parking enforcement.
- 5) Pave additional overflow parking area by blueroom area. Same Meter/local free parking scenario.

Seems simple enough with out damaging the unique area that is Ke'e.

PLEASE DO NOT APPROVE THE KE'E PLAN AS WRITTEN!

Mahalo  
Ryan



Month XX, 2018 - DRAFT

Mr. Ryan Siebring  
Via Email: siebring@me.com

**SUBJECT: COMMENTS ON THE HÄ'ENA STATE PARK MASTER PLAN  
DRAFT ENVIRONMENTAL IMPACT STATEMENT (EIS),  
HÄ'ENA, KAUAI, HAWAII**

Aloha Mr. Siebring,

Mahalo nui for your emailed comment dated September 8, 2015 regarding the Hä'ena State Park Master Plan Draft Environmental Impact Statement (EIS). We sincerely apologize for the delay in responding. Due to the feedback received on the Draft EIS, the State of Hawai'i, Department of Land and Natural Resources, Division of State Parks (State Parks) has worked on revising the master plan with a reorganized Hä'ena State Park Community Advisory Committee (HSPCAC) to address the concerns voiced by the larger community. As a result, the master plan presented in the Final EIS has been updated based on the feedback received from the public meetings, comments received, and subsequent extensive collaboration with the HSPCAC. As the planning consultant for State Parks, we offer the following responses to your comments.

We recognize your concerns with the Hä'ena State Park Master Plan Draft EIS and your comments highlighting the growing constraints on current parking stalls coupled with an increasing volume of rental cars as well as your suggested solution to avoid "damaging" the park. The draft version of the master plan has been revised to reflect feedback received from the community and includes significant changes with minimal physical improvements to preserve the natural beauty of the park. Please see the **Master Plan Summary and Figure 1** from the Final EIS attached for reference with an overview of the revisions to the plan.

Mahalo for your suggestions to expand the parking area, create parking fees for nonresidents, and generate revenue through parking enforcement. Similar to your suggested parking fee designations, the main parking lot is proposed to be separated into a fee-paying lot and non-fee-paying lot. As the State has more time to analyze user patterns, other options can be explored over time, and they are actively engaged in discussions regarding parking enforcement and increased fines along the roadway outside of the park as well. Currently, entry fees for all state parks are established by Hawai'i Administrative Rules (HAR) 13-146-6, at the rate of \$5/car or \$1/person. HAR 13-146-6 also states that Hawai'i residents are exempt from paying park entry fees if they can show a valid Hawai'i ID. Similar fees could be instituted at Hä'ena State Park. However, State Parks will continue to work on the different options with the advisory committee. More information on the park entry, parking improvements, and proposed fee structure for parking is attached in **Section 2.5.1.1** and **Section 2.5.1.2** from the Final EIS.

Mahalo nui for your input and participation in the environmental review process. Your letter will be included in the Final EIS. If you would like a copy of the Final EIS or portions thereof, please let us know. Otherwise, the electronic copy of the Final EIS will be available on the Office of Environmental Quality Control website at [http://oeqc2.doh.hawaii.gov/EA\\_EIS\\_Library/2018--KA-FEIS-Haena-State-Park-Master-Plan.pdf](http://oeqc2.doh.hawaii.gov/EA_EIS_Library/2018--KA-FEIS-Haena-State-Park-Master-Plan.pdf) on 9/15/2018.

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Aloha,

Kimi Mikami Yuen, LEED AP BD+C  
Principal

Attachments: Master Plan Summary  
Parking  
Figure 1: Master Plan

cc: The Honorable David Y. Ige, Governor  
Office of Environmental Quality Control  
Board of Land and Natural Resources  
Division of State Parks

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Hana Ke'e plan - Don't approve! - DS.docx

**Nathalie Razo**

**From:** Ryan S <rskvarla@gmail.com>  
**Sent:** Tuesday, September 08, 2015 4:22 PM  
**To:** Kimi Yuen  
**Subject:** Haena Plan

The plan is a disaster , plain and simple, the results would be a detriment to our community and would negatively impact other natural resources in the area

How bout shuttles from Princeville

Parking enforcement

Higher taxes for rental cars

With limits on how many rental cars can be allowed on the island with the limited infrastructure currently

Please do not approve the current plan on the table as it is written

Ryan Skvarla



Month XX, 2018 - DRAFT

Mr. Ryan Skvarla  
5595 Weke Road  
Hanalei, HI 96714

**SUBJECT: COMMENTS ON THE HĀ'ENA STATE PARK MASTER PLAN  
DRAFT ENVIRONMENTAL IMPACT STATEMENT (EIS),  
HĀ'ENA, KAUA'I, HAWAII**

Aloha Mr. Skvarla,

Mahalo nui for your emailed comment dated September 8, 2015 regarding the Hā'ena State Park Master Plan Draft Environmental Impact Statement (EIS). We sincerely apologize for the delay in responding. Due to the feedback received on the Draft EIS, the State of Hawai'i, Department of Land and Natural Resources, Division of State Parks (State Parks) has worked on revising the master plan with a reorganized Hā'ena State Park Community Advisory Committee (HSPCAC) to address the concerns voiced by the larger community. As a result, the master plan presented in the Final EIS has been updated based on the feedback received from the public meetings, comments received, and subsequent extensive collaboration with the HSPCAC. As the planning consultant for State Parks, we offer the following responses to your comments.

We recognize your concerns with the Hā'ena State Park Master Plan Draft EIS and acknowledge your suggestions for shuttle service and parking enforcement. There have been several changes to the revised master plan. The draft version of the Master Plan has been revised to reflect feedback received from the community. Please see the **Master Plan Summary** from the Final EIS attached for reference with an overview of the revisions to the plan.

Mahalo for your suggestions for shuttle service from Princeville. While the potential shuttle service is not proposed to be administered by State Parks in the revised master plan, it does include specific elements to support effective implementation with infrastructure design for the proposed park entry and main parking lot to support a recommended shuttle service with shuttle stop structures, as described in **Section 2.5.1.1** and **Section 2.5.1.2** from the Final EIS.

Acknowledging your suggestions for parking enforcement, the revised master plan includes an entry fee structure for managing parking. The main parking lot will be separated into a fee-paying lot and non-fee-paying lot, which can be adaptively managed and adjusted daily as appropriate to allow flexibility depending on future demand for parking and the potential use of the proposed shuttle. The attached **Section 2.5.1.2** describes the revised master plan parking aspects in the Final EIS. We also acknowledge your comments on limiting rental cars on the island and raising taxing on rental cars, however these comments are beyond the scope of the Final EIS.

Mahalo nui for your input and participation in the environmental review process. Your letter will be included in the Final EIS. If you would like a copy of the Final EIS or portions thereof, please let us know. Otherwise, the electronic copy of the Final EIS will be available on the Office of Environmental Quality Control **website** at:

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Aloha,

Kimi Mikami Yuen, LEED AP BD+C  
Principal

Attachments: Master Plan Summary  
Park Entry  
Parking

cc: The Honorable David Y. Ige, Governor  
Office of Environmental Quality Control  
Board of Land and Natural Resources  
Division of State Parks



**Nathalie Razo**

**From:** William Wright CFP <advisors@gfcwow.com>  
**Sent:** Tuesday, September 08, 2015 12:21 PM  
**Cc:** Kimi Yuen  
**Subject:** Stern Opposition to any FIXING you have in mind for Kauai north shore

Please register my stern opposition to your proposed interventions and presence on the North Shore of Kauai. As a tax paying full time resident of Kauai county for the last 5 years I am opposed to anything BUT your parking expansion and parking improvements to KEE beach area.

ALL OTHER so called improvements are not welcome. Leave the pristine area alone and keep govt hands and ordinances away...we are better off in total with things as they are than they will be after you get your hands on it. Please stay OUT!

**William O. Wright, CFP**  
**President**  
**Guidance Financial Consultants, Inc.**  
[www.gfcwow.com](http://www.gfcwow.com)  
888-250-4012 Toll Free  
316-619-6799 Cell



Month XX, 2018 - DRAFT

Mr. William O. Wright  
Via Email: [advisors@gfcwow.com](mailto:advisors@gfcwow.com)

**SUBJECT: COMMENTS ON THE HÅ'ENA STATE PARK MASTER PLAN  
DRAFT ENVIRONMENTAL IMPACT STATEMENT (EIS),  
HÅ'ENA, KAUAI, HAWAII**

Aloha Mr. Wright,

Mahalo nui for your emailed comment dated September 8, 2015 regarding the Hå'ena State Park Master Plan Draft Environmental Impact Statement (EIS). We sincerely apologize for the delay in responding. Due to the feedback received on the Draft EIS, the State of Hawai'i, Department of Land and Natural Resources, Division of State Parks (State Parks) has worked on revising the master plan with a reorganized Hå'ena State Park Community Advisory Committee (HSPCAC) to address the concerns voiced by the larger community. As a result, the master plan presented in the Final EIS has been updated based on the feedback received from the public meetings, comments received, and subsequent extensive collaboration with the HSPCAC. As the planning consultant for State Parks, we offer the following responses to your comments.

We recognize your comments regarding improvements to the state park outside of parking expansion and parking improvements. The "no change" (or No Action) alternative was evaluated and rejected outright due factors that include the potential for continued degradation of cultural and natural resources, the worsening traffic and parking congestion that would occur if nothing were done, and potential risk of rockfalls and threats to public safety.

Mahalo nui for your input and participation in the environmental review process. Your letter will be included in the Final EIS. If you would like a copy of the Final EIS or portions thereof, please let us know. Otherwise, the electronic copy of the Final EIS will be available on the Office of Environmental Quality Control website at

[http://oecq2.doh.hawaii.gov/EA\\_EIS\\_Library/2018-04-04-FEIS-Haena-State-Park-Master-Plan.pdf](http://oecq2.doh.hawaii.gov/EA_EIS_Library/2018-04-04-FEIS-Haena-State-Park-Master-Plan.pdf) on 04/04/2018.

Aloha,

Kimi Mikami Yuen, LEED AP BD+C  
Principal

Attachment: Alternatives

cc: The Honorable David Y. Ige, Governor  
Office of Environmental Quality Control  
Board of Land and Natural Resources  
Division of State Parks

O:\Job26\262701 DLNR-Haena State Park Master Plan\EIS\Responses\Email Merge\2015-09-08 Wright Email-Stern Opposition to any FIXING you have in mind for Kauai north shore - JSI.docx

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**Nathalie Razo**

**From:** Yogi Lacock <kauaiboy1979@hotmail.com>  
**Sent:** Tuesday, September 08, 2015 7:41 PM  
**To:** Kimi Yuen  
**Subject:** Ha'ena Master Plan testimony

Aloha, to whom it may concern,  
My name is Yogi Lacock and i'm lucky enough to be born and raised in Haena. Over the years I've seen a lot of changes on the island but nothing as drastic as the Ke'e Master plan that is being proposed. I'm paralyzed in a wheelchair due to an accident I had 17 years ago when I was 19 years old but I have a 10-year-old son and six-year-old daughter that I'm so thankful get to grow up here on the North Shore of this beautiful island. Yes it's true there's a bit of congestion at Ke'e especially in the mid day and busy season but most of the cars down there keep the crowds spread out, from the people down the coast to the people hanging out on the beach there to all the cars just pulling up taking a quick picture and turning around. It would be a major mistake to try and regulate the cars that go down there and if people are concerned with the congestion I really believe the simplest solution would just be to add more parking or to reopen the back parking lot. If people can't park down there they're just going to turn around and go park at tunnels which would just create a whole new set of problems. Ke'e is honestly my favorite place to pull up at the beach with my kids kick back relax watch sunset cruise with friends. The crowds there have never really bothered me and all the locals know to go in the morning evenings and off-season to avoid the crowds. Please reconsider your big master plan and just add a bit more parking or reopen the back parking lot, it's definitely the easiest and most effective solution for the problem. Thanks for your attention to this matter.

Mahalo

Yogi Lacock



Month XX, 2018 - DRAFT

Mr. Yogi Lacock  
P.O. Box 1563  
Hanalei, HI 96714

**SUBJECT: COMMENTS ON THE HA'ENA STATE PARK MASTER PLAN  
DRAFT ENVIRONMENTAL IMPACT STATEMENT (EIS),  
HA'ENA, KAUA'I, HAWAII**

Aloha Mr. Lacock,

Mahalo nui for your emailed comment dated September 8, 2015 regarding the Ha'ena State Park Master Plan Draft Environmental Impact Statement (EIS). We sincerely apologize for the delay in responding. Due to the feedback received on the Draft EIS, the State of Hawai'i, Department of Land and Natural Resources, Division of State Parks (State Parks) has worked on revising the master plan with a reorganized Ha'ena State Park Community Advisory Committee (HSPCAC) to address the concerns voiced by the larger community. As a result, the master plan presented in the Final EIS has been updated based on the feedback received from the public meetings, comments received, and subsequent extensive collaboration with the HSPCAC. As the planning consultant for State Parks, we offer the following responses to your comments.

We recognize your concerns with regulating vehicle access and the potential impact on neighboring communities and beaches, such as Tunnels, Mahalo for your suggestions to expand parking and reopening the back parking lot. Similar to your suggested parking expansion, the revised master plan includes several parking improvements, as well as park entry design with a turnaround to mitigate congestion. The new main parking lot expansion is intended to alleviate the strain on current parking demand along with facilities designed to support the recommended shuttle service. The proposed gate installation is designed as a safety precaution from the rockfall hazard on the existing road. While the existing corridor between the proposed park entry turnaround and Ke'e Beach will be restricted to the general public due to the rockfall hazard, access will be permitted for special user groups such as lifeguards and those with ADA parking placards. Please review the attached [Section 2.5.1.1](#) and [Section 2.5.1.2](#) from the Final EIS describing the park entry and parking improvements. You will also find more details on the rockfall hazard and limited access corridor in [Section 2.5.1.8](#) and [Section 3.10.5](#) from the Final EIS.

Mahalo nui for your input and participation in the environmental review process. Your letter will be included in the Final EIS. If you would like a copy of the Final EIS or portions thereof, please let us know. Otherwise, the electronic copy of the Final EIS will be available on the Office of Environmental Quality Control website at [http://oeqc2.doh.hawaii.gov/EA\\_EIS\\_Library/2018-09-KA-FEIS-Haena-State-Park-Master-Plan.pdf](http://oeqc2.doh.hawaii.gov/EA_EIS_Library/2018-09-KA-FEIS-Haena-State-Park-Master-Plan.pdf) on 09/08/2018.

Aloha,

Kimi Mikami Yuen, LEED AP BD+C

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Principal

Attachments: Park Entry  
Parking  
Limited Access Corridor  
Rockfall Hazard

cc: The Honorable David Y. Ige, Governor  
Office of Environmental Quality Control  
Board of Land and Natural Resources  
Division of State Parks

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Ha'ena Master Plan testimony - DS.docx

**Nathalie Razo**

**From:** Awesome Adventures Kauai <aak@hawaiiintel.net>  
**Sent:** Wednesday, September 09, 2015 10:57 AM  
**To:** lauren.a.tanaka@hawaii.gov  
**Cc:** Kimi Yuen  
**Subject:** comments for Kee Beach on Kauai

Aloha to whom it may concern,

I am a 40 year resident to the Haena area on Kauai. I have 3 generations of family here in Haena and on Kauai. I am very opposed to having a gate at Kee beach, or any kind of buildings. Turning away people is not the answer. Where would they go? This will cause a choking of the other Haena beaches as there is not any parking available at any of those beaches either. It will result in just moving the problem to a new location down the road.

I feel a good solution would be to have shuttle vans, like a park and ride to the north shores beaches. Park and rides are all over the mainland, we don't need to re-create the wheel. If you have shuttle vans, the tourists can park at a location that has room for all the cars, and then can take a shuttle to Kee for the beach and also for the hikers. Then no one gets turned away, and there is not a parking problem at the end of the road. There is room in Princeville for a parking lot. I realize the devil is in the details, but I truly believe that there is a better solution than putting up a gate and turning away people.

Thank you for taking the time to read my opinion.

Acacia Morrison  
PO Box 687  
Hanalei, HI 96714



Month XX, 2018 - DRAFT

Ms. Acacia Morrison  
P.O. Box 687  
Hanalei, HI 96714

**SUBJECT: COMMENTS ON THE HĀ'ENA STATE PARK MASTER PLAN  
DRAFT ENVIRONMENTAL IMPACT STATEMENT (EIS),  
HĀ'ENA, KAUAI, HAWAII**

Aloha Ms. Morrison,

Mahalo nui for your emailed comment dated September 9, 2015 regarding the Hā'ena State Park Master Plan Draft Environmental Impact Statement (EIS). We sincerely apologize for the delay in responding. Due to the feedback received on the Draft EIS, the State of Hawai'i, Department of Land and Natural Resources, Division of State Parks (State Parks) has worked on revising the master plan with a reorganized Hā'ena State Park Community Advisory Committee (HSPCAC) to address the concerns voiced by the larger community. As a result, the master plan presented in the Final EIS has been updated based on the feedback received from the public meetings, comments received, and subsequent extensive collaboration with the HSPCAC. As the planning consultant for State Parks, we offer the following responses to your comments.

We recognize your concerns with the proposed gate installation and potential impact on neighboring communities and beaches. Due to the rockfall hazard proximity along the existing road, the proposed plan calls for a gate to restrict vehicle access along the corridor between the proposed park entry turnaround and Ke'e Beach, and will only be permitted for special user groups such as lifeguards and those with ADA parking placards. The revised master plan also calls for gate design to be visually open to minimize the aesthetic impact for views toward Ke'e Beach. In response to your concerns over overflow impacts on the community, State Parks will continue working with the advisory committee to monitor conditions and will also be conscious of unintended impacts on neighboring beaches similar to your comments. The attached [Section 2.5.1.8](#) and [Section 2.5.1.1](#) from the Final EIS provide a description of the revised master plan pertaining to the Park Entry and Limited Access Corridor. Additional information on the Rockfall Hazard is provided in [Section 3.10.5](#) from the Final EIS.

We recognize your concern with the originally proposed buildings as well. The revised master plan includes significant changes and minimal physical improvements to preserve the natural beauty of the park. Most of the proposed buildings in the draft master plan have been removed in the revised master plan to reflect feedback received from the community. Please see the [Master Plan Summary](#) from the Final EIS attached for reference with an overview of the revisions to the plan.

Mahalo for your suggestions to include "park and ride" shuttle service from Princeville. While the potential shuttle service is not proposed to be administered by State Parks in the revised master plan, it does include specific elements to support effective implementation with infrastructure design for the proposed park entry and main parking lot to support a recommended shuttle service with shuttle stop structures, as described in [Section 2.5.1.1](#) and [Section 2.5.1.2](#) from the Final EIS.

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Ms. Acacia Morrison  
SUBJECT: COMMENTS ON THE HĀ'ENA STATE PARK MASTER PLAN DRAFT ENVIRONMENTAL  
IMPACT STATEMENT (EIS), HĀ'ENA, KAUAI, HAWAII  
Month XX, 2018  
Page 2

Mahalo nui for your input and participation in the environmental review process. Your letter will be included in the Final EIS. If you would like a copy of the Final EIS or portions thereof, please let us know. Otherwise, the electronic copy of the Final EIS will be available on the Office of Environmental Quality Control website at [http://oeq2.doh.hawaii.gov/EA\\_EIS\\_Library/2018-18-KA-FEIS-Haena-State-Park-Master-Plan.pdf](http://oeq2.doh.hawaii.gov/EA_EIS_Library/2018-18-KA-FEIS-Haena-State-Park-Master-Plan.pdf) on 11/29/2018.

Aloha,

Kimi Mikami Yuen, LEED AP BD+C  
Principal

Attachments: Master Plan Summary  
Park Entry  
Parking  
Visitor Limits  
Limited Access Corridor  
Rockfall Hazard

cc: The Honorable David Y. Ige, Governor  
Office of Environmental Quality Control  
Board of Land and Natural Resources  
Division of State Parks

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comments for Kae Beach on Kauai - DS.docx



Nathalie Razo

From: andrea smith <andrea@brasilbazar.com>  
Sent: Wednesday, September 09, 2015 11:44 AM  
To: Kimi Yuen  
Subject: Plans

To whom this is concern,

Please don't move forward with Na Pali Kee plans.

Thank you,  
Andrea

Sent from my iPhone



Month XX, 2018 - DRAFT

Ms. Andrea Smith  
P.O. Box 281  
Hanalei, HI 96714

Via Email (as requested): [andrea@brasilbazar.com](mailto:andrea@brasilbazar.com)

SUBJECT: COMMENTS ON THE HÄ'ENA STATE PARK MASTER PLAN  
DRAFT ENVIRONMENTAL IMPACT STATEMENT (EIS),  
HÄ'ENA, KAUA'I, HAWAII

Aloha Ms. Smith,

Mahalo nui for your emailed comment dated September 9, 2015 regarding the Hä'ena State Park Master Plan Draft Environmental Impact Statement (EIS). We sincerely apologize for the delay in responding. Due to the feedback received on the Draft EIS, the State of Hawai'i, Department of Land and Natural Resources, Division of State Parks (State Parks) has worked on revising the master plan with a reorganized Hä'ena State Park Community Advisory Committee (HSPCAC) to address the concerns voiced by the larger community. As a result, the master plan presented in the Final EIS has been updated based on the feedback received from the public meetings, comments received, and subsequent extensive collaboration with the HSPCAC. As the planning consultant for State Parks, we offer the following responses to your comments.

We recognize your concerns with the originally proposed plans for Hä'ena State Park. There have been significant revisions from the original draft and the Master Plan has been revised to reflect feedback received from the community. Please see the attached **Master Plan Summary** from the Final EIS for reference with an overview of the revisions to the plan.

Mahalo nui for your input and participation in the environmental review process. Your letter will be included in the Final EIS. If you would like a copy of the Final EIS or portions thereof, please let us know. Otherwise, the electronic copy of the Final EIS will be available on the Office of Environmental Quality Control website at [http://oeqc2.doh.hawaii.gov/EA\\_EIS\\_Library/2018--KA-FEIS-Haena-State-Park-Master-Plan.pdf](http://oeqc2.doh.hawaii.gov/EA_EIS_Library/2018--KA-FEIS-Haena-State-Park-Master-Plan.pdf) on 2018.

Aloha,

Kimi Mikami Yuen, LEED AP BD+C  
Principal

Attachments: Master Plan Summary

cc: The Honorable David Y. Ige, Governor  
Office of Environmental Quality Control  
Board of Land and Natural Resources  
Division of State Parks

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Project Director

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Cultural Sustainability Planner

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Please share your comments on the Hā'ena State Park Master Plan Draft EIS.  
(If you would like a written response letter, please include your mailing address.)

I oppose this  
project

Locals should have open access to  
local beaches. Do not clamp locals  
into the group of "900". Mahalo





Month XX, 2018 - DRAFT

Ms. Barb Douglass  
P.O. Box 1654  
Hanalei, HI 96714

**SUBJECT: COMMENTS ON THE HĀ'ENA STATE PARK MASTER PLAN  
DRAFT ENVIRONMENTAL IMPACT STATEMENT (EIS),  
HĀ'ENA, KAUA'I, HAWAII**

Aloha Ms. Douglass,

Mahalo nui for your comment card received on September 9, 2015 in response to the public meeting held on August 19, 2015 regarding the Hā'ena State Park Master Plan Draft Environmental Impact Statement (EIS). We sincerely apologize for the delay in responding. Due to the feedback received on the Draft EIS, the State of Hawai'i, Department of Land and Natural Resources, Division of State Parks (State Parks) has worked on revising the master plan with a reorganized Hā'ena State Park Community Advisory Committee (HSPCAC) to address the concerns voiced by the larger community. As a result, the master plan presented in the Final EIS has been updated based on the feedback received from the public meetings, comments received, and subsequent extensive collaboration with the HSPCAC. As the planning consultant for State Parks, we offer the following responses to your comments.

We recognize your concerns with the Hā'ena State Park Master Plan from the perspective of local residents regarding beach access and potential limitations on the number of visitors. The draft version of the Master Plan has been revised to reflect feedback received from the community. Please see the [Master Plan Summary](#) from the Final EIS attached for reference with an overview of the revisions to the plan.

We acknowledge your concern over inclusion of local residents in the proposed visitor limits, however there is not a distinction in the revised master plan between residents and nonresidents. The revised master plan proposes the 900-person visitor limit as an initial number which can be adaptively managed and adjusted as appropriate, especially if there continues to be unwanted impacts at the park. State Parks will continue to work with the advisory committee to assess potential adjustments to the number. The limits will also be instituted only during peak hours of park use and will allow visitors to enter before and after without being counted against the visitor limit. Therefore, access will be allowed into the park outside those peak hours and will be adjusted as appropriate based on ongoing input from the community. There will also be exemptions from the visitor limit total for special user groups from the community. Please reference the attached [Section 2.5.4.3](#) from the Final EIS for a description of these aspects within the revised master plan.

Mahalo nui for your input and participation in the environmental review process. Your letter will be included in the Final EIS. If you would like a copy of the Final EIS or portions thereof, please let us know. Otherwise, the electronic copy of the Final EIS will be available on the Office of Environmental Quality Control website at [http://oeq2.deh.hawaii.gov/EA\\_EIS\\_Library/2018-04-KA-EIS-Haena-State-Park-Master-Plan.pdf](http://oeq2.deh.hawaii.gov/EA_EIS_Library/2018-04-KA-EIS-Haena-State-Park-Master-Plan.pdf) on 04/18/2018.

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Barb Douglass  
p.o. box 1654  
Hanalei, HI 96714

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SEP 09 2015

PBR HAWAII

PBR HAWAII & Associates

Attn: Kimi Yuen

1001 Bishop Street, Suite 650

Honolulu, HI 96813

Aloha,

Kimi Mikami Yuen, LEED AP BD+C  
Principal

Attachments: Master Plan Summary  
Visitor Limits

cc: The Honorable David Y. Ige, Governor  
Office of Environmental Quality Control  
Board of Land and Natural Resources  
Division of State Parks

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Hā'ena State Park Master Plan | Draft EIS Community Meeting | August 19, 2015

Please share your comments on the Hā'ena State Park Master Plan Draft EIS.  
(If you would like a written response letter, please include your mailing address.)

I OPPOSE BECAUSE THIS PLAN  
IS INCOMPLETE,

IF YOU ADD A PARKING LOT  
AND SHUTTLE SERVICE  
IN PRINCEVILLE THE PLAN  
WOULD HAVE MERIT.  
AT THIS TIME IT WILL ONLY  
MAKE TRAFFIC WORSE.







Month XX, 2018 - DRAFT

E. (Maile) Bendor  
P.O. Box 526  
Hanalei, HI 96714

**SUBJECT: COMMENTS ON THE HĀ'ENA STATE PARK MASTER PLAN  
DRAFT ENVIRONMENTAL IMPACT STATEMENT (EIS),  
HĀ'ENA, KAUA'I, HAWAII**

Aloha E. Bendor,

Mahalo nui for your comment card received on September 9, 2015 in response to the public meeting held on August 19, 2015 regarding the Hā'ena State Park Master Plan Draft Environmental Impact Statement (EIS). We sincerely apologize for the delay in responding. Due to the feedback received on the Draft EIS, the State of Hawai'i, Department of Land and Natural Resources, Division of State Parks (State Parks) has worked on revising the master plan with a reorganized Hā'ena State Park Community Advisory Committee (HSPCAC) to address the concerns voiced by the larger community. As a result, the master plan presented in the Final EIS has been updated based on the feedback received from the public meetings, comments received, and subsequent extensive collaboration with the HSPCAC. As the planning consultant for State Parks, we offer the following responses to your comments.

We recognize your concerns with the Hā'ena State Park Master Plan Draft EIS and acknowledge your suggestions for additional parking and shuttle service from Princeville. The new main parking improvements are intended to alleviate the strain on current parking demand, with key management recommendations for adapting to future parking demand and the potential use of the proposed shuttle. A description of parking improvements proposed is attached in [Section 2.5.1.2](#) from the Final EIS.

Acknowledging your suggestion for shuttle service from Princeville, the proposed facilities in the plan have been designed to support potential shuttle service recommended as well as a proposed turnaround at the entry to reduce congestion. While the potential shuttle service is not proposed to be administered by State Parks in the revised master plan, it does include specific elements to support effective implementation with infrastructure design for the proposed park entry and main parking lot to support a recommended shuttle service with shuttle stop structures, as described in [Section 2.5.1.1](#) and [Section 2.5.1.2](#) from the Final EIS.

Mahalo nui for your input and participation in the environmental review process. Your letter will be included in the Final EIS. If you would like a copy of the Final EIS or portions thereof, please let us know. Otherwise, the electronic copy of the Final EIS will be available on the Office of Environmental Quality Control website at [http://oeqc2.doh.hawaii.gov/EA\\_EIS\\_Library/2018-18-KA-HEIS-Haena-State-Park-Master-Plan.pdf](http://oeqc2.doh.hawaii.gov/EA_EIS_Library/2018-18-KA-HEIS-Haena-State-Park-Master-Plan.pdf) on 2018.

Aloha,

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RUSSELL Y. J. CHUNG, FASLA, LEED® AP BD+C  
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E-mail: [nyadming@pbrhawaii.com](mailto:nyadming@pbrhawaii.com)

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Kimi Mikami Yuen, LEED AP BD+C  
Principal

Attachments: Park Entry  
Parking

cc: The Honorable David Y. Ige, Governor  
Office of Environmental Quality Control  
Board of Land and Natural Resources  
Division of State Parks

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Hā'ena State Park Master Plan | Draft EIS Community Meeting | August 14, 2015

Please share your comments on the Hā'ena State Park Master Plan Draft EIS.  
(If you would like a written response letter, please include your mailing address.)

State or Federal money should fund the shuttle  
system to get people past Hanalei -  
Tourists staying in Princeville should be shuttled  
to Kēe, Tunnels, Lūmaluāi and Hanalei - With  
shore hotels and condos should provide transport from  
airport to N. shore - then shuttles should move tourists  
around the N. shore -  
Līmaehuli gardens has a visitor center that  
explains local history, culture -  
money should be spent on shuttle system -  
Park should not be limited to 800 people  
just set rid of tourists in rental cars





Month XX, 2018 - DRAFT

Mr. Michaelle Edwards  
3812 Alonui Place  
Princeville, HI 96722

**SUBJECT: COMMENTS ON THE HĀ'ENA STATE PARK MASTER PLAN  
DRAFT ENVIRONMENTAL IMPACT STATEMENT (EIS),  
HĀ'ENA, KAU'A'I, HAWAII**

Aloha Mr. Edwards,

Mahalo nui for your comment card dated September 9, 2015 from the community meeting held on August 19, 2015 regarding the Hā'ena State Park Master Plan Draft Environmental Impact Statement (EIS). We sincerely apologize for the delay in responding. Due to the feedback received on the Draft EIS, the State of Hawai'i, Department of Land and Natural Resources, Division of State Parks (State Parks) has worked on revising the master plan with a reorganized Hā'ena State Park Community Advisory Committee (HSPCAC) to address the concerns voiced by the larger community. As a result, the master plan presented in the Final EIS has been updated based on the feedback received from the public meetings, comments received, and subsequent extensive collaboration with the HSPCAC. As the planning consultant for State Parks, we offer the following responses to your comments.

We recognize your comments regarding the possibility of a shuttle for the park master plan. A proposed third-party shuttle service has been analyzed as a part of the project's traffic impact assessment report, included in the EIS as Appendix F. The preferred scenario is to implement a third-party shuttle from the Princeville facility at the start of Phase I, minimizing the need for visitor parking in the parking lot in the park. Please see the "Shuttle Service" attachment from Section 4.3.3 of the Final EIS, which shows the verbatim changes from the Draft EIS for this section.

We also recognize your concerns regarding the implementation of potential park visitor limits. The revised master plan calls for an adaptive management approach for both the parking and the proposed visitor limits, which will be adjusted based on an average number of visitors rather than a set limit per day. The limits will also be instituted only during peak hours of park use and will allow visitors to enter before and after peak hours without being counted against the visitor limit. Please see the "Visitor Limits" attachment from Section 2.5.4.3 of the Final EIS, which shows the verbatim changes from the Draft EIS for this section.

Mahalo nui for your input and participation in the environmental review process. Your letter will be included in the Final EIS. If you would like a copy of the Final EIS or portions thereof, please let us know. Otherwise, the electronic copy of the Final EIS will be available on the Office of Environmental Quality Control website at [http://oeq2.deh.hawaii.gov/EA\\_EIS\\_Library/2018-18-KA-FEIS-Haena-State-Park-Master-Plan.pdf](http://oeq2.deh.hawaii.gov/EA_EIS_Library/2018-18-KA-FEIS-Haena-State-Park-Master-Plan.pdf) on 2018.

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Mr. Michaele Edwards  
SUBJECT: COMMENTS ON THE HA'ENA STATE PARK MASTER PLAN DRAFT ENVIRONMENTAL  
IMPACT STATEMENT (EIS), HA'ENA, KAUAI, HAWAII  
Month XX, 2018  
Page 2

Aloha,

Kimi Mikami Yuen, LEED AP BD+C  
Principal

Attachments: Shuttle Service  
Visitor Limits

cc: The Honorable David Y. Ige, Governor  
Office of Environmental Quality Control  
Board of Land and Natural Resources  
Division of State Parks

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- JSI.docx

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**Nathalie Razo**

**From:** Lauren.A.Tanaka@hawaii.gov  
**Sent:** Wednesday, September 09, 2015 10:12 AM  
**To:** Curt.A.Cottrell@hawaii.gov; Russell.P.Kumabe@hawaii.gov;  
Alan.B.Carpenter@hawaii.gov; Kimi Yuen  
**Subject:** Fw: Haena State Park Plan comment

----- Forwarded by Lauren A Tanaka\DLNR\State\HUS on 09/09/2015 10:11 AM -----

From: Shyla <shyla.moon@gmail.com>  
To: "Lauren A. Tanaka@hawaii.gov" <Lauren.A.Tanaka@hawaii.gov>  
Date: 09/08/2015 09:27 PM  
Subject: Haena State Park Plan comment

---

This is in regards to the Haena State Park Master Plan public comment.

Make sure the entire island community is involved, we all use the area. From what I see there's special interest groups being involved, make sure the Haena and Hanalei community wants this plan. They live there and they should ALL have a fair say in what is being planned.

Aloha  
Shyla Moon





Month XX, 2018 - DRAFT

Ms. Shyla Moon  
Via Email: shyla.moon@gmail.com

**SUBJECT: COMMENTS ON THE HÄ'ENA STATE PARK MASTER PLAN  
DRAFT ENVIRONMENTAL IMPACT STATEMENT (EIS),  
HÄ'ENA, KAUA'I, HAWAII**

Aloha Ms. Moon,

Mahalo nui for your emailed comment dated September 8, 2015 regarding the Hä'ena State Park Master Plan Draft Environmental Impact Statement (EIS). We sincerely apologize for the delay in responding. Due to the feedback received on the Draft EIS, the State of Hawai'i, Department of Land and Natural Resources, Division of State Parks (State Parks) has worked on revising the master plan with a reorganized Hä'ena State Park Community Advisory Committee (HSPCAC) to address the concerns voiced by the larger community. As a result, the master plan presented in the Final EIS has been updated based on the feedback received from the public meetings, comments received, and subsequent extensive collaboration with the HSPCAC. As the planning consultant for State Parks, we offer the following responses to your comments.

We recognize your comments concerning the need for consideration of feedback from the Hä'ena and Hanalet community and concern with the involvement of special interest groups. The planning process involved a collaborative approach to support the development of the master plan by consulting various local community groups and individuals, including a thirty-two member Master Plan Advisory Committee (MPAC) consisting of Hä'ena kūpuna and 'ohana members, cultural practitioners and scientific experts, business representatives, State and County agencies, and other North Shore community members to provide recommendations on the physical plan and park management. The environmental review process has also included opportunities for public comment throughout the process. In addition, State Parks held a public meeting on August 19, 2015 to gather more input and extended the Draft EIS public comment period to allow more time for feedback from the community before revising the master plan. Please see the attached **Section 1.6** and **Section 1.7** from the Final EIS describing community engagement and environmental review process. One of the key management recommendations is to establish a permanent Cultural Advisory Group and Community Advisory Committee. These are described in **Section 2.5.4.2** of the Final EIS and the verbatim description of these groups is included in the "Cultural and Community Advisory Groups" attachment.

Mahalo nui for your input and participation in the environmental review process. Your letter will be included in the Final EIS. If you would like a copy of the Final EIS or portions thereof, please let us know. Otherwise, the electronic copy of the Final EIS will be available on the Office of Environmental Quality Control website at [http://osqe2.doh.hawaii.gov/EA\\_EIS\\_Library/2018--KA-HEIS-Haena-State-Park-Master-Plan.pdf](http://osqe2.doh.hawaii.gov/EA_EIS_Library/2018--KA-HEIS-Haena-State-Park-Master-Plan.pdf) on **Month XX, 2018**.

Aloha,

THOMAS WITTEN, ESQ.  
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President / Principal

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E-mail: syadaming@pbrhawaii.com

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Kimi Mikami Yuen, LEED AP BD+C  
Principal

Attachments: State Environmental Review Law  
Cultural and Community Advisory Groups

cc: The Honorable David Y. Ige, Governor  
Office of Environmental Quality Control  
Board of Land and Natural Resources  
Division of State Parks

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Haena State Park Plan comment - DSI.docx

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**Nathalie Razo**

**From:** Lauren.A.Tanaka@hawaii.gov  
**Sent:** Wednesday, September 09, 2015 10:51 AM  
**To:** Kimi Yuen  
**Subject:** Fw: Proposed Ke'e Master Plan

Please note her request.

----- Forwarded by Lauren A. Tanaka/DLNR/StateHUS on 09/09/2015 10:50 AM -----

---

**From:** Lauren A Tanaka/DLNR/StateHUS  
**To:** teresa tico <teranagrl@gmail.com>  
**Date:** 09/09/2015 10:50 AM  
**Subject:** Re: Proposed Ke'e Master Plan

---

Teresa:

An email response will be sent as requested.

---

**From:** teresa tico <teranagrl@gmail.com>  
**To:** Lauren Tanaka <Lauren.A.Tanaka@hawaii.gov>  
**Date:** 09/09/2015 09:26 AM  
**Subject:** Re: Proposed Ke'e Master Plan

---

Yes, thank you. But if possible, I would prefer an email response, with attachments if you are including them.

Teresa Tico  
P.O. Box 220  
Hanalei, HI 96714

On Wed, Sep 9, 2015 at 9:18 AM, <[Lauren.A.Tanaka@hawaii.gov](mailto:Lauren.A.Tanaka@hawaii.gov)> wrote:  
Ms. Tico:

Thank you for your comments. May I get a mailing address to which a written response will be provided and both included in the final EIS.

---

**From:** Teresa Tico <teranagrl@gmail.com>  
**To:** [Lauren.A.Tanaka@hawaii.gov](mailto:Lauren.A.Tanaka@hawaii.gov)  
**Date:** 09/08/2015 03:35 PM  
**Subject:** Proposed Ke'e Master Plan

---

Dear Ms. Tanaka,  
I am writing in regard to the proposed Ke'e Master Plan. As a long time Kauai resident

(since 1976) and Haena resident (since 1990), I am always pleased to see community input into island planning. I reviewed the 1,000 + page proposed plan and commend the members of the community who spent so much time to take so many issues into consideration. However, I was surprised at the amount of proposed "development" (the visitor center, boardwalks, ranger's house, signage, etc) which, I feel, is inappropriate in a Conservation area. The idea of a Conservation area it to restrict development, not increase it. Our real issue at Ke'e is parking. There are simply too many vehicles. I fully support limiting the number of vehicles, offering a public form of transportation, and charging a fee for hourly parking. While educating residents and visitors about the cultural history and resources of the area is necessary, I feel this could be done by printing an educational pamphlet that could handed out at the parking site. Bottom line, please restrict vehicles and development. Keep the Conservation area in Conservation. Mahalo.

Teresa Tico



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Ms. Teresa Tico  
SUBJECT: COMMENTS ON THE HÄ'ENA STATE PARK MASTER PLAN DRAFT ENVIRONMENTAL  
IMPACT STATEMENT (EIS), HÄ'ENA, KAUA'I, HAWAII  
Month XX, 2018  
Page 2

Month XX, 2018 - DRAFT

Ms. Teresa Tico  
P.O. Box 220  
Hanalei, HI 96714

Via Email (as requested): haenagirl@gmail.com

SUBJECT: COMMENTS ON THE HÄ'ENA STATE PARK MASTER PLAN  
DRAFT ENVIRONMENTAL IMPACT STATEMENT (EIS),  
HÄ'ENA, KAUA'I, HAWAII

Aloha Ms. Tico,

Mahalo nui for your emailed comment dated September 9, 2015 regarding the Hä'ena State Park Master Plan Draft Environmental Impact Statement (EIS). We sincerely apologize for the delay in responding. Due to the feedback received on the Draft EIS, the State of Hawai'i, Department of Land and Natural Resources, Division of State Parks (State Parks) has worked on revising the master plan with a reorganized Hä'ena State Park Community Advisory Committee (HSPCAC) to address the concerns voiced by the larger community. As a result, the master plan presented in the Final EIS has been updated based on the feedback received from the public meetings, comments received, and subsequent extensive collaboration with the HSPCAC. As the planning consultant for State Parks, we offer the following responses to your comments.

Mahalo for your support of the aspects of the master plan to limit the number of vehicles and your support for community input incorporated into the master plan. We recognize your concerns with the originally proposed "development" and desire to preserve the park for conservation. The revised master plan includes significant changes and minimal physical improvements to preserve the natural beauty of the park. Most of the proposed buildings, including the visitor center, and caretaker's cottage, have been removed in the revised master plan. The master plan includes many aspects to restore the natural environment of the park as well and the master plan has been revised to reflect feedback received from the community. Please see the Master Plan Summary from the Final EIS attached for reference with an overview of the revisions to the plan.

We also acknowledge your concern with parking as well as your suggestions for parking fees and shuttle service. Acknowledging your suggestions for parking fees, the revised plan includes proposed main parking lot design with controlled entry and flexibility depending on future demand for parking and the potential use of the proposed shuttle. Entry fees for state parks are established by Hawai'i Administrative Rules (HAR) 13-146-6, at the rate of \$5/car or \$1/person. HAR 13-146-6 also states that Hawai'i residents are exempt from paying park entry fees if they can show a valid Hawai'i ID. Similar fees could be instituted at Hä'ena State Park, however, State Parks will continue to work on the different options with the advisory committee. More details on parking is attached in Section 2.5.1.2 from the Final EIS.

While the potential shuttle service is not proposed to be administered by State Parks in the revised master plan, it does include specific elements to support effective implementation with infrastructure design for the proposed park entry and main parking lot to support a recommended shuttle service with shuttle stop structures, as described in Section 2.5.1.1

and Section 2.5.1.2 from the Final EIS.

We also acknowledge your suggestion for providing information through educational pamphlets on the cultural history and resources at the park to be distributed at the parking areas. The revised plan also includes proposals to provide information to all visitors prior to entry with availability at the Welcome Hale and online. The attached sections from the Final EIS on Visitor Orientation and Welcome Hale described the proposed provisions for information, which will educate visitors to the park on appropriate behavior for preserving the natural and cultural resources within the park.

Mahalo nui for your input and participation in the environmental review process. Your letter will be included in the Final EIS. If you would like a copy of the Final EIS or portions thereof, please let us know. Otherwise, the electronic copy of the Final EIS will be available on the Office of Environmental Quality Control website at [http://oeq2.doh.hawaii.gov/EA\\_EIS\\_Library/2018\\_KA-EIS-Haena-State-Park-Master-Plan.pdf](http://oeq2.doh.hawaii.gov/EA_EIS_Library/2018_KA-EIS-Haena-State-Park-Master-Plan.pdf) on 10/15/2018.

Aloha,

Kimi Mikami Yuen, LEED AP BD+C  
Principal

Attachments: Master Plan Summary  
Park Entry  
Parking  
Welcome Hale  
Visitor Orientation

cc: The Honorable David Y. Ige, Governor  
Office of Environmental Quality Control  
Board of Land and Natural Resources  
Division of State Parks

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Proposed K&C Master Plan - DS.docx

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**Nathalie Razo**

**From:** Beau Blair <beausephine@hawaii.rr.com>  
**Sent:** Wednesday, September 09, 2015 6:13 AM  
**To:** Kimi Yuen  
**Cc:** Lauren.A.Tanaka@hawaii.gov  
**Subject:** Haena Park Plan DEIS  
**Attachments:** Haena park plan comments.docx

Aloh. Although I missed submitting this by the deadline yesterday, I wanted to submit my comments on the DEIS of the Park Master Plan anyway. I hopes that my comments add to a better approach to the Park Master Plan.  
Mahalo,  
Beau Blair  
beausephine@hawaii.rr.com

Aloha Div. of State Parks & Ms Yuen

I am submitting these comments to you re: the DEIS on the Haena State Park Plan.

I was at the meeting at the Hanalei School where Ms Yuen made her presentation, and I also attended some of the earlier meetings re: input on the Master Plan, although I am not a member of the CAC.

My comments are as follows:

This Ha'ena State Park Master Plan does not take into account the sum total environmental impacts on the local and resident population. Currently, when all of the tourist visitors that cannot access Ke'e are turned away, they already tidal wave backwards, into the beaches that lead up to Ke'e. These other beaches are not equipped with sufficient parking and bathrooms for the excessive amount of tourists that are here presently. The Ke'e Park Plan has limited car access, and when cars are forced back to Haena Beach Park, it will certainly not deter people from accessing Ke'e via the beach, from Maniholo to Ke'e. This would be devastating to the last small area of somewhat quiet beach left primarily to residents. Our beaches and our community are currently under "full attack" due to exploitation by tourist business and tourists.

- This plan does not allow for residents who are neither a Hawaiian kumu nor fishermen, who may be unable to "volunteer" in order to be able to have access to their neighborhood resource. Long-time Kama'aina have enjoyed the use of Ke'e for many years, until it became over-run with tourists. It does not seem just to restrict those who have paid taxes but are being given no consideration in this plan to utilize the resources as well. Residents are the ones who malama the beaches and reefs, by virtue of caring for their backyard, but now residents have been over-run by too many visitors.
- There is mention of shuttles, but no requirements that all park-goers use them for going through the "rural roadway corridor" that leads from Hanalei to Ha'ena.
- Limiting the access to tourists and their vehicles will also set up a system that encourages people to "que up" earlier & earlier in



- order to be able to gain access, if shuttles are not a requirement for visitor access. This is a common result in parks all over the world that have limited access.
- If you restrict access via pre-sale passes or on-line permits, the State is doing to the residents the exact same thing that has happened with camping permits on the Na Pali. Many tourists plan ahead for their trips, and those of us who have to or choose to be spontaneous have lost the ability to go camping, because we are unable to procure permits on a short-term time frame. All the permits are being taken long in advance. If a resident goes camping without a permit, they are liable for immense fines. The State needs to factor this in before further restricting local access to parks and recreational areas, and this is a real problem that needs to be addressed.
  - The turnaround area is a good idea, but the rest of the "build-out" is neither respectful of the natural beauty, nor necessary to protect and preserve the park. A 24hr care-taker is not necessary, and neither is a large visitor education center. "Cold Pond" in Limahuli stream is an oasis for local families, and there is no mention of how to protect this place for local access and prevent it from the backflow of the visitor turn-around.
  - It is clear that the money for this grand plan is not all available, and the State of Hawaii historically does not manage its' parks or finances well. Without the full funding for a complete plan, this Master Plan is not going to alleviate the problems at Ke'e, and could possibly intensify them.
  - I wish I could say that this plan just had a few problems, but I feel that is not the case. This DEIS does not address the myriad of issues that go along with the problems at Ke'e.
  - The restriction of tourists coming to the island via specific quota would allow the resources to be better managed. Enforcement by police of parking restrictions and violations on the State Hwy 560, and making sure on a constant basis that emergency access routes are clear for the emergency vehicles would be very productive.
  - I am aware that because it is a State Park with Federal funding, there can be no distinction in this plan between local resident use and tourist use. But that is frustrating to me because the park is located at the end of a residential area- one that we all want to cherish and enjoy.

- To me, this plan is not work-able as presented.

- Beau Blair  
beausephine.b@me.com  
57331 Kuhio Hwy.  
Ha'ena, HI 96714 (Hanalei)  
808-826-7038



Mr. Beau Barthel-Blair  
SUBJECT: COMMENTS ON THE HĀ'ENA STATE PARK MASTER PLAN DRAFT ENVIRONMENTAL  
IMPACT STATEMENT (EIS), HĀ'ENA, KAUA'I, HAWAII  
Month XX, 2018  
Page 2

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Mr. Beau Blair  
P.O. Box 421  
Hanalei, HI 96714

SUBJECT: COMMENTS ON THE HĀ'ENA STATE PARK MASTER PLAN  
DRAFT ENVIRONMENTAL IMPACT STATEMENT (EIS),  
HĀ'ENA, KAUA'I, HAWAII

Aloha Mr. Blair,

Mahalo nui for your emailed comments dated September 9, 2015 regarding the Hā'ena State Park Master Plan Draft Environmental Impact Statement (EIS). We sincerely apologize for the delay in responding. Due to the feedback received on the Draft EIS, the State of Hawai'i, Department of Land and Natural Resources, Division of State Parks (State Parks) has worked on revising the master plan with a reorganized Hā'ena State Park Community Advisory Committee (HSPCAC) to address the concerns voiced by the larger community. As a result, the master plan presented in the Final EIS has been updated based on the feedback received from the public meetings, comments received, and subsequent extensive collaboration with the HSPCAC. As the planning consultant for State Parks, we offer the following responses to your comments.

We understand your concerns regarding parking, the potential limitations on the number of visitors, and the potential impact on neighboring communities and beaches. The revised master plan also calls for an adaptive management approach for parking and the proposed visitor limits, which will be based on an average number of visitors rather than a set limit per day. Should the impacts to the surrounding beach areas occur, the visitor limit could be adjusted to relieve the pressure on the beaches leading up to Kē'e.

We also acknowledge your overall concern with the impact of tourism on the area and loss of access for residents to their neighborhood resources. The visitor limit is proposed only during peak hours of park use and early morning and late afternoon arrivals would not be included in the limit to support resident access to the park. The plan supports those who help take care of the place and would not include those who do in visitor limits as well.

The original Master Plan Advisory Committee proposed the requirement that all park goers arrive by shuttle from a remote Princeville entry point. However, some members of the community felt that was too inconvenient, especially if they lived closer to the park. The revised master plan supports shuttle use and includes a shuttle stop at the turnaround to provide a place where shuttle riders can be dropped off and picked up.

We recognize your concern that the visitor and parking limits will encourage visitors to arrive earlier and earlier, which is why key management recommendations include adaptively managing all park policies, such as park entry, parking management, and the visitor limits. Please see Section 2.5.4 of the attached Description of the Master Plan. This will allow State Parks to revise any management policy that is not working and to consult with the HSPCAC on the impacts to the community and work together on solutions.

We recognize your concerns that access for local residents will be more difficult with pre-sale and ticketing availability online that may favor tourists planning well in advance of arrival to the park. As mentioned previously, the revised plan proposes visitor limits only during peak hours and alternatives for park entry can be explored through adaptive management as long as they do not violate the Land and Water Conservation Fund rules, which do not allow residents to be favored over nonresidents in ticket availability.

Mahalo for your support for the turnaround proposed at the park entry. We have revised the master plan and removed the Education and Cultural Center and Carstaker's Cottage in response to help preserve the openness and natural beauty of the park. Please see the revised Figure 1 showing the updated master plan graphic from the Final EIS. We have also attached the Description of the Master Plan section from the Final EIS, which shows the verbatim changes from the Draft EIS. You may download a full copy of the master plan report at the State Parks website for Hā'ena State Park: <http://dlhr.hawaii.gov/dsp/parks/kaui/haena-state-park/>.

We also recognize your concern related to the Limahuli Stream Cold Pond and the revised master plan includes preservation and restoration proposals for Limahuli Stream in Section 2.5.1.14 of the above Description of the Master Plan. However, similar to access and park use in general, protection and use of Cold Pond cannot be limited to residents only. We acknowledge the feeling of loss and concern for it being overrun with visitors. However, restoration and protection of these natural resources is recommended for everyone's enjoyment and primarily for the health of that stream ecosystem.

We understand your concerns with funding and implementation of the proposed plan. As you note, the timing and funding strategies have not been finalized; however the revised master plan has been simplified with fewer large-scale facility improvements. We also recognize your concerns regarding the plan as presented in the Draft EIS. State Parks worked with a reorganized HSPCAC to revise the plan based on the input gathered from the community.

We also acknowledge your comments on restricting tourism on the island with a quota and parking enforcement on State Highway 560. However, this is beyond the scope of the Hā'ena State Park Master Plan EIS. During the master plan process, we learned enforcement is a jurisdictional issue and the State and County officials have been working together to address the issue of keeping State Highway Route 560 open for emergency vehicles. As you mentioned in your comments, proposed visitor access cannot distinguish between residents and tourist groups and understand your frustration. However, the plan recommends actively and adaptively managing the park to encourage solutions that can evolve over time and working closely with the community and cultural advisory groups.

Mahalo nui for your input and participation in the environmental review process. Your letter will be included in the Final EIS. If you would like a copy of the Final EIS or portions thereof, please let us know. Otherwise, the electronic copy of the Final EIS will be available on the Office of Environmental Quality Control website at [http://oeqc2.doh.hawaii.gov/EA\\_EIS\\_Library/2018\\_KA-EIS-Haena-State-Park-Master-Plan.pdf](http://oeqc2.doh.hawaii.gov/EA_EIS_Library/2018_KA-EIS-Haena-State-Park-Master-Plan.pdf) on 2018

Aloha,

Kimi Mikami Yuen, LEED AP BD+C  
Principal

Attachments: Description of the Master Plan  
Phasing and Timing of Actions  
Public Transit and Shuttle Service

cc: The Honorable David Y. Ige, Governor  
Office of Environmental Quality Control  
Board of Land and Natural Resources  
Division of State Parks

---

**Nathalie Razo**

**From:** Jake Kilgrow <jakekilgrow@gmail.com>  
**Sent:** Wednesday, September 09, 2015 6:19 AM  
**To:** Kimi Yuen  
**Subject:** Haena State Park Master Plan Draft EIS

Aloha Ms. Yuen,

We are not in favor of the plan moving forward in light of the restricted access to residents as well as the resulting damage to Makua bay.

We believe that much could be solved through parking enforcement, shuttles and encouraging the visitor community to be eco-sensitive.

Thank you,

Jake & Jennifer Kilgrow  
5283 Malolo Place  
Hanalei, HI 96714



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Cultural Sustainability Planner

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Senior Associate

GATE CULLISON, AICP  
Senior Associate

MARC SHIMATSU, ASLA  
Senior Associate

DACHUNG HONG, LEED® AP  
Associate

SCOTT MURAKAMI, ASLA, LEED® AP  
Associate

MICHAEL McSHILLEN, ASLA, LEED® AP  
Associate

NATHALIE BAGO  
Associate

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Mr. and Mrs. Jake and Jennifer Kilgrow  
SUBJECT: COMMENTS ON THE HĀ'ENA STATE PARK MASTER PLAN DRAFT ENVIRONMENTAL  
IMPACT STATEMENT (EIS), HĀ'ENA, KAUA'I, HAWAII  
Month XX, 2018  
Page 2

Mr. Jake and Mrs. Jennifer Kilgrow  
5283 Malolo Place  
Hanalei, HI 96714

SUBJECT: COMMENTS ON THE HĀ'ENA STATE PARK MASTER PLAN  
DRAFT ENVIRONMENTAL IMPACT STATEMENT (EIS),  
HĀ'ENA, KAUA'I, HAWAII

Aloha Mr. and Mrs. Kilgrow,

Mahalo nui for your emailed comment dated September 9, 2015 regarding the Hā'ena State Park Master Plan Draft Environmental Impact Statement (EIS). We sincerely apologize for the delay in responding. Due to the feedback received on the Draft EIS, the State of Hawai'i, Department of Land and Natural Resources, Division of State Parks (State Parks) has worked on revising the master plan with a reorganized Hā'ena State Park Community Advisory Committee (HSPCAC) to address the concerns voiced by the larger community. As a result, the master plan presented in the Final EIS has been updated based on the feedback received from the public meetings, comments received, and subsequent extensive collaboration with the HSPCAC. As the planning consultant for State Parks, we offer the following responses to your comments.

We recognize your concerns with the Hā'ena State Park Master Plan from the perspective of local residents concerning potential restricted access and the potential impact on neighboring communities and beaches. The draft version of the master plan has been revised to reflect feedback received from the community and includes significant changes. The revised master plan proposes the 900-person visitor limit as an initial number which can be adaptively managed and adjusted as appropriate, especially if there continues to be unwanted impacts at the park and the surrounding community. If there continue to be issues, State Parks will work with the advisory committee on adjusting the number and will also be conscious of unintended impacts on neighboring beaches like your concern regarding damage to Makua Bay.

The proposed visitor limits will also be instituted only during peak hours of park use and will allow visitors to enter before and after without being counted against the visitor limit. Therefore, access will be allowed into the park outside those peak hours and will be adjusted as appropriate based on ongoing input from the community. There will also be exemptions from the visitor limit total for special user groups. Please see the attached Section 2.5.4.3 from the Final EIS on the revised visitor limits proposed.

In response to your comments regarding parking enforcement and shuttle service, the parking improvements are intended to address parking enforcement with a parking fee structure for entry and facilities designed to support the recommended shuttle service. While the potential shuttle service is not proposed to be administered by State Parks in the revised master plan, it does include specific elements to support effective implementation with infrastructure design for the proposed park entry and main parking lot to support a recommended shuttle service with shuttle stop structures, as described in Section 2.5.1.1 and Section 2.5.1.2 from the Final EIS.

We also acknowledge your suggestion for informing visitors about the environmentally sensitive areas of the park. The revised plan includes proposals to provide information to all visitors prior to entry with availability at the Welcome Hale and online. The attached sections from the Final EIS on Visitor Orientation and Welcome Hale described the proposed provisions for information, which will educate visitors to the park on appropriate behavior for preserving the natural and cultural resources within the park.

Mahalo nui for your input and participation in the environmental review process. Your letter will be included in the Final EIS. If you would like a copy of the Final EIS or portions thereof, please let us know. Otherwise, the electronic copy of the Final EIS will be available on the Office of Environmental Quality Control website at [http://oeq2.doh.hawaii.gov/EA\\_EIS\\_Library/2018-10-KA-FEIS-Haena-State-Park-Master-Plan.pdf](http://oeq2.doh.hawaii.gov/EA_EIS_Library/2018-10-KA-FEIS-Haena-State-Park-Master-Plan.pdf) on 10/18/2018.

Aloha,

Kimi Mikami Yuen, LEED AP BD+C  
Principal

Attachments: Park Entry  
Parking  
Visitor Limits  
Welcome Hale  
Visitor Orientation

cc: The Honorable David Y. Ige, Governor  
Office of Environmental Quality Control  
Board of Land and Natural Resources  
Division of State Parks

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**Nathalie Razo**

**From:** Lauren.A.Tanaka@hawaii.gov  
**Sent:** Wednesday, September 09, 2015 3:25 PM  
**To:** Curt.A.Cottrell@hawaii.gov; Stephen.L.Thompson@hawaii.gov;  
Russell.P.Kumabe@hawaii.gov; Alan.B.Carpenter@hawaii.gov; Kimi Yuen  
**Subject:** Fw: Haena State Park EIS

----- Forwarded by Lauren A Tanaka/DLNR/StateHUS on 09/09/2015 03:24 PM -----

**From:** "Casey Riemer" <hanter1@hawaii.net>  
**To:** <Lauren.A.Tanaka@hawaii.gov>  
**Date:** 09/09/2015 03:23 PM  
**Subject:** Haena State Park EIS

Aloha,

I attended the meeting at the Hanalei School in August and would like to submit the following comments on behalf of Jack Harter Helicopters. We are a helicopter charter company that has been hired by contractors working on NaPali. We transport people, equipment and rubbish to and from the current helicopter landing area within the park. We often transport loads slung under our helicopters (external load operations). It is critical in this support role that we have a location within the Park to operate from that is safe and large enough to accommodate our operations. The current helicopter landing zone is acceptable, but could be improved to increase safety. The proposal has a possible helicopter landing area located right next to the visitor parking area. This is not an ideal location for the landing area because of the proximity to automobiles and people.

We would like to see an area designated for helicopter landings that is somewhat separated from the park users, park staff and their associated vehicles. An ideal area also needs to have ingress and egress paths that will allow us to fly from the ocean to the landing area without flying over persons or vehicles. There is also a need for parking for the trail workers.

I am available to discuss this matter and would be interested in discussing this with your planners when they have time to do so.

Casey Riemer  
General Manager/VP

Jack Harter Helicopters  
4231 Ahukini Rd.  
Lihue, HI 96766

808-652-6982 cell  
808-245-3774 office  
808-245-4661 fax



Month XX, 2018-DRAFT

Mr. Casey Riemer  
Jack Harter Helicopters  
4231 Ahukini Road  
Lihue, HI 96766

**SUBJECT: COMMENTS ON THE HÅ'ENA STATE PARK MASTER PLAN  
DRAFT ENVIRONMENTAL IMPACT STATEMENT (EIS),  
HÅ'ENA, KAUA'I, HAWAII**

Aloha Mr. Riemer,

Mahalo nui for your emailed comments dated September 9, 2015 regarding the Hå'ena State Park Master Plan Draft Environmental Impact Statement (EIS). We sincerely apologize for the long delay in responding. Due to the feedback received on the Draft EIS, the State of Hawai'i, Department of Land and Natural Resources, Division of State Parks (State Parks) has worked on revising the master plan with a reorganized Community Advisory Committee to address the concerns voiced by the larger community. As a result, the master plan presented in the Final EIS has been updated based on the feedback received from the public meetings, comments received, and subsequent extensive collaboration with the Community Advisory Committee. As the planning consultant for State Parks, we offer the following responses to your comments.

We recognize your concerns with the location of the alternative helipad location in the proposed master plan due to the proximity of the new main parking lot. We appreciate your recommendations to provide a large area with adequate distance from automobiles and park visitors for safety concerns and well as flight paths away from visitor uses. The final location and details have not been determined and are subject to a forthcoming detailed design process for the main parking lot and park entry, where we will incorporate your input. However, the number of facilities near the parking lot has been reduced in the revised master plan so there may be more areas available for safe landing zones. Please see Figure 1 which shows the updated master plan graphic from the Final EIS.

Mahalo nui for your input and participation in the environmental review process. Your letter will be included in the Final EIS. If you would like a copy of the Final EIS or portions thereof, please let us know. Otherwise, the electronic copy of the Final EIS will be available on the Office of Environmental Quality Control website at [http://oeqc2.doh.hawaii.gov/EA\\_EIS\\_Library/2018\\_KA-FEIS-Haena-State-Park-Master-Plan.pdf](http://oeqc2.doh.hawaii.gov/EA_EIS_Library/2018_KA-FEIS-Haena-State-Park-Master-Plan.pdf) on 9/20/2018.

Aloha,

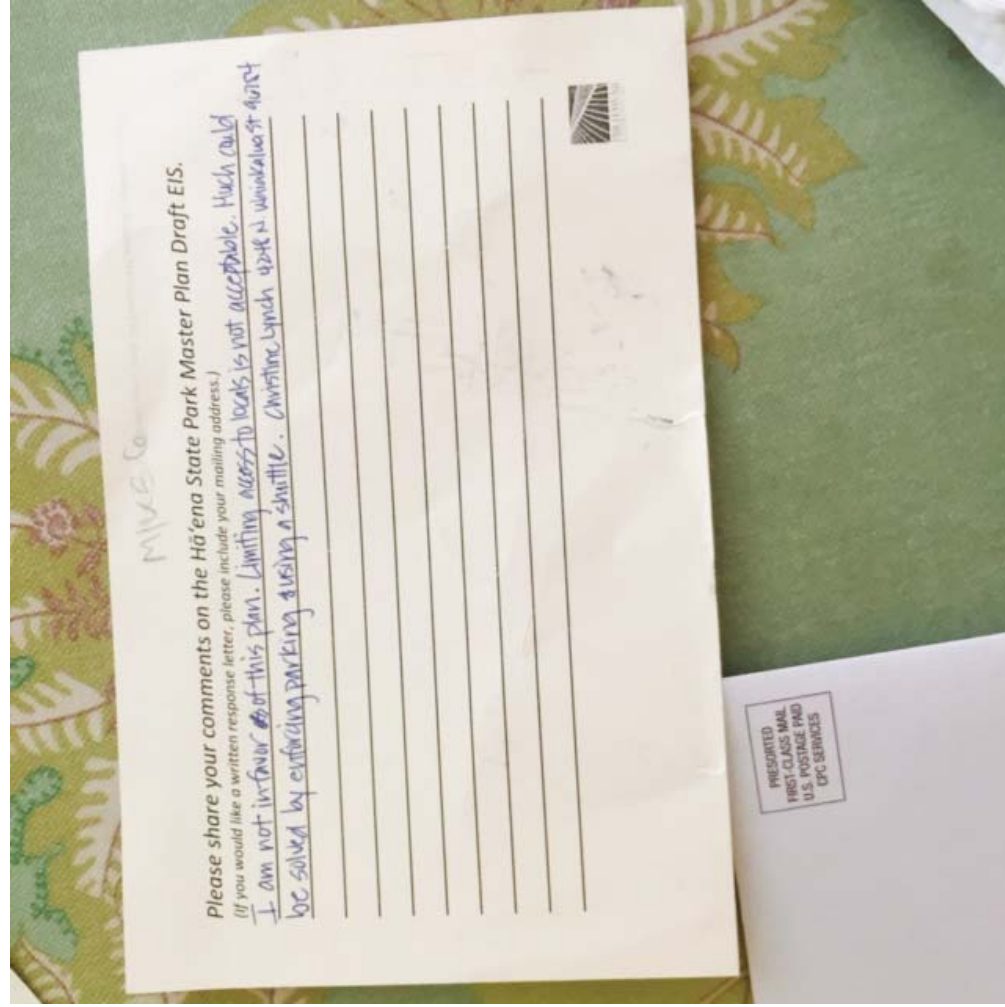
Kimi Mikami Yuen, LEED AP BD+C  
Principal

Attachment: Figure 1: Master Plan

cc: The Honorable David Y. Ige, Governor  
Office of Environmental Quality Control

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PLANNING • LANDSCAPE ARCHITECTURE • ENVIRONMENTAL STUDIES • ENTITLEMENTS / PERMITTING • GRAPHIC DESIGN

Ms Christine Lynch  
SUBJECT: COMMENTS ON THE HĀ'ENA STATE PARK MASTER PLAN DRAFT ENVIRONMENTAL  
IMPACT STATEMENT (EIS), HĀ'ENA, KAUA'I, HAWAII  
Month XX, 2018  
Page 2

Attachments: Visitor Limits  
cc: The Honorable David Y. Ige, Governor  
Office of Environmental Quality Control  
Board of Land and Natural Resources  
Division of State Parks

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SUBJECT: COMMENTS ON THE HĀ'ENA STATE PARK MASTER PLAN  
DRAFT ENVIRONMENTAL IMPACT STATEMENT (EIS),  
HĀ'ENA, KAUA'I, HAWAII

Aloha Ms. Lynch,

Mahalo nui for your comment card dated September 8, 2015 from the community meeting held on August 19, 2015 regarding the Hā'ena State Park Master Plan Draft Environmental Impact Statement (EIS). We sincerely apologize for the delay in responding. Due to the feedback received on the Draft EIS, the State of Hawai'i, Department of Land and Natural Resources, Division of State Parks (State Parks) has worked on revising the master plan with a reorganized Hā'ena State Park Community Advisory Committee (HSPCAC) to address the concerns voiced by the larger community. As a result, the master plan presented in the Final EIS has been updated based on the feedback received from the public meetings, comments received, and subsequent extensive collaboration with the HSPCAC. As the planning consultant for State Parks, we offer the following responses to your comments.

We recognize your comment regarding limiting access to residents as a part of the master plan. The revised master plan calls for an adaptive management approach for both the parking and the proposed visitor limits, which will be adjusted based on an average number of visitors rather than a set limit per day. The limits will also be instituted only during peak hours of park use and will allow visitors to enter before and after peak hours without being counted against the visitor limit. There will be exemptions for special user groups, such as hunters and cultural practitioners. Entry fees for state parks are established by Hawai'i Administrative Rules (HAR) 13-146-6, which states that Hawai'i residents are exempt from paying park entry fees if they can show a valid Hawai'i ID. Other categories of fee exempt park users (such as registered volunteers) may be established at a later time. Please see the "Visitor Limits" attachment from Section 2.5.4.3 of the Final EIS, which shows the verbatim changes from the Draft EIS for this section:

Mahalo nui for your input and participation in the environmental review process. Your letter will be included in the Final EIS. If you would like a copy of the Final EIS or portions thereof, please let us know. Otherwise, the electronic copy of the Final EIS will be available on the Office of Environmental Quality Control website at: [http://oeq2.doh.hawaii.gov/EA\\_EIS\\_Library/2018--KA-FEIS-Haena-State-Park-Master-Plan.pdf](http://oeq2.doh.hawaii.gov/EA_EIS_Library/2018--KA-FEIS-Haena-State-Park-Master-Plan.pdf) on , 2018.

Aloha,

Kimi Mikami Yuen, LEED AP BD+C  
Principal

**Nathalie Razo**

**From:** Lauren A.Tanaka@hawaii.gov  
**Sent:** Monday, September 14, 2015 2:04 PM  
**To:** Curt.A.Cottrell@hawaii.gov; Stephen.L.Thompson@hawaii.gov;  
Russell.P.Kumabe@hawaii.gov; Alan.B.Carpenter@hawaii.gov; Kimi Yuen  
**Subject:** Fw: proposed changes to Haena state park

----- Forwarded by Lauren A Tanaka@DLNR/StateHUS on 09/14/2015 02:03 PM -----

**From:** Boreas v <boreas@gmail.com>  
**To:** lauren.a.tanaka@hawaii.gov,  
**Date:** 09/12/2015 05:37 PM  
**Subject:** proposed changes to Haena state park

I've lived on Kauai for 9 years, 5 of them on the North Shore and I've visited Haena state park countless times.  
I'm concerned about the proposed changes

- please do not limit the number of visitors; the problem is too many cars not too many people. Turning cars away at the gate will just mean more people trying to park at Haena beach park or at tunnels and they are already overcrowded with cars.
- I don't mind paying a fee to enter. There should be an option for Hawaii residents to buy an annual pass so we don't have to pay every time we go.
- The only real solution to the parking and traffic problems on the North Shore is a shuttle that runs 365 days a year and is subsidized by the county or state government. Perhaps the fees collected at the entrance to the park could be used to subsidize the shuttle
- Haena state park could more easily accommodate more people if there were more paths leading to other parts of the park. Right now everyone goes to the lagoon so it feels crowded, but if there were other places to go, the crowd would be spread out.

Mahalo  
Boreas van Nouthuys,  
Kalaheo



Month XX, 2018 - DRAFT

Mr. Boreas van Nouthuys  
2691 Onu Place  
Kalaheo, HI 96741

**SUBJECT: COMMENTS ON THE HA'ENA STATE PARK MASTER PLAN  
DRAFT ENVIRONMENTAL IMPACT STATEMENT (EIS),  
HA'ENA, KAUAI, HAWAII**

Aloha Mr. van Nouthuys,

Mahalo nui for your emailed comment dated September 12, 2015 regarding the Ha'ena State Park Master Plan Draft Environmental Impact Statement (EIS). We sincerely apologize for the delay in responding. Due to the feedback received on the Draft EIS, the State of Hawai'i, Department of Land and Natural Resources, Division of State Parks (State Parks) has worked on revising the master plan with a reorganized Ha'ena State Park Community Advisory Committee (HSPCAC) to address the concerns voiced by the larger community. As a result, the master plan presented in the Final EIS has been updated based on the feedback received from the public meetings, comments received, and subsequent extensive collaboration with the HSPCAC. As the planning consultant for State Parks, we offer the following responses to your comments.

We recognize your concerns with the Ha'ena State Park Master Plan Draft EIS and there have been several changes to reflect feedback received from the community. We acknowledge your comments requesting not to limit the number of visitors as well as your comment that the main issue is parking and your concern with the potential impact on neighboring communities and beaches.

The revised master plan proposes the 900-person visitor limit as an initial number which can be adaptively managed and adjusted as appropriate, especially if there continues to be unwanted impacts at the park and surrounding community. If there continue to be issues, State Parks will work with the advisory committee on adjusting the number and will also be conscious of unintended impacts on neighboring beaches like your stated concern regarding Ha'ena Beach Park and Tunnels. The proposed visitor limits will also be instituted only during peak hours of park use and will allow visitors to enter before and after without being counted against the visitor limit. Therefore, access will be allowed into the park outside those peak hours and will be adjusted as appropriate based on ongoing input from the community. There will also be exemptions from the visitor limit for permitted special user groups. Please see the attached **Section 2.5.4.3** from the Final EIS on the revised visitor limit proposal.

We also acknowledge your suggestions for parking fees with annual passes for Hawai'i residents. While there is no distinction between residents and nonresidents in the visitor limits, the revised plan features a similar park entry fee structure with the main parking lot separated into a fee-paying lot and non-fee-paying lot. As the State has more time to analyze user patterns, other options can be explored over time, and they are actively engaged in discussions regarding parking enforcement and increased fines along the roadway outside of the park as well. Currently, entry fees for all state parks are established by Hawai'i Administrative Rules (HAR) 13-146-6, at the rate of \$5/car or \$1/person. HAR 13-146-6 also states that Hawai'i residents are exempt from paying park entry fees if they

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Associate

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can show a valid Hawai'i ID. Similar fees could be instituted at Hä'ena State Park. However, State Parks will continue to work on the different options with the advisory committee. More information on the proposed fee structure for parking is attached in [Section 2.5.1.2](#) from the Final EIS.

In response to your suggestions for year-round shuttle service subsidized by county or state government and use of entry fees to fund subsidies, the revised master plan includes facilities designed to support the recommended shuttle service. While the potential shuttle service is not proposed to be administered by State Parks in the revised master plan, it does include specific elements to support effective implementation with infrastructure design for the proposed park entry and main parking lot to support a recommended shuttle service with shuttle stop structures, as described in [Section 2.5.1.1](#) and [Section 2.5.1.2](#) from the Final EIS.

We also recognize your suggestion for offering more paths throughout the park to mitigate crowding at the lagoon. However, due to the sensitivity of various cultural and natural areas within the park, the design of the pedestrian access does not allow multiple pathways to the beach. There have also been some revisions to pedestrian path in the revised master plan, however, it still maintains design to protect the archaeological sites. Please see the attached [Section 2.5.1.4](#) and [Figure 1](#) from the Final EIS detailing the new pedestrian path as well as the culturally and environmentally sensitive areas of the park.

Mahalo nui for your input and participation in the environmental review process. Your letter will be included in the Final EIS. If you would like a copy of the Final EIS or portions thereof, please let us know. Otherwise, the electronic copy of the Final EIS will be available on the Office of Environmental Quality Control website at <http://oeqc2.doh.hawaii.gov/EA-EIS-Library/2018--KA-FEIS-Haena-State-Park-Master-Plan.pdf> on [Month XX, 2018](#).

Aloha,

Kimi Mikami Yuen, LEED AP BD+C  
Principal

Attachments: Park Entry  
Parking  
Pedestrian Path  
Visitor Limits  
Figure 1: Master Plan

cc: The Honorable David Y. Ige, Governor  
Office of Environmental Quality Control  
Board of Land and Natural Resources  
Division of State Parks

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Email-Fw proposed changes to Haena state park - DS.docx

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## Nathalie Razo

**From:** Lauren.A.Tanaka@hawaii.gov  
**Sent:** Monday, September 14, 2015 2:06 PM  
**To:** Curt.A.Cottrell@hawaii.gov; Stephen.L.Thompson@hawaii.gov;  
Russell.P.Kumabe@hawaii.gov; Alan.B.Carpenter@hawaii.gov; Kimi Yuen  
**Subject:** Fw: Draft Master Plan for HÄ'ENA STATE PARK, Kauai

----- Forwarded by Lauren A Tanaka\DLNR\State\HUS on 09/14/2015 02:05 PM -----

**From:** Christie Lyn <lionness818@gmail.com>  
**To:** Lauren Tanaka <Lauren.A.Tanaka@hawaii.gov>  
**Date:** 09/12/2015 03:18 PM  
**Subject:** Re: Draft Master Plan for HÄ'ENA STATE PARK, Kauai

Yes, of course. PO Box 662034, Lihue, HI 96766.

My main objection to the proposal that I'm not sure I said clearly in my first email is this: Disturbing the land in order to construct buildings, new roads, parking lots and boardwalks. I think the park should be left in as wild a state as possible.  
Mahalo.

On Thu, Sep 10, 2015 at 10:34 AM, <Lauren.A.Tanaka@hawaii.gov> wrote:  
Thank you for your comments. May I have your mailing address to which a written response will be sent?

---

**From:** Christie Lyn <lionness818@gmail.com>  
**To:** Lauren Tanaka <Lauren.A.Tanaka@hawaii.gov>  
**Date:** 09/09/2015 03:58 PM  
**Subject:** Draft Master Plan for HÄ'ENA STATE PARK, Kauai

I have two big funding concerns regarding this proposal. I question where the funding is going to come from to provide round the clock oversight of the park. This would likely require hiring six full time staff members to accomplish this. Along these same lines, a shuttle was already tried and funding was dropped. Now it is proposed to limit parking (brilliant) to 100 stalls (or fewer!) depending on how functional a shuttle turns out to work.

I don't feel the answer to easing traffic congestion should be to limit access. The parks I enjoy the most are the ones that have the least interference by parks & recreation/government. These proposals seek to interfere a great deal with the park from construction of new roads, parking lots, boardwalks, visitor center, caretakers' cottage, and construction of a limited access point of entry, etc. All this construction will be unsightly at a spot that is currently very picturesque. Hä'ena State Park offers a refuge to people from all over the world. People come thousands of miles to commune with nature and find healing on the trek to Kalalau Valley. This proposal seeks to limit that access, thereby limiting the enjoyment of the park.

Regarding the educational component of the proposal, if I want to be educated, I go to a museum. When I go to



Haena State Park, I go there to enjoy nature. I question how many people will come in out of the water or off the trail to sit still for an educational video or lecture. I feel that is something better accomplished in conjunction with a school field trip.

I think things should be left as they are. I certainly don't see anything in this proposal that I like. This is sounding a lot like measures taken at Yosemite National Park.

Christie Bagley  
Sanitary Chemist III  
County of Kauai



**PBR HAWAII**  
& ASSOCIATES, INC.

Month XX, 2018 - DRAFT

Ms. Christie Bagley  
P.O. Box 662034  
Lihue, HI 96766

**SUBJECT: COMMENTS ON THE HA'ENA STATE PARK MASTER PLAN  
DRAFT ENVIRONMENTAL IMPACT STATEMENT (EIS),  
HA'ENA, KAUAI, HAWAII**

Aloha Ms. Bagley,

Mahalo nui for your emailed comments dated September 10 and September 12, 2015 regarding the Ha'ena State Park Master Plan Draft Environmental Impact Statement (EIS). We sincerely apologize for the delay in responding. Due to the feedback received on the Draft EIS, the State of Hawai'i, Department of Land and Natural Resources, Division of State Parks (State Parks) has worked on revising the master plan with a reorganized Ha'ena State Park Community Advisory Committee (HSPCAC) to address the concerns voiced by the larger community. As a result, the master plan presented in the Final EIS has been updated based on the feedback received from the public meetings, comments received, and subsequent extensive collaboration with the HSPCAC. As the planning consultant for State Parks, we offer the following responses to your comments.

We recognize your concerns regarding funding aspects of the master plan. The Master Plan itself is an effort by State Parks to improve funding of coastal recreational planning and management. Completion of the plan and Chapter 343, HRS processing will enable State Parks to move forward with capital improvement projects to improve coastal recreation at the park. The Master Plan proposes to potentially increase the number of people staffed at the park, many feel that the current level of staffing is inadequate to effectively protect and maintain the resources and therefore an increase is warranted. State Parks is considering options to have a third-party operator manage the park who as part of their responsibilities would be to operate the park in a fiscally responsible way and independent of State funding as much as possible.

We also recognize your concerns regarding overdevelopment and construction at the park. The updated draft Master Plan for Ha'ena State Park includes management and development strategies that bring the significant historic, cultural and ecological resources of the park to the forefront and balance the protection of those resources with recreational and community uses. Only a few new structures are proposed, including a Welcome Hale that is envisioned as an open traditional Hawaiian hale and located near the improved main parking lot. Please see the revised Figure 1 Master Plan graphic and the "Master Plan Summary" attachment from Section 1.9.1 of the Final EIS, which show the verbatim changes from the Draft EIS in this section.

We recognize your concerns regarding congestion and limiting access to the park. The revised master plan calls for an adaptive management approach for both the parking and the proposed visitor limits, which will be adjusted based on an average number of visitors rather than a set limit per day. The limits will also be instituted only during peak hours of park use and will allow visitors to enter before and after peak hours without being counted against the visitor limit. Please see the "Visitor Limits" attachment from Section 2.5.4.3 of the Final EIS which shows the verbatim changes from the Draft EIS for this section.

THOMAS WITTEN, FASLA  
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We recognize your concerns regarding education at the park. Providing educational information and signage at the park will help to minimize impacts to the park's varied natural, cultural, historic, and scenic resources as visitors will learn about appropriate behavior, protocol, and activities permitted in the park, having the beneficial secondary effect of better protection of those resources and reduced user conflicts which will in turn improve mutual understanding, respect, and the feeling of aloha shared by all who visit the park. Please see the "Visitor Orientation" attachment from Section 2.5.4.5 of the Final EIS, which shows the verbatim changes from the Draft EIS for this section:

Mahalo nui for your input and participation in the environmental review process. Your letter will be included in the Final EIS. If you would like a copy of the Final EIS or portions thereof, please let us know. Otherwise, the electronic copy of the Final EIS will be available on the Office of Environmental Quality Control website at [http://oeqc2.doh.hawaii.gov/EA\\_EIS\\_Library/2018-09-14-FHIS-Haena-State-Park-Master-Plan.pdf](http://oeqc2.doh.hawaii.gov/EA_EIS_Library/2018-09-14-FHIS-Haena-State-Park-Master-Plan.pdf) on 09/14/2018.

Aloha,

Kimi Mikami Yuen, LEED AP BD+C  
Principal

Attachments: Master Plan Summary  
Figure 1: Master Plan  
Visitor Limits  
Visitor Orientation

cc: The Honorable David Y. Ige, Governor  
Office of Environmental Quality Control  
Board of Land and Natural Resources  
Division of State Parks

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**Nathalie Razo**

**From:** Lauren.A.Tanaka@hawaii.gov  
**Sent:** Monday, September 14, 2015 1:54 PM  
**To:** Curt.A.Cottrell@hawaii.gov; Stephen.L.Thompson@hawaii.gov; Russell.P.Kumabe@hawaii.gov; Alan.B.Carpenter@hawaii.gov; Kimi Yuen  
**Subject:** Fw: Ha'ena Park Plan

----- Forwarded by Lauren A Tanaka\DLNR\State\HUS on 09/14/2015 01:52 PM -----

**From:** "Anthony J. Sutton" <anthonyjsutton@gmail.com>  
**To:** Lauren.A.Tanaka@hawaii.gov,  
**Date:** 09/14/2015 10:57 AM  
**Subject:** Ha'ena Park Plan

I live in Hanalei and support this plan. However, I also believe that something like a park and ride shuttle from Princeville to Ha'ena would be very beneficial, in addition to everything else in the plan. It isn't so much the people as the cars that hurt the part. If there were a good stiff charge for non-resident cars, but the shuttle was free or cheap, this would encourage people to do the shuttle. Perhaps the shuttle could be supported off the revenue from the car parking fees, so the county wouldn't have to pay cash for the shuttle. Perhaps a private company could offer this service with some subsidy from the county. Also, somehow we need to get the word out to tourists that the parking is horrible. Get there early or there will be no parking- so use the shuttle- it isn't much fun to get there and find it packed so you have to walk a mile or can't park at all. Thanks for looking at this- you are doing a good job and I am just trying to add an idea or two.

Aloha,  
A.J. Sutton  
5131 Papio Place, Hanalei



Mr. A.J. Sutton  
SUBJECT: COMMENTS ON THE HĀ'ENA STATE PARK MASTER PLAN DRAFT ENVIRONMENTAL  
IMPACT STATEMENT (EIS), HĀ'ENA, KAUA'I, HAWAII  
Month XX, 2018  
Page 2

Mr. A.J. Sutton  
5131 Papato Place  
Hanalei, HI 96714

**SUBJECT: COMMENTS ON THE HĀ'ENA STATE PARK MASTER PLAN  
DRAFT ENVIRONMENTAL IMPACT STATEMENT (EIS),  
HĀ'ENA, KAUA'I, HAWAII**

Aloha Mr. Sutton,

Mahalo nui for your emailed comment dated September 14, 2015 regarding the Hā'ena State Park Master Plan Draft Environmental Impact Statement (EIS). We sincerely apologize for the delay in responding. Due to the feedback received on the Draft EIS, the State of Hawai'i, Department of Land and Natural Resources, Division of State Parks (State Parks) has worked on revising the master plan with a reorganized Hā'ena State Park Community Advisory Committee (HSPCAC) to address the concerns voiced by the larger community. As a result, the master plan presented in the Final EIS has been updated based on the feedback received from the public meetings, comments received, and subsequent extensive collaboration with the HSPCAC. As the planning consultant for State Parks, we offer the following responses to your comments.

Mahalo for your support of the master plan and recognize your comments suggesting "park and ride" shuttle service from Princeville. While the potential shuttle service in the revised master plan is not proposed to be administered by State Parks, it does include specific elements to support effective implementation with infrastructure design for the proposed park entry and main parking lot to support a recommended shuttle service with shuttle stop structures, as described in **Section 2.5.1.1** and **Section 2.5.1.2** from the Final EIS.

We also acknowledge your suggestion for non-resident parking fees to generate revenue and incentivize shuttle use. The proposed parking improvements include an entry fee structure similar to your suggested parking fees. Entry fees for state parks are established by Hawai'i Administrative Rules (HAR) 13-146-6, at the rate of \$5/car or \$1/person. HAR 13-146-6 also states that Hawai'i residents are exempt from paying park entry fees if they can show a valid Hawai'i ID. Similar fees could be instituted at Hā'ena State Park and State Parks will continue to work on the different options with the advisory committee. Other categories of fee exempt park users (such as registered volunteers) may be established at a later time. A description of parking improvements proposed is attached in **Section 2.5.1.2** from the Final EIS.

We also acknowledge your suggestion to encourage the county to subsidize a private shuttle service and distribute information to tourists on the parking restrictions at the park. The revised plan also includes proposals to provide information and notices to all visitors prior to entry with availability at the Welcome Hale and online. In addition to general information on parking condition, public information will also educate visitors to the park on appropriate behavior for preserving the natural and cultural resources within the park. The attached sections from the Final EIS on **Visitor Orientation** and **Welcome Hale** described the proposed provisions for information.

THOMAS WITTEN, ESQ.  
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Mahalo nui for your input and participation in the environmental review process. Your letter will be included in the Final EIS. If you would like a copy of the Final EIS or portions thereof, please let us know. Otherwise, the electronic copy of the Final EIS will be available on the Office of Environmental Quality Control website at [http://oeqc2.doh.hawaii.gov/EA\\_EIS\\_Library/2018-18-KA-FEIS-Haena-State-Park-Master-Plan.pdf](http://oeqc2.doh.hawaii.gov/EA_EIS_Library/2018-18-KA-FEIS-Haena-State-Park-Master-Plan.pdf) on 10/18/2018.

Aloha,

Kimi Mikami Yuen, LEED AP BD+C  
Principal

Attachments: Park Entry  
Parking  
Welcome Hale  
Visitor Orientation

cc: The Honorable David Y. Ige, Governor  
Office of Environmental Quality Control  
Board of Land and Natural Resources  
Division of State Parks

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Haena Park Plan - DS.docx

**Nathalie Razo**

**From:** Matt Hunter <matthunter@hawaii.rr.com>  
**Sent:** Tuesday, September 15, 2015 8:43 AM  
**To:** Lauren.A.Tanaka@hawaii.gov; Kimi Yuen  
**Subject:** Haena State Park comment 9.15.15

Hi Lauren

I'm a full time resident in Haena and I like that the traffic and mess at the end of the road is being addressed. I have one major concern and two comments.

1) Locals residents of Haena/Wainiha should not be counted in the 900. I and other residents walk, jog and bike to Kee regularly and we need assurance that we can continue to do so. We pay the local taxes and live here to enjoy this stretch of coast and want unobstructed walking, biking and jogging to the end of the road.  
What is the current plan for residents?

Comments:

- 2) Limahuli Gardens is a great model of interpretive experiences without ridiculous buildings and other structures.  
3) Denali National Park is a successful model of a shuttle system that accentuates nature and limits human impact.

Please let me know how local residents will be able to freely walk, run, and bike the road to Kee.

Thanks

Matt Hunter



Month XX, 2018 - DRAFT

Mr. Matt Hunter  
P.O. Box 1247  
Hanalei, HI 96714

**SUBJECT: COMMENTS ON THE HÄ'ENA STATE PARK MASTER PLAN  
DRAFT ENVIRONMENTAL IMPACT STATEMENT (EIS),  
HÄ'ENA, KAUA'I, HAWAII**

Aloha Mr. Hunter,

Mahalo nui for your emailed comment dated September 15, 2015 regarding the Hä'ena State Park Master Plan Draft Environmental Impact Statement (EIS). We sincerely apologize for the delay in responding. Due to the feedback received on the Draft EIS, the State of Hawai'i, Department of Land and Natural Resources, Division of State Parks (State Parks) has worked on revising the master plan with a reorganized Hä'ena State Park Community Advisory Committee (HSPCAC) to address the concerns voiced by the larger community. As a result, the master plan presented in the Final EIS has been updated based on the feedback received from the public meetings, comments received, and subsequent extensive collaboration with the HSPCAC. As the planning consultant for State Parks, we offer the following responses to your comments.

Mahalo for your support of the aspects of the master plan to address traffic congestion. We recognize your concerns with local resident access and the specific impact on residents choosing to walk, jog, and/or bike to Ke'e. The revised master plan proposes the 900-person visitor limit as an initial number which can be adaptively managed and adjusted as appropriate, especially if there continues to be unwanted impacts at the park and surrounding community. If there continue to be issues, State Parks will work with the advisory committee on adjusting the number.

There will also be exemptions from the visitor limit total for special user groups from the community, such as cultural practitioners. In addition, the proposed visitor limits will be adjusted based on an average number of visitors rather than a set limit per day. The limits will also be instituted only during peak hours of park use and will allow visitors to enter before and after without being counted against the visitor limit. Please reference the attached **Section 2.5.4.3** on the proposed visitor limits from the Final EIS for more details.

We also acknowledge your comments on Limahuli Gardens and Denali National Park as models for interpretive experiences with minimal building structures. The draft version of the Master Plan has been revised to reflect feedback received from the community and the revised master plan includes significant changes and minimal physical improvements to preserve the natural beauty of the park. Most of the proposed buildings, including the visitor center and caretaker's cottage, have been removed in the revised master plan. The master plan includes many aspects to restore the natural environment of the park. Please see the **Master Plan Summary** from the Final EIS attached for reference with an overview of the revisions to the plan.

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Mr. Matt Hunter  
SUBJECT: COMMENTS ON THE HA'ENA STATE PARK MASTER PLAN DRAFT ENVIRONMENTAL  
IMPACT STATEMENT (EIS), HA'ENA, KAUAI, HAWAII  
Month XX, 2018  
Page 2

In response to your comments on modelling a shuttle service on Denali National Park, the proposed park entry turnaround includes facilities designed to support the recommended shuttle service. While the potential shuttle service is not proposed to be administered by State Parks in the revised master plan, it does include specific elements to support effective implementation with infrastructure design for the proposed park entry and main parking lot to support a recommended shuttle service with shuttle stop structures, as described in Section 2.5.1.1 and Section 2.5.1.2 from the Final EIS.

Mahalo nui for your input and participation in the environmental review process. Your letter will be included in the Final EIS. If you would like a copy of the Final EIS or portions thereof, please let us know. Otherwise, the electronic copy of the Final EIS will be available on the Office of Environmental Quality Control website at [http://oeq2.deh.hawaii.gov/EA\\_EIS\\_Library/2018-01-KA-FEIS-Haena-State-Park-Master-Plan.pdf](http://oeq2.deh.hawaii.gov/EA_EIS_Library/2018-01-KA-FEIS-Haena-State-Park-Master-Plan.pdf) on 01/15/2018.

Aloha,

Kimi Mikami Yuen, LEED AP BD+C  
Principal

Attachments: Master Plan Summary  
Park Entry  
Parking  
Visitor Limits

cc: The Honorable David Y. Ige, Governor  
Office of Environmental Quality Control  
Board of Land and Natural Resources  
Division of State Parks

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Haena State Park comment 9/15/15 - DS.docx

Nathalie Razo

From: Lauren.A.Tanaka@hawaii.gov  
Sent: Friday, September 18, 2015 9:21 AM  
To: Curt.A.Cottrell@hawaii.gov; Stephen.L.Thompson@hawaii.gov;  
Russell.P.Kumabe@hawaii.gov; Alan.B.Carpenter@hawaii.gov; Kimi Yuen  
Subject: Fw: Haena State Park

----- Forwarded by Lauren A Tanaka\DLNR\State\HUS on 09/18/2015 09:20 AM -----

From: Sarah Rogers <kupokauai@gmail.com>  
To: Lauren.A.Tanaka@hawaii.gov,  
Date: 09/18/2015 07:07 AM  
Subject: Haena State Park

I like the plan. I was concerned about the raised boardwalk being to conspicuous, but realize it is not. My only question is, should we restrict to less than 900 visitors since there will be hunters and kamaiana over that number?

Sarah Rogers  
6021 Olohena Rd  
Kapaa, HI 96746





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Ms. Sarah Rogers  
SUBJECT: COMMENTS ON THE HĀ'ENA STATE PARK MASTER PLAN DRAFT ENVIRONMENTAL  
IMPACT STATEMENT (EIS), HĀ'ENA, KAUA'I, HAWAII  
Month XX, 2018  
Page 2

Aloha,

Kimi Mikami Yuen, LEED AP BD+C  
Principal

Attachments: Visitor Limits  
Pedestrian Path

cc: The Honorable David Y. Ige, Governor  
Office of Environmental Quality Control  
Board of Land and Natural Resources  
Division of State Parks

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Haena State Park - DS.docx

SUBJECT: COMMENTS ON THE HĀ'ENA STATE PARK MASTER PLAN  
DRAFT ENVIRONMENTAL IMPACT STATEMENT (EIS),  
HĀ'ENA, KAUA'I, HAWAII

Aloha Ms. Rogers,

Mahalo nui for your emailed comment dated September 18, 2015 regarding the Hā'ena State Park Master Plan Draft Environmental Impact Statement (EIS). We sincerely apologize for the delay in responding. Due to the feedback received on the Draft EIS, the State of Hawai'i, Department of Land and Natural Resources, Division of State Parks (State Parks) has worked on revising the master plan with a reorganized Hā'ena State Park Community Advisory Committee (HSPCAC) to address the concerns voiced by the larger community. As a result, the master plan presented in the Final EIS has been updated based on the feedback received from the public meetings, comments received, and subsequent extensive collaboration with the HSPCAC. As the planning consultant for State Parks, we offer the following responses to your comments.

Mahalo for your support of the Hā'ena State Park Master Plan. However, we recognize your concerns with the originally proposed "raised boardwalk" you referenced in your comments. The boardwalk has been modified in the revised master plan. The new pedestrian pathway follows along the first berm of the lo'i closest to the highway and is proposed to be slightly elevated so as not to impact the berm or any of the historic resources. Please see the attached Section 2.5.1.4 from the Final EIS detailing the modified pedestrian path.

We also recognize your comments concerning access for hunters and kama'āina with the proposed visitor limits. The revised master plan proposes the 900-person visitor limit as an initial number which can be adaptively managed and adjusted as appropriate, especially if there continues to be unwanted impacts at the park and surrounding community. If there continue to be issues, State Parks will work with the advisory committee on adjusting the number. There will also be exemptions from the visitor limit total for permitted hunters, overnight camping hikers and/or other special user groups. The proposed visitor limits will be adjusted based on an average number of visitors rather than a set limit per day. The limits will also be instituted only during peak hours of park use and will allow visitors to enter before and after without being counted against the visitor limit. Please reference the attached Section 2.5.4.3 on the proposed visitor limits from the Final EIS for more details.

Mahalo nui for your input and participation in the environmental review process. Your letter will be included in the Final EIS. If you would like a copy of the Final EIS or portions thereof, please let us know. Otherwise, the electronic copy of the Final EIS will be available on the Office of Environmental Quality Control website at [http://oeeq2.doh.hawaii.gov/EA\\_HIS\\_Library/2018--KA-Haena-State-Park-Master-Plan.pdf](http://oeeq2.doh.hawaii.gov/EA_HIS_Library/2018--KA-Haena-State-Park-Master-Plan.pdf) on 2018.

**Nathalie Razo**

**From:** James R. Christiansen <christiansen@att.net>  
**Sent:** Sunday, September 20, 2015 4:47 PM  
**To:** Kimi Yuen  
**Subject:** Ke'e Beach Park

Lauren Tanaka  
Division of State Parks of Hawaii  
1151 Punchbowl St., Room 310  
Honolulu, HI 96813

I am writing to you concerning the proposed restriction of driving and parking on Ke'e Beach. My home is on Kuhio Highway in Haena, west of Wainiha Stream. My home was built more than 40 years ago, long before this State Park was created. Because all the homeowners (just west of Wainiha Stream to Ke'e Park Beach) up to now needs to use most safety and enjoyment on Ke'e Beach. Other nearby beeches has less safety and is more difficult to reach the ocean.

The big crowds of cars on Ke'e Beach Park are from:

- (1) Huge cruise ships with 2000 or more passengers stopping for one day at Nawiliwili. The majority of those passengers will rent cars and rush to Ke'e Beach.
- (2) Largest of tourists stay in hotels and condos in Poipu who drive almost 2 hours through Kapaa to reach Ke'e Beach.

**For the above (1) an (2) are massively traffic and parking when most get there arriving at 10 AM and leaving at 4 PM in order to catch their ship or get where they are staying to eat.**

- (3) A large number of hikers leave there cars for all day or much longer to hike on Kalalau Trail. They should walk to a new special parking area to walk just a few feet longer away from the beach access. Since they already are walking, a little longer will not be too difficult. They will already be taking a long walk.

**Requiring many people hiking, in a cruise ship or driving a long distant be required to take a good bus to Ke'e Beach.** The prior attempt was a junk yard bus. It would save a lot of State money and have a better Beach Park.

If you still intend to provide restrictions for the end of Kuhio Highway, please provide special permits for homeowners Haena west of Wainiha stream

Sincerely,

Jim



Month XX, 2018 - DRAFT

Mr. James R. Christiansen  
Via Email: christiansen@att.net

**SUBJECT: COMMENTS ON THE HĀ'ENA STATE PARK MASTER PLAN  
DRAFT ENVIRONMENTAL IMPACT STATEMENT (EIS),  
HĀ'ENA, KAUA'I, HAWAII**

Aloha Mr. Christiansen,

Mahalo nui for your emailed comment dated September 20, 2015 regarding the Hā'ena State Park Master Plan Draft Environmental Impact Statement (EIS). We sincerely apologize for the delay in responding. Due to the feedback received on the Draft EIS, the State of Hawai'i, Department of Land and Natural Resources, Division of State Parks (State Parks) has worked on revising the master plan with a reorganized Hā'ena State Park Community Advisory Committee (HSPCAC) to address the concerns voiced by the larger community. As a result, the master plan presented in the Final EIS has been updated based on the feedback received from the public meetings, comments received, and subsequent extensive collaboration with the HSPCAC. As the planning consultant for State Parks, we offer the following responses to your comments.

We recognize your concerns numbered (1) and (2) regarding traffic and parking in regards to the Hā'ena State Park Master Plan, including visitor demands from cruise ships, tourists, rental cars, and peak park usage periods based on these factors. The revised master plan proposes the 900-person visitor limit as an initial number which can be adaptively managed and adjusted as appropriate, especially if there continues to be unwanted impacts at the park. If there continue to be issues, State Parks will work with the advisory committees on adjusting the number. As the State has more time to analyze user patterns, other options can be explored over time, and they are actively engaged in discussions regarding parking enforcement and increased fines along the roadway outside of the park as well. Visitor limits will be instituted during peak hours of park use. **Please see the "Visitor Limits" attachment from Section 2.5.4.3 of the Final EIS which shows the verbatim changes from the Draft EIS for this section**

We recognize your comment numbered (3), regarding designated parking for the parking lot closer to the beach. Per the revised master plan, parking will be simplified and better organized by limiting it to two lots: the main one at the entrance and the special access parking lot at Kē'ē. Hikers will be directed to use the main parking lot, as the special access parking lot at Kē'ē will be reserved for ADA accessibility, the lifeguards, park staff, the Hula Complex, and other cultural practices. It will also be accessible for emergencies as well as safety and rescue operations. **Please see the "Parking" attachment from Section 2.5.1.2 of the Final EIS which shows the verbatim changes from the Draft EIS for this section.**

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Mr. James R. Christiansen  
SUBJECT: COMMENTS ON THE HA'ENA STATE PARK MASTER PLAN DRAFT ENVIRONMENTAL  
IMPACT STATEMENT (EIS), HA'ENA, KAUAI, HAWAII  
Month XX, 2018  
Page 2

We also recognize your comment regarding the quality of the bus/shuttle for the master plan. The type of bus will be determined by the third-party shuttle operator. A proposed third-party shuttle service has been analyzed as a part of the project's traffic impact assessment report, included in the EIS as Appendix F. The preferred scenario is to implement a third-party shuttle from the Princeville facility at the start of Phase I, minimizing the need for visitor parking in the parking lot in the park. Please see the "Shuttle Service" attachment from Section 4.3.3 of the Final EIS, which shows the verbatim changes from the Draft EIS for this section.

Mahalo nui for your input and participation in the environmental review process. Your letter will be included in the Final EIS. If you would like a copy of the Final EIS or portions thereof, please let us know. Otherwise, the electronic copy of the Final EIS will be available on the Office of Environmental Quality Control website at [http://oeqc2.doh.hawaii.gov/EA\\_EIS\\_Library/2018-\\_-KA-FEIS-Haena-State-Park-Master-Plan.pdf](http://oeqc2.doh.hawaii.gov/EA_EIS_Library/2018-_-KA-FEIS-Haena-State-Park-Master-Plan.pdf) on 9/23/2018.

Aloha,

Kimi Mikami Yuen, LEED AP BD+C  
Principal

Attachments: Visitor Limits  
Parking  
Shuttle Service

cc: The Honorable David Y. Ige, Governor  
Office of Environmental Quality Control  
Board of Land and Natural Resources  
Division of State Parks

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**Nathalie Razo**

**From:** Lauren.A.Tanaka@hawaii.gov  
**Sent:** Wednesday, September 23, 2015 1:25 PM  
**To:** Curt.A.Cottrell@hawaii.gov; Stephen.L.Thompson@hawaii.gov; Russell.P.Kumabe@hawaii.gov; Alan.B.Carpenter@hawaii.gov; Kimi Yuen  
**Subject:** Fw: comments on Draft EIS for Ha'ena State Park Master Plan

----- Forwarded by Lauren A Tanaka\DLNR\State\HUS on 09/23/2015 01:24 PM -----

**From:** Lauren A. Tanaka\DLNR\State\HUS  
**To:** Kathy Valier <kvalier@gmail.com>  
**Date:** 09/23/2015 01:23 PM  
**Subject:** Re: comments on Draft EIS for Ha'ena State Park Master Plan

Thank you for your comments. We will send a written response addressing your concerns to your mailing address and will include them in the final EIS.

**From:** Kathy Valier <kvalier@gmail.com>  
**To:** Lauren A. Tanaka@hawaii.gov  
**Date:** 09/23/2015 10:59 AM  
**Subject:** comments on Draft EIS for Ha'ena State Park Master Plan

September 23, 2015

Lauren Tanaka  
Division of State Parks  
1151 Punchbowl St., Room 310  
Honolulu, HI 96813

**Re: Draft EIS for Ha'ena State Park Master Plan**

I am a resident of Wainiha and have lived in Wainiha for 25 years. I have a master's degree in environmental planning through the geography department at H Manoa and did what I believe was the first census of hikers at Ke'e in 1984 as part of the field study for my thesis.

I have not had time to read through all 1000+ pages of the Draft EIS for the Ha'ena State Park Master Plan, but wanted to submit my comments based on reading the first 88 pages.

- I am not clear what hours the park will be open and how the park will be secured when it is closed, since it would seem impossible to fence it off across the beach and reef. How would visitors be prevented from walking down the beach from Ha'ena County Park?
- I know I am one of many local residents who, over the years, have adapted to growing crowds at Ke'e by biking to the end of the road before 8 am to walk the beach, swim in the lagoon and dip at Cold Pond on the way home. I hope there would be a way of accommodating such use in the final master plan.
- I think it is optimistic to think that the visitors turned away will simply disperse elsewhere. One only needs to drive to the end of the road during the summer to see how people park along the road and fill the parking at Ha'ena County Park. In my experience, people are like water and will find a way to get where they want to go despite your best efforts to contain them. I think it is essential to work with the Hawaii Tourism Authority to try to align advertising for Kauai with a number of visitors that we can offer a quality experience to. If the State proposes to reduce the number of visitors allowed in the park by more than 5%, then it is counter productive to spend money advertising to increase visitors coming to Kaua'i. It seems to me that travel guides have a major influence in where visitors go. It would be ideal to have a liaison person who can work with publishers to help achieve the goals of this master plan.

Sincerely,

Kathy Valier  
P.O. Box 1213  
Hanalei, HI 96714



Month XX, 2018 - DRAFT

Ms. Kathy Valier  
P.O. Box 1213  
Hanalei, HI 96714

**SUBJECT: COMMENTS ON THE HA'ENA STATE PARK MASTER PLAN  
DRAFT ENVIRONMENTAL IMPACT STATEMENT (EIS),  
HA'ENA, KAUAI, HAWAII**

Aloha Ms. Valier,

Mahalo nui for your emailed comment dated September 23, 2015 regarding the Ha'ena State Park Master Plan Draft Environmental Impact Statement (EIS). We sincerely apologize for the delay in responding. Due to the feedback received on the Draft EIS, the State of Hawai'i, Department of Land and Natural Resources, Division of State Parks (State Parks) has worked on revising the master plan with a reorganized Ha'ena State Park Community Advisory Committee (HSPCAC) to address the concerns voiced by the larger community. As a result, the master plan presented in the Final EIS has been updated based on the feedback received from the public meetings, comments received, and subsequent extensive collaboration with the HSPCAC. As the planning consultant for State Parks, we offer the following responses to your comments.

We acknowledge your comments concerning park hours and regulation of the proposed visitor limits, including access for local residents. As you noted, the revised master plan does not include a fully fenced off design for the park. In addition, the proposed visitor limits will be adjusted based on an average number of visitors rather than a set limit per day. The limits will also be instituted only during peak hours of park use and will allow visitors to enter before and after without being counted against the visitor limit. Therefore, access will be allowed into the park and parking lot outside of those peak hours and will be adjusted as appropriate based on ongoing input from the community. The new main gate will be the only point of entry for managing the proposed visitor limits and there are no proposals in the revised master plan for constructing fencing around the entire park. In addition, the proposed gate design will allow pedestrian and bicycle access even when it is closed to vehicles. More details can be found on the design of the park entry in the attached **Section 2.5.1.1** from the Final EIS

We also recognize your concerns with the potential impact on neighboring communities and beaches. The revised master plan proposes the 900-person visitor limit as an initial number which can be adaptively managed and adjusted as appropriate, especially if there continues to be unwanted impacts at the park and the surrounding community. If there continue to be issues, State Parks will work with the advisory committee on adjusting the number and will also be conscious of unintended impacts on neighboring beaches. Please reference the attached **Section 2.5.4.3** from the Final EIS for more details on park entry and the proposed visitor limits.

We acknowledge your concern with overall tourism volume and your suggestions to work with the tourism agencies to manage marketing efforts that may impact visitor numbers at the park, however, the suggestions are beyond the scope of the Final EIS. The revised plan also includes proposals to provide information on the park to all visitors prior to entry with

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availability online, including notices on parking restrictions. The attached section from the Final EIS on [Visitor Orientation](#) describes the proposed provisions for information, which will also educate visitors to the park on appropriate behavior for preserving the natural and cultural resources within the park.

Mahalo nui for your input and participation in the environmental review process. Your letter will be included in the Final EIS. If you would like a copy of the Final EIS or portions thereof, please let us know. Otherwise, the electronic copy of the Final EIS will be available on the Office of Environmental Quality Control website at [http://oeqc2.doh.hawaii.gov/EA\\_EIS\\_Library/2018--KA-FEIS-Haena-State-Park-Master-Plan.pdf](http://oeqc2.doh.hawaii.gov/EA_EIS_Library/2018--KA-FEIS-Haena-State-Park-Master-Plan.pdf) on 11/15/2018.

Aloha,

Kimi Mikami Yuen, LEED AP BD+C  
Principal

Attachments: Park Entry  
Visitor Limits  
Visitor Orientation

cc: The Honorable David Y. Ige, Governor  
Office of Environmental Quality Control  
Board of Land and Natural Resources  
Division of State Parks

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comments on Draft EIS for Haena State Park Master Plan - DS.docx

## Nathalie Razo

**From:** sailor decamp <sailordcamp@hotmail.com>  
**Sent:** Thursday, September 24, 2015 2:47 PM  
**To:** Kimi Yuen  
**Subject:** Ke'e Beach, Haena, HI

Hi, I've lived in Haena close to 40 yrs. I've enjoyed KEE beach since it was pristine and quiet and no one ever went there. Now with the traffic it's chaotic so no one would be to fix that,  
(1). It's not going to stop because too many developers and everyone making money off tourists are promoting the area. The main traffic problems as everyone knows are: The car rental companies. They are probably behind every stoppage of every traffic solution that comes up. And they've been growing and growing and it gets worse and worse. I'm sure they have all the needed majority of mayors and county councilmen in their pockets. Because of the very limited parking space from Hanalei to the end of the road; The easiest and best thing for the North shore is for limited size unobtrusive fuel efficient private passenger van companies to be the only vehicles allowed down the hill from Princeville. Princeville Development is the reason for all the traffic in the first place. There used to be no traffic problems. As Princeville grew traffic grew. They recruit plenty (maybe hundreds) of minimum pay workers from the mainland also adding to the problem. They have been totally irresponsible of the impact they cause. They should have to pay and run the shuttle service themselves in reality. They have plenty of property that a long time ago should have been made into parking for the cars taking the shuttle service. It would mostly be for cars other than Princeville as a courtesy I'm sure of the hotels and condos would have their own beach shuttles. The people that live past Princeville or are staying in hotel or property there are the only ones with a permit sticker on their car allowed down the hill. It's not that hard to work out. I've lived in beach communities where this is what they had to do. The shuttle companies would get efficient real quick to however the need came up and they would profit from it. Uber would probably be big with Hanalei residents who had permits (private vehicles only so they didn't try sneaking in a bunch of cars to use for rentals from Hanalei). I've seen vans like these with more efficient service in St. Lucia and even third world countries, it's stupid it's been going on this long. Hertz rental would probably one with the first shuttles, haha!

(2) The natural beauty of Kee, it's gorgeous because it's surrounded by jungle and natural vegetation and some taro gardens by some Hawaiian families that have been there probably over 100 yrs, leave them alone, they have already had the land there stolen from them by the Wickmans and the Moore family, the Moore family by a sneaky land claim when it became a state not that long ago. The Wickmans I think we're part of the Hawaiian overthrow. Now Chipper Wickman wants to make the whole area part of his Limahuli Botanical Garden. They have plans for the Museum, etc, like Kokee. This will ruin the unique natural integrity it has. So I say forget it!

To change it to a park museum where I'm sure they would all make a nice profit is to ruin it in another way. Let it stay with the beautiful feel it had once the cars are out of there. I used to be able to ride my bike around and all the way to the end. With the traffic going out there it's too dangerous to ride on the road now.

(3) let the Hawaiians plant their taro and food their. It's authentic and lovely. They should have that right!

(4) There are some Hawaiians that want the area past the beach blocked off to everyone but their hula halau. I say this is not fair and greedy off them. All the years I've lived there, it's been a special almost meditative walk to go around and up in that area. It's pretty and very special. The halau use it which is special also but they don't use it every day, every week, or even every month. The Hawaiians put halau on every pretty spot on the island. Why should they try to hog it only for themselves. I've only seen the tourists be very respectful and





appreciative. It's like my backyard too, they already ruined Makawao Caveby Shipwrecks beach that was the natural Secret Garden spot that I loved. It had a few supposedlu ancient Hawaiian petroglyphs and a little cave entrance into a big natural ring that a big tree grew in the center of, it was shady in a really hot drier side of the island and nice and quiet. Then some cultural idiots laid claim to it, put in an iron gate and locked everyone out, tore out the tree, and brought in water hoses and grew a lawn. Then they put in a little stage on one side and grew a Palm tree on each side. Then they put in big stage lighting with big electric cords crisscrossing the ground. I almost fell over the cliff trying to see inside at what they had done to it. It was ruined. For what? To make a stage you could fabricate like that anywhere? Who enjoys it now? I never see anything that says their is a show there to see?! Leave it with the State parks so they can leave it more to the people. The Fed overreaches a lot of the time and will close it down on any premise it comes up with. It's happened with lots of Federal parks for political reasons.

Aloha Nui,  
Sailor DeCamp  
P.O. Box630, Hanalei, Hi 96714  
Sent from my iPhone

Month XX, 2018 - DRAFT

Ms. Sailor DeCamp  
P.O. Box 630  
Hanalei, HI 96714

**SUBJECT: COMMENTS ON THE HĀ'ENA STATE PARK MASTER PLAN  
DRAFT ENVIRONMENTAL IMPACT STATEMENT (EIS),  
HĀ'ENA, KAUAI, HAWAII**

Aloha Ms. DeCamp,

Mahalo nui for your emailed comment dated September 24, 2015 regarding the Hā'ena State Park Master Plan Draft Environmental Impact Statement (EIS). We sincerely apologize for the delay in responding. Due to the feedback received on the Draft EIS, the State of Hawai'i, Department of Land and Natural Resources, Division of State Parks (State Parks) has worked on revising the master plan with a reorganized Hā'ena State Park Community Advisory Committee (HSPCAC) to address the concerns voiced by the larger community. As a result, the master plan presented in the Final EIS has been updated based on the feedback received from the public meetings, comments received, and subsequent extensive collaboration with the HSPCAC. As the planning consultant for State Parks, we offer the following responses to your comments.

1. We recognize your concerns regarding traffic and parking issues at the park, including a potential third-party shuttle service. The proposed third-party shuttle service has been analyzed as a part of the project's traffic impact assessment report, included in the EIS as Appendix F. The preferred scenario is to implement a third-party shuttle from the Princeville facility at the start of Phase I, minimizing the need for visitor parking in the parking lot in the park. **Please see the "Shuttle Service" attachment from Section 4.3.3 of the Final EIS, which shows the verbatim changes from the Draft EIS for this section.**

As a part of the master plan, the main parking lot is proposed to be separated into a fee-paying lot and non-fee-paying lot, which will also be adjusted daily to allow flexibility depending on future demand for parking and the potential use of the proposed shuttle. The revised master plan proposes the 900-person visitor limit as an initial number which can be adaptively managed and adjusted as appropriate, especially if there continues to be unwanted impacts at the park. If there continue to be issues, State Parks will work with the advisory committees on adjusting the number. As the State has more time to analyze user patterns, other options can be explored over time, and they are actively engaged in discussions regarding parking enforcement and increased fines along the roadway outside of the park as well. **Please see the "Parking and Visitor Limits" attachments from the Final EIS, which show the verbatim changes from the Draft EIS for these sections.**

2. We also recognize your comments identifying the beauty of Hā'ena's natural environment. Main reasons for proceeding with the proposed Master Plan include protection and restoration of the park's sensitive and unique natural, cultural, historic, and scenic resources; improvement of the environmental conditions such as surface and marine water quality; removal of alien species and restoration of native ecosystems; and reducing negative impacts to native flora and fauna.

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3. The park contains extensive historical, archaeological and cultural features, such as the Ka Ulu a Paoa Heiau, Ke Ahu a Laka, Lohi'au's house platform, known burials and cemeteries, a historic house site, wet caves, restored taro lo'i, as well as unrestored Agricultural Complex walls and 'auwai. On-going cultural practices, including maintenance and restoration of lo'i and Agricultural Complex areas are highlighted in the EIS and are identified as essential components of the Master Plan.
4. The updated draft Master Plan for Hā'ena State Park includes management and development strategies that bring the significant historic, cultural and ecological resources of the park to the forefront and balance the protection of those resources with recreational and community uses. The master plan's vision includes recreational uses co-existing with cultural practices and educational programs in order to provide opportunities for the diverse types of community park users. Given the extreme importance of the area around the ancient heiau and its worldwide recognition as a wahi kapu, the entire area makai of the Kalalau Trailhead and encompassing the area of the former Allerton estate and the heiau is designated as a Hula Complex. It is the first priority of the Master Plan Advisory Committee to restore the area and to develop a culturally appropriate management plan. While the master plan EIS complies with federal regulations and guidelines, the park is under the jurisdiction of the State of Hawai'i, under the Department of Land and Natural Resources, Division of State Parks. Please see the revised Figure 1 Master Plan graphic and the "Master Plan Summary" attachment from Section 1.9.1 of the Final EIS, which show the verbatim changes from the Draft EIS in this section.

Mahalo nui for your input and participation in the environmental review process. Your letter will be included in the Final EIS. If you would like a copy of the Final EIS or portions thereof, please let us know. Otherwise, the electronic copy of the Final EIS will be available on the Office of Environmental Quality Control website at: [http://oeq2.doh.hawaii.gov/EA\\_EIS\\_Library/2018-04-04-FEIS-Haena-State-Park-Master-Plan.pdf](http://oeq2.doh.hawaii.gov/EA_EIS_Library/2018-04-04-FEIS-Haena-State-Park-Master-Plan.pdf) on 04/04/2018.

Aloha,

Kimi Mikami Yuen, LEED AP BD+C  
Principal

Attachments: Shuttle Service  
Parking  
Visitor Limits  
Master Plan Summary  
Figure 1: Master Plan

cc: The Honorable David Y. Ige, Governor  
Office of Environmental Quality Control  
Board of Land and Natural Resources  
Division of State Parks

## Nathalie Razo

**From:** Lauren.A.Tanaka@hawaii.gov  
**Sent:** Friday, October 02, 2015 10:26 AM  
**Cc:** Curt.A.Cottrell@hawaii.gov; Stephen.L.Thompson@hawaii.gov;  
Russell.P.Kumabe@hawaii.gov; Alan.B.Carpenter@hawaii.gov; Kimi Yuen  
**Subject:** Fw: ha'ena state park.easy solution

FYI.  
----- Forwarded by Lauren A Tanaka\DLNR\State\HUS on 10/02/2015 10:25 AM -----

**From:** Lauren A.Tanaka\DLNR\State\HUS  
**To:** Gary Bart <g2tanaka@gmail.com>  
**Date:** 10/02/2015 10:24 AM  
**Subject:** Re: ha'ena state park.easy solution

Aloha Gary:

Thank you for taking the time to write and submit to us your comments. As required by law, we have to respond to all comments received in writing. As such, may I have your mailing address? Both your comments and our response will then be part of the record when the final EIS is published.

**From:** Gary Bart <g2tanaka@gmail.com>  
**To:** Lauren A.Tanaka@hawaii.gov  
**Date:** 10/02/2015 09:34 AM  
**Subject:** ha'ena state park.easy solution

aloha lauren:

seems to me one of the reasons the end of the road is so crowded is because everyone is funneled thru the one narrow entrance to the beach by the lifeguard stand. Why not open up several pathways to the expanse of the beach so access to the other parts of the beach are more easily accessible. Also, there is plenty of room to double and triple the size of the existing dirt parking lot...create a path for them to walk to the beach directly behind the existing lot...make a wide turn around and basically all your problems are solved. (you may need another lifeguard stand to cover this newly exposed part of the beach)...please dont make it more complicated than it needs to be.

Mahalo for your kind consideration.  
Gary Bart

--  
**There Is No Day More Important Than Today!**



Month XX, 2018 - DRAFT

Mr. Gary Bart  
P.O. Box 249  
Hanalei, HI 96714

**SUBJECT: COMMENTS ON THE HĀ'ENA STATE PARK MASTER PLAN  
DRAFT ENVIRONMENTAL IMPACT STATEMENT (EIS),  
HĀ'ENA, KAUA'I, HAWAII**

Aloha Mr. Bart,

Mahalo nui for your emailed comment dated October 2, 2015 regarding the Hā'ena State Park Master Plan Draft Environmental Impact Statement (EIS). We sincerely apologize for the delay in responding. Due to the feedback received on the Draft EIS, the State of Hawai'i, Department of Land and Natural Resources, Division of State Parks (State Parks) has worked on revising the master plan with a reorganized Hā'ena State Park Community Advisory Committee (HSPCAC) to address the concerns voiced by the larger community. As a result, the master plan presented in the Final EIS has been updated based on the feedback received from the public meetings, comments received, and subsequent extensive collaboration with the HSPCAC. As the planning consultant for State Parks, we offer the following responses to your comments.

We recognize your concerns regarding overcrowding, parking and entry/access design to the beach. We acknowledge your suggestions on increasing the number of pathways through the park to mitigate the crowded "funneled" entrance. However, due to the sensitivity of various cultural and natural areas within the park, the design of the pedestrian access does not allow multiple pathways to the beach. The boardwalk has been modified in the revised master plan. The new pedestrian pathway follows along the first berm of the lo'i closest to the highway and is proposed to be slightly elevated so as not to impact the berm or any of the historic resources. Please see the attached **Section 2.5.1.4 and Figure 1** from the Final EIS detailing the modified pedestrian path as well as the culturally and environmentally sensitive areas of the park.

Mahalo for your suggestions on creating a wide turnaround and modifying the existing dirt parking lot. The parking lot and park entry improvements in the revised master plan includes a turnaround to mitigate congestion near the parking lot similar to your suggestions. The parking area will be designed to allow flexibility depending on future demand for parking and the potential use of the proposed shuttle. Please see the attached **Section 2.5.1.1 and Section 2.5.1.2** from the Final EIS for more details on parking and the park entry turnaround.

Mahalo nui for your input and participation in the environmental review process. Your letter will be included in the Final EIS. If you would like a copy of the Final EIS or portions thereof, please let us know. Otherwise, the electronic copy of the Final EIS will be available on the Office of Environmental Quality Control website at [http://oeqc2.doh.hawaii.gov/EA\\_EIS\\_Library/2018-KA-FEIS-Haena-State-Park-Master-Plan.pdf](http://oeqc2.doh.hawaii.gov/EA_EIS_Library/2018-KA-FEIS-Haena-State-Park-Master-Plan.pdf) on **Month XX, 2018**.

THOMAS WITTEN, FASLA  
Chairman / Principal

R. SEAN DUNCAN, ASLA  
President / Principal

RUSSELL Y. J. CHUNG, FASLA, LEED® AP BD+C  
Executive Vice President / Principal

VINCENT SHIGEKUNI  
Vice President / Principal

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ANN MIKAO BERNHARDT, PhD  
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Mr. Gary Bart  
SUBJECT: COMMENTS ON THE HĀ'ENA STATE PARK MASTER PLAN DRAFT ENVIRONMENTAL  
IMPACT STATEMENT (EIS), HĀ'ENA, KAUA'I, HAWAII  
Month XX, 2018  
Page 2

Aloha,

Kimi Mikami Yuen, LEED AP BD+C  
Principal

Attachments: Park Entry  
Parking  
Pedestrian Path  
Figure 1: Master Plan

cc: The Honorable David Y. Ige, Governor  
Office of Environmental Quality Control  
Board of Land and Natural Resources  
Division of State Parks

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haena state park\_easy solution - DS.docx



HONOLULU HI 968  
21 AUG 2015 PM 1 L

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AUG 20 2015  
PBR HAWAII

PBR HAWAII & Associates  
Attn: Kimi Yuen  
1001 Bishop Street, Suite 650  
Honolulu, HI 96813

95813348450



Please share your comments on the Hā'ena State Park Master Plan Draft EIS.  
(If you would like a written response letter, please include your mailing address.)

I think we should explore the specifics of the organization that could manage the park and the potential and probable amount of money that the organization could make. In addition, it would be useful to address how these moneys could or should be used. Also, is there a way of discriminating against rental cars? Perhaps one day a week can be reserved for preservation and closed to non-residents or if that is illegal, perhaps a hawaiian based or hawaiian race organization can have privileges. Also, I think the information about the issues of Kele should be given to visitors in a non aggressive way before they get there.

Box 1018 Hana, HI





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President / Principal

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SUBJECT: COMMENTS ON THE HĀ'ENA STATE PARK MASTER PLAN DRAFT ENVIRONMENTAL  
IMPACT STATEMENT (EIS), HĀ'ENA, KAUA'I, HAWAII  
Month XX, 2018  
Page 2

All visitors will be provided with park rules and information prior to entering the park. The orientation information could be made available on the State Parks website or tied to ticket purchase, particularly if advanced reservations become a requirement in the future. The orientation session would educate visitors on appropriate recreational activities and behavior, safety precautions as well as sensitivity to natural and cultural resources and to cultural activities that may be occurring in the park. This is described in Section 2.5.4.5 of the EIS and the verbatim description of these procedures is included in the "Visitor Orientation" attachment.

Mahalo nui for your input and participation in the environmental review process. Your letter will be included in the Final EIS. If you would like a copy of the Final EIS or portions thereof, please let us know. Otherwise, the electronic copy of the Final EIS will be available on the Office of Environmental Quality Control website at [http://oeqc2.doh.hawaii.gov/EA\\_EIS\\_Library/2018-\\_-KA-FEIS-Haena-State-Park-Master-Plan.pdf](http://oeqc2.doh.hawaii.gov/EA_EIS_Library/2018-_-KA-FEIS-Haena-State-Park-Master-Plan.pdf) on 2018.

Aloha,

Kimi Mikami Yuen, LEED AP BD+C  
Principal

Attachments: Cultural and Community Advisory Groups  
Parking  
Visitor Limits  
Visitor Orientation

cc: The Honorable David Y. Ige, Governor  
Office of Environmental Quality Control  
Board of Land and Natural Resources  
Division of State Parks

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Month XX, 2018 - DRAFT  
No Name Given  
P.O. Box 478  
Hanalei, HI 96714  
SUBJECT: COMMENTS ON THE HĀ'ENA STATE PARK MASTER PLAN  
DRAFT ENVIRONMENTAL IMPACT STATEMENT (EIS),  
HĀ'ENA, KAUA'I, HAWAII

Aloha,

Mahalo nui for your comment card dated August 24, 2015 from the community meeting held on August 19, 2015 regarding the Hā'ena State Park Master Plan Draft Environmental Impact Statement (EIS). We sincerely apologize for the delay in responding. Due to the feedback received on the Draft EIS, the State of Hawai'i, Department of Land and Natural Resources, Division of State Parks (State Parks) has worked on revising the master plan with a reorganized Hā'ena State Park Community Advisory Committee (HSPCAC) to address the concerns voiced by the larger community. As a result, the master plan presented in the Final EIS has been updated based on the feedback received from the public meetings, comments received, and subsequent extensive collaboration with the HSPCAC. As the planning consultant for State Parks, we offer the following responses to your comments.

We recognize your comments regarding management and funding of the park. One of the key management recommendations is to establish a permanent Cultural Advisory Group and Community Advisory Committee. These are described in Section 2.5.4.2 of the EIS and the verbatim description of these groups is included in the "Cultural and Community Advisory Group" attachment.

We also recognize your comments regarding limiting parking at the park. The revised master plan calls for an adaptive management approach for both the parking and the proposed visitor limits, which will be adjusted based on an average number of visitors rather than a set limit per day. The main parking lot is proposed to be separated into a fee-paying lot and non-fee-paying lot, which will also be adjusted daily to allow flexibility depending on future demand for parking and the potential use of the proposed shuttle. Please see the "Parking" and "Visitor Limits" attachments from the Final EIS which show the verbatim changes from the Draft EIS for these sections.

We recognize your comments regarding cultural and historic preservation as a part of the park access and educational programs for visitors as a part of the park master plan. The daily visitor limit proposed in the adaptive management approach also would not include cultural practitioners or special user groups such as hālau, lo'i workgroups, cemetery caretakers, or school groups as all except the cemetery caretakers will require advanced reservations.



Please share your comments on the Hā'ena State Park Master Plan Draft EIS.

(If you would like a written response letter, please include your mailing address.)

Where will the "turn-around" point be? (where the 1st 900 visitors gain entry)? If it is at the entry to the Ke'e Rec. area, the rejected overflow may end up overcrowding/impacting the Tunnels/Makua beach area, stressing the already overcrowded Haena Beach park area and on the highway. Above and beyond the parking concerns, are the conservation considerations / is... a sloughing environmentally compromised coral reef area.

Capping the visitor count thru the HAW. Tourism Authority and the Kona Visitor Bureau should be considered, even at the risk of diminished tourism revenue — because w/ our suffering ecosystem + sorry infrastructure everyone, residents + visitors alike will be negatively impacted.

HONOLULU HI 968

24 AUG 2015 PM 1 L



PO Box 470

Honolulu HI 96714

PBR HAWAII & Associates

Attn: Kimi Yuen

1001 Bishop Street, Suite 650

Honolulu, HI 96813

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PBR HAWAII

56813348450





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President / Principal

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No name given  
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IMPACT STATEMENT (EIS), HĀ'ENA, KAUA'I, HAWAII  
Month XX, 2018  
Page 2

We recognize your comment regarding proposed visitor limits to the park. The revised master plan proposes the 900-person visitor limit as an initial number which can be adaptively managed and adjusted as appropriate, especially if there continues to be unwanted impacts at the park. If there continue to be issues, State Parks will work with the advisory committees on adjusting the number. Please see the "Visitor Limits" attachment from Section 2.5.4.3 of the Final EIS, which shows the verbatim changes from the Draft EIS for this section.

We recognize your comments regarding cultural conservation and protection as a part of the park master plan. The master plan supports the continued restoration of the Agricultural Complex and encourages restoration of the varied historic, cultural, and natural resources throughout the park. It prioritizes the restoration of the dune complex as a potential first effort, recognizing the multiple benefits of ecological restoration, beach protection, and caring for the iwi kupuna.

One of the key management recommendations is to establish a permanent Cultural Advisory Group and Community Advisory Committee. These are described in Section 2.5.4.2 of the EIS and the verbatim description of these groups is included in the "Cultural and Community Advisory Group" attachment.

An objective of the Master Plan is to balance outdoor recreational uses with the protection and preservation of the park's natural and cultural features to enrich the Hā'ena park experience for all. Recreational aspects of the park will still be on going and are described in more detail in EIS Section 4.9.4. All visitors will be provided with park rules and information prior to entering the park. This is described in Section 2.5.4.5 of the EIS and the verbatim description of these procedures is included in the "Visitor Orientation" attachment.

Mahalo nui for your input and participation in the environmental review process. Your letter will be included in the Final EIS. If you would like a copy of the Final EIS or portions thereof, please let us know. Otherwise, the electronic copy of the Final EIS will be available on the Office of Environmental Quality Control website at: [http://oeqc2.doh.hawaii.gov/EA\\_EIS\\_Library/2018-](http://oeqc2.doh.hawaii.gov/EA_EIS_Library/2018-) KA-FEIS-Haena-State-Park-Master-Plan.pdf on , 2018

Aloha,

Kimi Mikami Yuen, LEED AP BD+C  
Principal

Attachments: Park Entry  
Visitor Limits  
Cultural and Community Advisory Group  
Visitor Orientation

cc: The Honorable David Y. Ige, Governor  
Office of Environmental Quality Control  
Board of Land and Natural Resources  
Division of State Parks

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Month XX, 2018 - DRAFT

No Name Given  
P.O. Box 478  
Hanalei, HI 96714

SUBJECT: COMMENTS ON THE HĀ'ENA STATE PARK MASTER PLAN  
DRAFT ENVIRONMENTAL IMPACT STATEMENT (EIS),  
HĀ'ENA, KAUA'I, HAWAII

Aloha,

Mahalo nui for your comment card dated August 26, 2015 from the community meeting held on August 19, 2015 regarding the Hā'ena State Park Master Plan Draft Environmental Impact Statement (EIS). We sincerely apologize for the delay in responding. Due to the feedback received on the Draft EIS, the State of Hawai'i, Department of Land and Natural Resources, Division of State Parks (State Parks) has worked on revising the master plan with a reorganized Hā'ena State Park Community Advisory Committee (HSPCAC) to address the concerns voiced by the larger community. As a result, the master plan presented in the Final EIS has been updated based on the feedback received from the public meetings, comments received, and subsequent extensive collaboration with the HSPCAC. As the planning consultant for State Parks, we offer the following responses to your comments.

We also recognize your comments regarding the main entry at the park. A new main gate is recommended to be installed when the highway is closed to general vehicle traffic to reduce visitor exposure to the rockfall hazards. Only those with special access to Kē'e, such as the lifeguards and rescue personnel, those with valid ADA parking placards on plates, park staff, the Hula Complex and other cultural practitioners will be allowed along the limited access portion of the highway. It will have a separate entry off the turnaround. Rockfall hazard warning signs will be installed on the gate across the highway and a swing gate on the mauka half of the right-of-way could be automated to open for exiting traffic only.

A vehicle turnaround is provided just past the park entry and provides separate accesses to and from the main parking lot, as well as the special access parking at Kē'e, and a separate staging area that could be used for various park purposes. Those who do not have valid park parking access may continue around the turnaround and exit the park without blocking traffic. Please see the "Park Entry" attachment from Section 2.5.1.1 of the Final EIS, which show the verbatim changes from the Draft EIS for this section.

Also located at the turnaround, shade structures are provided to support general visitor drop-off and pick-up areas or can be used as a shuttle or bus stop when such services become available. Shuttle and transit schedules should be posted at the stop if they are established. Should shuttle or transit service to the park become successful enough to eliminate or reduce the need for the parking lot, the shuttle stop area can be enlarged to accommodate the required passenger drop offs and pick-ups.

**Nathalie Razo**

**From:** Lauren.A.Tanaka@hawaii.gov  
**Sent:** Tuesday, August 18, 2015 5:49 PM  
**To:** Nathalie Razo  
**Subject:** Fw: Regarding the Ha'ena/Ke'e Park project.

----- Forwarded by Lauren A Tanaka/DLNR/StateHUS on 08/18/2015 05:48 PM -----

**From:** mystiseseaswimmer@gmail.com  
**To:** Lauren.A.Tanaka@hawaii.gov,  
**Date:** 08/17/2015 09:33 AM  
**Subject:** Regarding the Ha'ena/Ke'e Park project.

Dear Lauren,

Regarding the Ha'ena/Ke'e Park project.

I am a 12 year resident of Kaua'i and a 1+ year resident of Ha'ena. What seems an easy (and relatively inexpensive) solution to the Ke'e over crowding with little construction, is to have a viable North Shore shuttle service operating at 15 minute intervals in Summer months, and possibly during winter. From my estimation now in the summer, it seems 90-95% of current cars parking at Ke'e are rental cars from North Shore staying visitors. Make it expensive to park, say \$20-30 for the day for visitors, and have a regularly arriving shuttle and it becomes a no-brainer for visitors to plan to hop on a shuttle. Parking mess solved.

I wonder why this hasn't been put forth already, except that it may be a county versus state jurisdiction thing of who funds/operates a shuttle, and who staffs/funds parking. When the County of Kauai did the shuttle last year it was operating only in the winter, and as no-surprise, had low ridership and was cancelled. Not smart, if the intention was for it to succeed. Also, with no parking fees at Ke'e then, there was no incentive for visitors to take a shuttle if they could be lazy and drive their rental car. Incentivize the shuttle and it will work, I believe.

Thank you,

Jenn Tyler  
Ha'ena



Month XX, 2018 - DRAFT

Ms. Jenn Tyler  
Via Email: mystiseseaswimmer@gmail.com

**SUBJECT: COMMENTS ON THE HA'ENA STATE PARK MASTER PLAN  
DRAFT ENVIRONMENTAL IMPACT STATEMENT (EIS),  
HA'ENA, KAUAI, HAWAII**

Aloha Ms. Tyler,

Mahalo nui for your emailed comment dated August 17, 2015 regarding the Ha'ena State Park Master Plan Draft Environmental Impact Statement (EIS). We sincerely apologize for the delay in responding. Due to the feedback received on the Draft EIS, the State of Hawaii's, Department of Land and Natural Resources, Division of State Parks (State Parks) has worked on revising the master plan with a reorganized Ha'ena State Park Community Advisory Committee (HSPCAC) to address the concerns voiced by the larger community. As a result, the master plan presented in the Final EIS has been updated based on the feedback received from the public meetings, comments received, and subsequent extensive collaboration with the HSPCAC. As the planning consultant for State Parks, we offer the following responses to your comments.

Mahalo for your suggestions to have a North Shore shuttle service. The master plan supports shuttle service to and from the park by including a shuttle stop at the turnaround as described in [Section 2.5.11](#) of the Final EIS. We recognize your concerns with existing overcrowding and the impact of tourists and rental cars on the park. Mahalo for your suggestions on charging high parking fees to incentivize a potential shuttle service.

Mahalo nui for your input and participation in the environmental review process. Your letter will be included in the Final EIS. If you would like a copy of the Final EIS or portions thereof, please let us know. Otherwise, the electronic copy of the Final EIS will be available on the Office of Environmental Quality Control website at [http://oeqc2.doh.hawaii.gov/EA\\_EIS\\_Library/2018\\_KA-FEIS-Haena-State-Park-Master-Plan.pdf](http://oeqc2.doh.hawaii.gov/EA_EIS_Library/2018_KA-FEIS-Haena-State-Park-Master-Plan.pdf) on [August 18, 2018](#).

Aloha,

Kimi Mikami Yuen, LEED AP BD+C  
Principal

Attachments: Park Entry

cc: The Honorable David Y. Ige, Governor  
Office of Environmental Quality Control  
Board of Land and Natural Resources  
Division of State Parks

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# ENVIRONMENTAL REVIEW LAW

## 1.6 COMPLIANCE WITH STATE AND COUNTY OF KAUAI ENVIRONMENTAL LAWS

This document has been prepared in accordance with the provisions of the State of Hawai'i's Environmental Impact Statement Law, Chapter 343, HRS and the Environmental Impact Statement Rules, Title 11, Chapter 200, HAR. Section 343-5, HRS, establishes nine (9) actions, or "triggers," which require the environmental review process. Implementation of the Hā'ena State Park Master Plan will involve the following triggers: 1) the use of State land and funds, 2) the use of county lands or funds; 3) a use within a shoreline area; 4) a use within a Historic District as designated in the Hawai'i and National Registers of Historic Places; 5) the use of State lands classified as a Conservation District; and 6) the modification of existing helicopter facilities within the State that may affect lands within a Conservation District, shoreline area, and registered historic site.

In addition, the project may involve or impact State and/or County lands or funds relating to, connections to, and/or easements across, State or County facilities and lands including but not limited to infrastructure improvements for public roadways, water, sewer, utility, drainage, or other facilities. While the specific nature of each improvement is not known at this time, the EIS is intended to address all current and future instances involving the use of State and/or County lands or funds relating to the proposed park improvements.

The DEIS was preceded by the Hā'ena State Park Master Plan Environmental Impact Statement Preparation Notice (EISPN) under the authority of Act 172-12. State Parks submitted the EISPN to the State Office of Environmental Quality Control (OEQC) on February 9, 2015. Notice of the availability of the EISPN was published in the February 23, 2015 edition of *The Environmental Notice*. Copies of the EISPN were provided to the appropriate government agencies and other individuals and organizations as listed in Section 8.3.1. The public comment period for the EISPN began on February 23, 2015 and ended on March 25, 2015. Comments and responses on the EISPN received during the public comment period are incorporated in this EIS and the letters are provided in Section 12.0.

Following the EISPN, State Parks submitted the DEIS to OEQC on July 13, 2015 and Notice of the availability of the Draft EIS was published in the July 23, 2015 edition of OEQC's *The Environmental Notice*. Copies of the DEIS were provided to appropriate government agencies, public officials, and other organizations and individuals (see Section 8.3.2). The official 45-day public comment period on the DEIS began on July 23, 2015 and ended on September 8, 2015. However, State Parks held a public meeting on August 19, 2015 to gather more input on the DEIS and extended the DEIS public comment period until October 8, 2015. Comments on the DEIS received during this public comment period and the responses to the comments are incorporated in this FEIS and copies of those letters are included in Section 13.0.

# AGENCY AND COMMUNITY GROUP ENGAGEMENT

## 1.7 AGENCY AND COMMUNITY GROUP ENGAGEMENT

Throughout the planning process for this project, various Federal, State of Hawai‘i, and County of Kaua‘i agencies as well as community groups, organizations and individuals have been engaged in the development of the Master Plan. A thirty-two member Master Plan Advisory Committee (MPAC) consisting of Hā‘ena kūpuna and ‘ohana members, cultural practitioners and scientific experts, business representatives, State and County agencies, and other North Shore community members provided recommendations to the physical plan and park management. Following the publication of the availability of the DEIS by OEQC in the July 23, 2015 *The Environmental Notice*, State Parks held a public community meeting on August 19, 2015 to gather input on the DEIS. A new Hā‘ena State Park Community Advisory Committee (HSPCAC) composed of a portion of the original MPAC as well as new members from the community met regularly to refine the master plan. These efforts culminated in an open house held on July 23, 2016 at Hā‘ena State Park to present to the community the revised master plan. The additional input and feedback was collected and incorporated into the plan. The HSPCAC provided further guidance on finalizing the master plan at a meeting held in November 2016 and via email through May 2018. A summary of the public and community meetings that were held is provided in Table 2.

At the onset of the project, pre-consultation letters were issued soliciting input into the Master Plan and environmental documents, and periodically through the process, public meetings and open houses were held to keep the greater community informed of the concepts being considered for the Park. Appendix A includes a record of and materials from the public meetings held with community members regarding this project with a summary of the public meeting held on August 19, 2015 for the Draft EIS in Section 8.3.3. Chapter 11.0 contains the pre-consultation correspondence.

**TABLE 1: PUBLIC AND COMMUNITY ADVISORY COMMITTEE MEETINGS**

| DATE                   | LOCATION                                             | PARTICIPANTS                                      | PURPOSE                                                                                                                             |
|------------------------|------------------------------------------------------|---------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------|
| August 14 and 15, 2008 | Hā‘ena State Park                                    | Various stakeholders, consultants                 | Field visit                                                                                                                         |
| October 16, 2008       | Honolulu                                             | Debbie Gowensmith, Community Conservation Network | Learn more about the Hā‘ena community-based subsistence fishery project                                                             |
| October 24, 2008       | Hanalei                                              | Maka‘ala Ka‘aumoana                               | Learn more about the 1990’s effort to master plan Hā‘ena State Park and about her work at Hā‘ena and with the Hanalei Watershed Hui |
| October 24-25, 2008    | Limahuli Gardens and County Planning Commission Room | Public                                            | Open house                                                                                                                          |
| February 4, 2009       | Teleconference                                       | Chad Listman, County of Kaua‘i Lifeguard          | Discuss issues at the park with Kē‘ē head lifeguard                                                                                 |



| DATE                  | LOCATION                                        | PARTICIPANTS                                                                                      | PURPOSE                                                                                                          |
|-----------------------|-------------------------------------------------|---------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------|
| October 14, 2009      | Limahuli Gardens                                | SMA interveners that entered into resolution agreement with State Parks regarding comfort station | Final design for constructed wetlands and update on Master Plan progress                                         |
| March 10, 2010        | Honolulu                                        | Debbie Gowensmith, Hawai'i Community Stewardship Network (HCSN)                                   | Community coordination                                                                                           |
| April 17, 2010        | Hanalei Elementary School                       | MPAC                                                                                              | Introductory meeting                                                                                             |
| May 8, 2010           | Hanalei Elementary School                       | MPAC                                                                                              | Master Plan revisions and management issues                                                                      |
| May 15, 2010          | Hanalei Elementary School                       | MPAC                                                                                              | Master Plan revisions and management issues, continued                                                           |
| July 10, 2010         | Hanalei                                         | Public                                                                                            | Overview of process and Master Plan revisions                                                                    |
| October 14, 2010      | Land Board Conference Room, Kalanimoku Building | BLNR                                                                                              | Request the BLNR to accept recommendations proposed in draft Master Plan and endorse preparation of an EIS       |
| February 17, 2011     | Various                                         | MPAC                                                                                              | Site visit to potential shuttle stop locations                                                                   |
| March 1, 2011         | Hanalei Community Center                        | Transportation and Parking Working Group                                                          | Transportation and Parking Working Group                                                                         |
| March 18, 2011        | Teleconference                                  | Jean Souza, Hawaiian Islands Humpback Whale Marine Sanctuary                                      | Hawaiian Islands Humpback Whale Marine Sanctuary and environmental interpretive tools                            |
| March 19, 2011        | Hanalei Community Center                        | MPAC                                                                                              | Transportation issues                                                                                            |
| March 1, 2012         | University of Hawai'i                           | Carlos Andrade, Konia Freitas                                                                     | Learn about a conceptual initiative being discussed at Hawaiian Studies program                                  |
| December 10, 2012     | Hā'ena State Park                               | MPAC                                                                                              | View the pre-final Master Plan, discuss a near-term plan for the entry complex and discuss management strategies |
| December 26, 2012     | Teleconference                                  | Sue Kanoho, Kaua'i Visitors Bureau                                                                | Discuss potential visitor limits at Hā'ena State Park and potential effects on visitor industry                  |
| January 10, 2013      | Hā'ena State Park                               | MPAC                                                                                              | Revised plan and continuation of management issues                                                               |
| January 21, 2013      | Hā'ena State Park                               | MPAC                                                                                              | Discuss proposed visitor limits, view pre-final Master Plan, and discuss capital improvement projects            |
| February 7, 2013      | Hā'ena State Park                               | MPAC                                                                                              | Review revised plan, capital improvement projects, and next steps                                                |
| April 22, 2013        | Hā'ena State Park                               | Hui Maka'āinana o Makana                                                                          | Rockfall hazard mitigation                                                                                       |
| May 3, 2013           | Hā'ena State Park                               | MPAC                                                                                              | Pedestrian walkway alternatives, rockfall mitigation, and next steps                                             |
| August 27, 2014       | Hā'ena State Park                               | MPAC                                                                                              | Review of latest changes to plan, kickoff for EIS                                                                |
| <u>August 6, 2015</u> | <u>County of Kaua'i Mo'ikeha Building</u>       | <u>Kauai Historic Preservation Review Commission (KHPRC)</u>                                      | <u>Present draft master plan to KHPRC and receive input and comments</u>                                         |

| <b>DATE</b>                           | <b>LOCATION</b>                  | <b>PARTICIPANTS</b>                                                  | <b>PURPOSE</b>                                                                            |
|---------------------------------------|----------------------------------|----------------------------------------------------------------------|-------------------------------------------------------------------------------------------|
| <u>August 19, 2015</u>                | <u>Hanalei Elementary School</u> | <u>Public</u>                                                        | <u>Present DEIS and gather community input</u>                                            |
| <u>September 2015 – November 2016</u> | <u>Waipā Foundation</u>          | <u>MPAC, Hā‘ena State Park Community Advisory Committee (HSPCAC)</u> | <u>Revise master plan; community outreach</u>                                             |
| <u>July 23, 2016</u>                  | <u>Hā‘ena State Park</u>         | <u>Public</u>                                                        | <u>Community Open House to present revised master plan and collect input and comments</u> |
| <u>November 27, 2016</u>              | <u>Waipā Foundation</u>          | <u>HSPCAC</u>                                                        | <u>Discuss revisions to master plan</u>                                                   |
| <u>May 2018</u>                       | <u>Various</u>                   | <u>Key members of HSPCAC</u>                                         | <u>Post-Flood Repairs</u>                                                                 |

# MASTER PLAN SUMMARY

## 1.9.1 HĀ'ENA STATE PARK MASTER PLAN

The proposed master plan for Hā'ena State Park refines the master plan drafted in 2001 but never adopted with a renewed emphasis on the cultural and historic significance of Hā'ena. The Master Plan includes minimal physical improvements to the park in order to maintain the natural beauty and openness of the area. Only a few new structures are proposed including a Welcome Hale that is envisioned as an open traditional Hawaiian hale and located near the improved main parking lot. Interpretive and informational signage will be posted at the hale and two small comfort stations to the side of the main parking lot will provide a second set of facilities to reduce wastewater flows at the existing Kē'ē comfort station. The current overflow parking area will serve as the main parking lot and be resurfaced with permeable paving. In addition, a new entry turnaround and shuttle stop, and a new pedestrian-only path that connects the main parking lot with Kē'ē Beach through the lo'i are included in the plan. The new Pedestrian Path would follow along the first berm of the lo'i system closest to the highway. It is proposed to be placed just over the berm so as not to impact the berm or any of the historic resources and will maintain a low profile just above the berm. The new path will provide visitors with a unique view of Makana, a famous mountain peak, as well as views of the restored wetlands, loko, and lo'i as they walk to Kē'ē. Understanding there are funding limitations for improvements at State Parks, the Master Plan provides a Near-Term Plan for the Entry Complex (Figure 2) which includes a controlled entry for the park at a new Welcome Pavilion equipped with restrooms and the Interpretive Path which will provide access to Kē'ē Beach along an elevated boardwalk located makai of the current highway alignment to move the main visitor path outside of a projected rockfall hazard zone. The full buildout of the Master Plan is shown in Figure 1.

The main parking lot is envisioned to be flexible, but with a maximum of 100 striped stalls. The overall size of the main parking lot would be adjusted accordingly to support visitor use of third-party shuttles to the park, or the County's proposed North Shore shuttle should it be established, with the goal of right-sizing the parking lot. The idea is to accommodate local demand, complement shuttle volume, and minimize parking impacts outside of the park. In addition, the main parking lot would be separated into a fee-paying lot and non-fee paying lot by moveable bollards and cordons so the parking can be adaptively managed on an as-needed basis to support the varying numbers in either group parking at the park on any given day and throughout the day. A smaller special access parking lot will be located at Kē'ē in the existing paved areas. These stalls will be reserved for ADA accessibility, the lifeguards, park staff, the Hula Complex, and other cultural practices. It will also be accessible for emergencies as well as safety and rescue operations.

Other recommendations include reestablishing the area makai of the Kalalau trailhead and encompassing Ka Ulu a Paoa Heiau and the former Allerton property as a Hula Complex, recognizing the extreme significance of this ancient wahi kapu to hula practitioners worldwide. In addition, a Cultural Gathering Place will be created inland of Ka'īlio Point with a traditional

hale and Hālau Wa‘a, where educational and community programs could be staged, including overnight stays.

The plan also supports the continued restoration of the Agricultural Complex and encourages restoration of the varied historic, cultural, and natural resources throughout the park. It prioritizes the restoration of the dune complex as a potential first effort, recognizing the multiple benefits of ecological restoration, beach protection, and caring for the iwi kupuna. The plan also encourages green building design, integrated water use, reuse, and rainwater catchment, and renewable energy throughout the park. The latest proven green wastewater treatment technologies should be installed and these new facilities will also help lessen the use of the existing comfort station at Kē‘ē, which has sensitive cultural sites nearby.

Key management recommendations include: 1) the establishment of a Cultural Advisory Committee and a Community Advisory Committee, both of whom will be consulted on all aspects of park management and proposed improvements; 2) the implementation of adaptive management principles with regards to all management issues at the park; 3) instituting an initial limit of 900 visitors entering the park during peak park hours and calculated on an average daily basis as opposed to a hard limit; 4) required staff and volunteer education; and 5) visitor orientation prior to park entry.

The existing historic state highway that runs through the park is also recommended to be transferred from the State Department of Transportation to State Parks so that it may be closed to general through traffic and State Parks can shift the bulk of visitor traffic and parking outside of a potential rockfall hazard zone.

~~There are improved parking lots and a new entry turnaround shown in the proposed plans. However, there is also a unique opportunity currently being explored for State Parks to work with the County and other public agencies or to solicit a concession agreement with a third-party shuttle operator to initiate a North Shore shuttle and possibly a remote entry location in Princeville in the near term. If this happens, the size of the proposed parking lot in the Near-Term Plan and full buildout plan should be adjusted to support visitor use of the shuttle. The area no longer needed for parking at the entry could be converted into other park uses such as additional educational gardens and picnic areas, event space with a grand entry lawn, or more compact development of the entry facilities. An expanded shuttle stop with shelters, benches and informational signage may also be required if a shuttle is the primary means for park entry.~~

~~The full buildout of the Master Plan includes additional facilities such as a larger Educational and Cultural Center, which would replace the Welcome Pavilion as the point of entry for the park and a Caretaker’s Cottage which will support a 24-hour a day presence at the park. The area makai of the Kalalau trailhead and encompassing Ka Ulu a Paoa Heiau and the former Allerton property are combined to create the Hula Complex. Coordination with the County of Kaua‘i will be required as the heiau sits on County land. Other features of the master plan include the development of a Cultural Gathering Place inland of Ka‘Ōlio Point with a traditional hale and Hālau Wā‘ā, where educational and community programs could be staged including~~

overnight stays. Restoration of the dune complex as well as the continued restoration of the Agricultural Complex, Allerton Caretaker's Cottage, Montgomery House, and other historic, cultural, archaeological, and natural resources of the park are also recommended. Picnic areas, pedestrian and bicycle paths, expanded garden areas, integrated water/wastewater/drainage facilities, a permanent location for the lifeguard tower, baseyards and a helicopter landing area for DLNR and emergency use only are also elements of the proposed master plan.

The master plan includes key management strategies such as the establishment of a Cultural Advisory Group and community advisory group, and mandatory visitor orientation and education upon entry to the park. The existing historic State highway that runs through the park is also recommended to be transferred from the State Department of Transportation to State Parks so that it may be closed to general through traffic and allow State Parks to shift the bulk of visitor traffic within the park outside of a potential rockfall hazard zone.

A significant management proposal in the plan is to limit the number of people who can enter the park to 900 people per day as an initial ceiling. This number may be adjusted over time based on the impacts to the natural and cultural resources, traffic, public safety and visitor satisfaction at the park among other potential variables. This initial number includes day hikers on the Kalalau Trail but does not include overnight campers or hunters with valid permits, members of the Hui, or attendees at special education or cultural events such as volunteer workdays or events at the Hula Complex. This will encourage visitors to plan their visits in advance. State Park acknowledges that access will be an ever-evolving operational issue and will likely change over time as new policies are implemented. However, the goal is to study the impacts of these proposed policies over time and to adjust them as appropriate to improve the long-term management of park resources and visitor satisfaction.



# DESCRIPTION OF THE MASTER PLAN

## 2.5 DESCRIPTION OF THE MASTER PLAN

A site analysis was prepared to map the existing resources and to guide the appropriate location of Master Plan park elements (see Figure 8). The Master Plan presented in Figure 1 shows the full build-out of the plan and is the preferred alternative. Key components of the plan include new visitor and caretaker facilities, pedestrian and bicycle paths, a Hula Complex surrounding Ka Ulu a Paoa Heiau, a Cultural Gathering Area with Hālau Wa‘a and open hale, and changes to the park entry, vehicle circulation, and parking. To facilitate the initiation of the controlled entry and access changes at the park, a near-term plan for the entry complex was developed and is described in Section 2.5.1 (Near-Term Plan). It is also illustrated in Figure 2. Subsequent sections describe elements of the full build-out of the Master Plan.

### 2.5.1 NEAR-TERM PLAN FOR THE ENTRY COMPLEX

The Near-Term Plan for the entry complex presented in Figure 2 offers an interim plan to help initiate the managed access concepts and safety improvements within the park which are based on an updated rockfall hazard study prepared by AECOM (Appendix B). AECOM prepared a map showing the location beyond which the potential for simulated rockfalls diminishes to a 0% chance based on computer modeling. This line is shown on all the Master Plan graphics for reference and labeled as such. The Near-Term Plan as well as the Master Plan locates all the proposed visitor facilities makai of this line. The following sections are brief descriptions of the proposed features of the Near-Term Plan.

#### 2.5.1.1 Welcome Pavilion

A Welcome Pavilion is proposed where the main entry to the park can be managed prior to the construction of the Education and Cultural Center (described in Section 2.5.2.1). The primary function of the Welcome Pavilion is to provide orientation for all visitors prior to park entry. Public restroom facilities and an information desk are also included in the structure. Areas for interpretive displays, exhibits, picnic tables, and bicycle parking are provided outside of the pavilion. The leach field for the comfort station will be located beneath the parking lot. Dual waterlines will be installed for the comfort station and the lo‘i.

#### 2.5.1.2 Interpretive Path

Due to the potential for rockfall hazards along the highway, an Interpretive Path will be provided makai of the highway, connecting the Welcome Pavilion to Kē‘ē Beach. It will traverse the lo‘i as an elevated boardwalk running along the first berm separating the first two rows of lo‘i and then turn north to avoid the wetlands. It will cross an ‘auwai over a footbridge and connect to a path through the hau tree tunnel. This path will then connect to the trail behind the dunes and turn south, leading visitors past the lifeguard tower to Kē‘ē.

Interpretive displays and wayside exhibits will be installed along this path, including directional signage and educational information for the varied sights along this trail. The portion of the path which traverses the lo‘i will be elevated with handrails and a viewing

platform where the path turns. From here, distant views of Wai a Kanaloa can be seen as well as spectacular views of Makana, the lo'i, loko, and the wetlands. The path is proposed to be a minimum of eight to ten feet wide to accommodate bicycles without being overly intrusive upon the lo'i. Pathway footings are proposed to avoid structural impacts to lo'i walls. The path will be designed to be ADA accessible and made with lightweight, durable, easy to maintain, and vandal proof or vandal resistant materials. Directional and ocean safety signs are proposed to be posted appropriately along the path.

The exact alignment and materials used to construct the path will be determined when construction plans are prepared based on input from rockfall engineers, State Parks archaeologists and staff, the Cultural Advisory Group, and the Hui.

### ***2.5.1.3 Parking***

In the Near Term Plan, most of the visitor parking is consolidated into the main visitor parking lot as much of the highway will be closed to general traffic. In addition, a small ADA/special access parking area will be established at Kē'ē. The main parking lot is proposed to be re-graded, resurfaced, and landscaped with striped parking stalls. The preferred medium for surfacing the parking lot is a permeable pavement or structural grass over the entire parking lot or at least half of the parking lot so it can be used for multiple purposes. The exact surface will be determined when construction plans are prepared based on soil drainage and material availability. The parking lot as shown in the plan is large enough to park roughly 100 vehicles. However, to encourage use of the shuttle or transit system being planned for the North Shore, the number of available stalls may be reduced and the grassed areas of the lot can be used for outdoor activities, staging areas, lo'i, or educational purposes. The area shaded in a darker green in the plans shows how the parking lot could be partitioned for the different uses. If the shuttle system proves successful, the area may no longer be needed for parking and could permanently be converted into other park uses such as additional educational gardens and picnic areas, event space with a grand entry lawn, or expanded staging areas. The Welcome Pavilion/ECC could also be located further east to open up more garden spaces to the west.

The Master Plan also shows an 'auwai running along the mauka edge of the main parking lot that is in roughly the same alignment as the original 'auwai that used to traverse this area before it was cleared for the dirt parking lot. There have been requests by some members of the MPAC to determine whether it can be restored and made functional again, connecting to the rest of the 'auwai system. If restoration is pursued, further investigation will be necessary prior to detailed design of the parking lot to see if the 'auwai can be restored without extreme construction requirements or costs and if there is sufficient water quality and quantity. If the 'auwai can be restored, the grading and landscaping of this area should be done so that stormwater runoff from the parking lot is diverted away from the 'auwai and directed to flow across the grassed areas of the parking lot or towards bioswales and the adjacent landscaped areas could be designed as rain gardens to filter and contain the runoff. In addition, overflow drainage swales could be designed to help mitigate larger rainfall flows that may overtop the 'auwai. If it cannot be restored, another alternative is to aesthetically integrate its design into the drainage system and to see if it has potential for microhydropower generation.

~~This area can double as a catchment ditch for rockfall events with hala trees could also be planted in a thick screen along the highway and parking lot as an added rockfall mitigation measure and to soften the view of the highway from the ECC and Interpretive Path.~~

~~Pedestrian paths are proposed to be provided throughout the parking lot and drop-off/pick-up areas to clearly delineate where people should walk. The pedestrian path itself could be curbed or edged for easier maintenance and may be surfaced with permeable pavers or pavements or natural soil hardeners to increase rainwater infiltration while providing a stable, ADA-accessible surface. The exact surface will be determined when construction plans are prepared based on soil drainage and material availability.~~

~~The subterranean area of the parking lot will serve as an absorption bed for the proposed restroom facilities minimizing the amount of disturbed area required to service the proposed facilities.~~

~~The smaller 13-space ADA/special access parking lot will be located at Kēʻē for ADA accessibility, as well as to provide parking for the lifeguards, family members tending to the cemeteries, lawaiʻa, hunters, and cultural practitioners visiting the Hula Complex. The two existing ADA stalls will be maintained and directly opposite the highway from them will be an 11-stall parking area. Bicycle racks should be installed here if bicycles are permitted on the Interpretive Path.~~

~~Drainage improvements to prevent ponding, soil erosion, and beach washouts during heavy rainfall events are recommended. Access to this parking area will be managed by special permit or controlled by parking staff to minimize vehicle access along the limited access corridor.~~

#### ***2.5.1.4 Park Entry and Turnaround***

~~Initial discussions with State DOT have indicated they are willing to transfer the section of highway within the park to State Parks. Therefore the proposed plan recommends closing the highway to through traffic just past the park entry and includes a large vehicle turnaround with separate, gated accesses to and from the main parking lot, as well as to the ADA/special access parking area at Kēʻē and the separate staging area that could be used by State Parks or the Hui. A kiosk will be installed to control the gates either mechanically or manually by an operator. The gate will limit access along the highway to minimize visitor exposure to the rockfall hazards. Only those needing ADA vehicular access to Kēʻē, or special access to the cemeteries, hunting area within the Nāpali Coast State Wilderness Park, fishing grounds, and the Hula Complex will be allowed along the limited access portion of the highway. Warning signs will be installed at the gate. The gate across the highway could have a swing gate over the mauka half of the right-of-way that could be automated to open for exiting traffic only. Gate design will be included in construction drawings.~~

~~The central island of the turnaround will be landscaped, highlighted by a large hala tree or other native tree of significance to Hāʻena. An alternative for the centerpiece could be a~~

sculpture depicting something of significance to Hā‘ena or created by a Hā‘ena artist. The turnaround also would include sheltered seating areas to accommodate visitor drop-offs and pickups and shuttles/transit stops, as appropriate. The shade structures could also be designed with photovoltaic (PV) panels to help power the nearby facilities. Shade structure design is conceptual at this time.

#### ***2.5.1.5 Safety Signage***

Rockfall hazard warning signs should be installed as appropriate along the highway to discourage the general public from accessing the highway between the park entry and Kē‘ē, including the area around Wai a Kanaloa. In addition, directional and ocean safety signs should be posted at appropriate locations along the Interpretive Path, trails, and shoreline.

### **2.5.2 LONG-TERM MASTER PLAN**

Descriptions of the remaining elements of the full buildout of the Master Plan are provided in the following sections. Elements that remain from the Near Term Plan are not repeated here. Figure 1 illustrates the full buildout of the Master Plan and Figure 9 provides a detailed view of the entry area.

#### ***2.5.2.1 Education and Cultural Center***

The Education and Cultural Center (ECC) is envisioned as the main gathering place for all who visit the park. The ECC is anticipated to house administrative staff offices, comfort station facilities, auditorium/classroom space, meeting rooms, interpretive displays, storage rooms and other related spaces to support the park’s operations and activities. The ECC is proposed to be designed with covered outdoor lanai-type spaces to encourage indoor-outdoor experiences and learning spaces. The footprint as shown is roughly 2,000 square feet (s.f.). It incorporates the 1,200 s.f. footprint of the Welcome Pavilion from the Near Term Plan and adds two 400 s.f. wings at the back of the structure. However, the final architectural program, design, and facility size will be determined during the detailed design stage of the ECC. Its exact location may also be moved further east into the graded area of the parking lot based on the size of the final parking lot needed at the park. This shift would open up more park/event space makai of the facility and allow the smaller entry pavilion to operate while the ECC is constructed.

Because of Hā‘ena’s remote location and limited access to infrastructure, all aspects of green design is proposed for consideration whenever feasible to help the ECC operate self-sufficiently. To collect, filter, and reuse rainwater from the roof for irrigation, toilet flushing, and other possible uses, a rainwater catchment cistern is proposed. Renewable energy will be investigated during the building design process to help support the electrical demand of the facility with solar, microwind, and microhydropower<sup>†</sup> as potential alternatives.

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<sup>†</sup>The U.S. Department of Energy defines a microhydropower system as a renewable energy system that typically generates up to 100 kilowatts of electricity. For reference, “a 10 kilowatt microhydropower system generally can provide enough power for a large home, a small resort, or a hobby farm.” (USDOE 2012)

#### ***2.5.2.2 Traditional Hale, Demonstration Gardens, Picnic Areas and Outdoor Event Space***

On the grounds surrounding the ECC are various outdoor spaces that are proposed for use as demonstration gardens and lo'i, tour staging areas, picnic areas, and outdoor event space. These areas are envisioned as flexible teaching spaces where outdoor demonstrations or classes could be held. They could also be landscaped with cultural and native plants, including kalo and Polynesian introduced plants, to aid in educational programs and may be used as staging areas for tours, school groups and community work days. A traditional hale is proposed to be constructed as a shelter for these activities. Its proposed location is in an existing cleared area which cannot be put back into lo'i production due to that area having previously abandoned cars and debris.

#### ***2.5.2.3 Reconstructed Hale and Lo'i Interpretive Site***

A traditional house foundation (Feature 8, Site 1600-8) is located on the northern side of the main parking lot. According to the State Parks archaeologists, it likely has been modified by the addition of a lanai in historic times. Recent reconnaissance of the site shows it to be in relatively good condition and provides an opportunity for a reconstructed hale pili and lo'i interpretive site at the entrance to the park. Final design of this area will be done once a more detailed condition analysis of the site is conducted and the feasibility of reconstruction is determined. The layout shown in the Master Plan is purely conceptual and subject to revision based on the condition analysis.

#### ***2.5.2.4 Caretaker's Cottage and Baseyard***

The Caretaker's Cottage is a feature from the 2001 draft park plan that some members of the MPAC felt was absolutely critical to preserve in the 2015 Master Plan. Having a caretaker at the park would provide a 24-hour presence at the park for security as well as provide someone to unlock the gates for hikers who wish to exit when the park is closed if the exit gate is not automated or is locked after hours.

The footprint of the Caretaker's Cottage as shown on the Master Plan is roughly 1,200 s.f. under the main roof with about 500 s.f. of covered lanai space. There are two potential baseyard areas, one of which is the area immediately surrounding the Caretaker's Cottage and measures over 6,400 s.f., but should include a protected buffer between the baseyard uses and the lo'i walls. The second area, which could also be used as a staging area or flexible space, measures roughly 4,800 s.f. and should similarly be buffered from the lo'i and 'auwai to the north and east, respectively.

These areas comprise previously disturbed land adjacent to the main parking lot. The final layout, location and sizing of the Caretaker's Cottage and baseyard will be dependent on the condition and exact locations of the lo'i walls, 'auwai, and traditional house site discussed in Section 2.5.2.3. Tall hedges or landscaping should be installed along the fences to secure the facility and to screen the facilities from public view. Similar to the ECC, green design and renewable energy are recommended. For hikers who need help after hours, and for any emergencies, an intercom or hardline emergency phone should be provided at the gate fronting the Caretaker's Cottage.



#### ***2.5.2.5 DLNR Helipad and Baseyard/Staging Area***

The helipad and baseyard/staging area will be used by DLNR for maintenance of their facilities including the Nāpali trails and sites. Since it is infrequently used, the helicopter landing area can be designed as a level, grassed site. The parking lot, entry complex, and helipad staging area will undergo a detailed design process prior to finalization to appropriately locate and size the facilities.

For emergency helicopter landings, the Fire Department tends to utilize the open grassy area near the Hui's current shelter. This area may continue to be used as an emergency landing zone as it is unsuitable for lo'i restoration and is proposed to remain as an open grassy field for educational and special events makai of the Welcome Pavilion/ECC. However, it is noted that the Fire Department will land wherever they need to as appropriate for the emergency situation.

#### ***2.5.2.6 Limited Access Corridor***

The highway between the turnaround and Kē'e will be closed to general vehicle traffic and used only for special vehicle access due to the potential rockfall hazard (Appendix B). The only vehicles that will be permitted beyond the gate will be special access vehicles such as the lifeguards, hula practitioners, family caretakers of the cemeteries, and vehicles with valid ADA placards or license plates. Because the road is currently owned by the State Department of Transportation (DOT), it will either need to be transferred to State Parks or an agreement must be made between the two state agencies for the proposed closure.

#### ***2.5.2.7 Hula Complex***

The entire area makai of the Kalalau Trailhead and south of the highway has been designated as the Hula Complex. It is the first priority of the MPAC to restore the area and to develop a culturally appropriate management plan. The complex includes Ka Ulu a Paoa Heiau and Ke Ahu a Laka, the former Allerton property, and the State lands surrounding them. Restoration of the heiau and Ke Ahu a Laka based on Henry Kekahuna's 1959 map (Figure 10) and all other available historical maps for the area is recommended.

The County has entered into an agreement with the Hui to care for the hula sites and is working with State Parks on access and coordination. It is recommended that appropriate cultural protocols be established as part of the management, access, and use of the area. Review by both the Kaua'i Historic Preservation Review Commission and the State Historic Preservation Division (SHPD) are required for any improvements and proposed management plans.

The Hui is also working on the rehabilitation of the historic Allerton Caretaker's Cottage and the Master Plan recommends reusing the structure to support park use, including the Hula Complex. The former Allerton house site and existing foundation is proposed in the Master Plan to be maintained as an open, grassed platform. State Parks notes that recent changes at the site may require short-term improvements to preserve it in place. If restroom facilities are provided within the area, potable water and an individual wastewater treatment system will be needed due to the remoteness of this facility. Sustainable design elements are proposed for

consideration to make it as self-sufficient as possible including high efficiency fixtures, renewable energy, rainwater catchment, and wastewater treatment and reuse.

#### ***2.5.2.8 Dune Restoration***

The dunes and beach strand were identified by both the MPAC and biologists at Geometrician Associates (Appendix C) as priority sites for restoration. For the MPAC, it would be an opportunity to take care of the kūpuna who are interred there. According to the biologists, the restoration of a native dune ecosystem would involve the removal of alien species and the planting of natives and Polynesian introduced plants such as Pōhuehue, Naupaka, Nanea, Pōhinahina, Nehe, Pa‘u o Hi‘iaka, ‘Aki‘aki grass, Milo, Hala and Kou. Not only would they provide improved and more authentic vegetation but they could also be used to help reduce coastal erosion if carefully planted. Restoration of the dune system would also improve the habitat for common native shorebirds, including the Kōlea or Pacific Golden Plover, ‘Ūlilī or Wandering Tattler, ‘Akekeke or Ruddy Turnstone, Kioea or Bristle-thighed Curlew, Hunakai or Sanderling, and various other sandpipers (Terry and Hart 2009).

Because the beach is one of the primary recreational resources at the park, visitors should clearly be instructed to be careful as they walk along the shoreline, especially east of the proposed lifeguard station since erosion is unearthing iwi and other cultural resources. The formal picnic areas that were shown on the dunes with picnic tables in the 2001 draft park plan have been removed and new picnic areas will be located on previously disturbed areas next to the Welcome Pavilion/ECC and on the paved areas at the end of the highway at Kē‘ē (Section 2.5.2.10). Visitors will still be permitted to picnic on the beach, but not on the dunes, and they will be encouraged to carry out all trash. The Master Plan further recommends that, to support dune restoration, recreational activities that impact the beach and dunes, such as driving on the sand (except for emergencies), be prohibited.

#### ***2.5.2.9 Lifeguard Tower***

A new permanent location for the lifeguard tower has been identified in the Master Plan with input from the MPAC and the Kē‘ē lifeguards (Listman, 2008). As shown in Figure 1, it is roughly 50 feet north of the highway pavement and 50 feet mauka of the 2009 certified shoreline to allow views from the end of the path to open up to the ocean and improve visibility for the lifeguards. The site is located outside any known flood hazard zone or wetland. To avoid potential impact to subsurface resources, the foundation should be built up rather than excavated down into the sand, if possible. Also, some of the existing ironwood trees may have to be cut.

#### ***2.5.2.10 Picnic Area at Kē‘ē***

Picnic tables will be located on the old highway pavement at the entrance to Kē‘ē Beach to provide ADA accessibility. The area is shaded by trees and overlooks the beach and lagoon.

#### ***2.5.2.11 Loko and Wetland Restoration***

Some members of the MPAC expressed a desire to restore the loko and wetland areas for endangered native birds and possible agricultural uses. Loko Naia is believed to have been a loko kalo and Loko Kē'ē either a fishpond or loko kalo.

Restoration of the small wetlands on the property for the purpose of creating a native bird habitat is a possibility according to Geometrician Associates. However, they do not recommend modifying these areas specifically to attract endangered birds for practical and legal reasons. In order to do so, there are several binding agreements and permits that must be obtained with the U.S. Fish and Wildlife Service (USFWS), such as a Safe Harbor Agreement and associated enhancement of survival permit as well as increased responsibility to protect the native birds once they are established at the park. Additionally, its location near the main public corridor would increase the potential for endangered birds to be harassed, injured or killed directly or indirectly by people or their pets and may be difficult to manage.

They do, however, recommend restoring the native flora which would increase native plant conservation and opportunities to educate the public. This may also indirectly support native birds including endangered and threatened species without a formal effort to create an endangered species habitat. A third party agreement with a local organization that may want to take on the responsibility of creating and maintaining such a habitat if a formal endangered species habitat may be another option. If pursued, the wetlands should be protected through fencing hidden with landscaping or fringing vegetation that encourages viewing but discourages direct entry to help minimize access by predators (Appendix C).

#### ***2.5.2.12 Limahuli Stream Restoration***

Based on recommendations from Geometrician Associates in Appendix C, a natural area with potential for beneficial impact is restoration of the riparian areas around Limahuli Stream. The alien tree species that form a dense, closed canopy around the stream are especially problematic since they effectively prevent sunlight from reaching the ground and prevent the mid-canopy and ground cover layers in the forest from developing. This in turn increases sediment loading in the stream due to erosion and tree litter. Reduced sunlight also limits the growth of benthic algae in streams. The algae are a major food source for many rare and federally endangered native fish and invertebrates. A reduction in this important food source, coupled with increased sediment loading, could ultimately result in decreased quality of streams.

Careful clearing of the alien trees along Limahuli Stream and the planting of appropriate native and Polynesian introduced plants to stabilize slopes are recommended. In order to prevent impacts to 'Ōpe'ape'a, the Hawaiian Hoary Bat, State Parks should restrict any cutting of large shrubs or trees over fifteen feet tall to periods outside of the June 1 through September 15 breeding and pupping season. Continued cooperation with the Division of Aquatic Resources (DAR) to keep new alien fish out of the 'auwai and stream and in ridding the stream of periodic invasions of swordtails, guppies, and other alien fish is recommended. Details of stream and riparian restoration will be deferred until a restoration plan can be prepared.

### ***2.5.2.13 Agricultural Complex***

In order to create a living cultural Agricultural Complex, community gardening practices restoring the lo'i should be continued (Carpenter, 1996). The restoration phases as recommended in the Major and Carpenter (2000) restoration plan are labeled in parentheses on Figure 1. The MPAC would like to allow for other cultural crops to be planted in addition to kalo. Historically, the complex was known to be flexible, allowing dryland cultivation to be done by simply redirecting water through different paths. 'Uala, or sweet potatoes, were known to be grown in sandy areas and mai'a (bananas), kō (sugar cane), and 'awa (*Piper methysticum*) were grown in the valleys.

Restoration of the 'auwai is also recommended wherever feasible, particularly in actively cultivated areas of the lo'i. Special care, however, needs to be taken not to make a hydraulic connection between the lo'i and 'auwai back to Limahuli Stream to prevent the spread of apple snails. Limahuli Stream is one of the few places in the State that does not have apple snails and the snails are currently in the park's lo'i.

The 2001 draft park plan also included pedestrian and bicycle pathways throughout the lo'i, primarily along and sometimes through the 'auwai. This is no longer recommended since the goal is to reestablish the 'auwai as the primary means of irrigating the lo'i. The plan currently locates the Interpretive Path over the first berm within the lo'i and will provide visitors an up-close view of the lo'i on their way to Kē'ē.

In addition, access to and/or through certain areas of the lo'i is required for both people and equipment as a part of ongoing maintenance and harvesting. For safety reasons, access within the working lo'i should therefore be managed and primarily reserved for those restoring the lo'i as well as for educational and work groups tending to the lo'i. Special tours for the public and educational groups guided by knowledgeable staff may also be arranged. These access ways shall be designed and constructed as the restoration of the lo'i progresses in order to appropriately locate them within the complex.

### ***2.5.2.14 Montgomery House***

Rehabilitation of the historic Montgomery House/Cottage situated within the Agricultural Complex is proposed to support agricultural activities or other park uses/operations. Similar to the Allerton Caretaker's Cottage, if restroom facilities are provided, potable water and an individual wastewater treatment system will be needed. Sustainable design elements should be considered to make it as self-sufficient as possible including high efficiency fixtures, renewable energy, rainwater catchment, and wastewater treatment and reuse.

### ***2.5.2.15 Cultural Gathering Place and Hālau Wa'a***

Tucked between the lo'i, Loko Naia and former coastal road, and up on higher ground, the Cultural Gathering Place is envisioned in the Master Plan as an outdoor gathering place to support community/educational groups and where overnight stays would be permitted. The Cultural Gathering Place is in an area of recent 20th century modification and encompasses the site of the historic poi mill.

An open hālau-type structure and Hālau Wa‘a, or canoe house, is also proposed to the east of the Cultural Gathering Place. Approximate locations of these facilities are shown in the Master Plan. However, because this area is located near potentially sensitive cultural sites, the exact extent of the area and location of the structures should be determined with input from State archaeologists and staff, the community, and kūpuna. In addition, the Hālau Wa‘a should be located as makai as possible without impacting sensitive sites and the dune system or being within areas of special flood and wave hazards. For infrastructure, potable water will be needed. Composting toilets should be considered as an option for restroom facilities or temporary restrooms could be brought in and removed as necessary to serve the campers. Alien plant species are proposed to be removed from the area and replanted with native and Polynesian-introduced plants.

#### ***2.5.2.16 Poi Mill***

In the 2001 draft plan, interpretation of the historic poi mill is recommended. However, no cost estimates were included for any reconstruction work. As remnants of the concrete foundation still remain, the MPAC discussed whether the poi mill could be rebuilt in order to process harvests from the lo‘i. However, the site is located in an area of potential flood hazard due to wave action, according to the Flood Insurance Rate Map (FIRM) and if State Parks or another entity wishes to reestablish a poi mill on site or within the park, additional studies are recommended to determine the most suitable location, design, and size for such a facility. Therefore, the site itself is recommended to be interpreted with signage or displays and included on guided tours.

#### ***2.5.2.17 Cemetery Areas***

The two historic cemeteries that are just north of the loko are currently maintained by family members. In the 1996 Burial Treatment Plan (Carpenter, 1996), there are recommendations to install signage and fence or wall off and gate the cemetery areas, with access provided to lineal descendants and State personnel. However, during the MPAC meetings a request was made to eliminate the fencing and gates. Rather than using fences or walls, landscaping and the use of native and Polynesian-introduced plants should be considered as more natural buffers for the area. Any signage that is installed should be designed with input from the families of those interred there.

#### ***2.5.2.18 Pedestrian Trails***

As discussed in the Near Term Plan, the Interpretive Path will serve as the main pedestrian route between the ECC and Kē‘ē. It will be located outside the area of the known rockfall hazard and will also serve as the primary ADA-accessible route. The proposed alignment was developed with Hui leadership and the final design is subject to refinement including input from the Hui, State archaeologists, Cultural Advisory Group, and rockfall engineers.

The old coastal road behind the dune, which will be used for restricted vehicle access to the lo‘i, cemetery and Cultural Gathering Place, is also proposed as a potential new pedestrian trail. Its location behind the dunes provides shelter from the winds and provides an alternate



route to Poholoikeiki Channel, the Hālau Wa‘a, and the historic poi mill site and passes by Loko Naia. In the Master Plan, this pathway is not envisioned as a paved, improved trail. Ocean safety signage, interpretive displays and wayside exhibits should be installed as appropriate. Bicycles should not be permitted on this portion of the trail due to the sensitivity of the area.

Another potential pedestrian trail could be developed to connect the ECC directly to the Hālau Wa‘a site through the proposed native plant and lo‘i demonstration gardens along an existing path at the edge of the Phase I lo‘i restoration. These trails together will provide a pedestrian loop trail through the most active areas of the Park as well as opportunities for diverse interpretive experiences. Signage, landscaping and trail markings may be installed to direct visitors towards appropriate areas and away from sensitive or hazardous areas. This loop trail serves as an alternate route back to the ECC and main parking lot. The exact alignment of all trails should be developed with input from State archaeologists, the Hui leadership, and the Cultural Advisory Group.

Additional pedestrian loop trails on the eastern side of the park should also be considered and designed in conjunction with the surveying and restoration of the lo‘i (Phases III and IV). All trails will need to be designed based on more detailed survey of the archaeological sites and to loop back to the ECC if access to these areas is to be managed.

#### ***2.5.2.19 Bicycle Facilities***

Bicycle racks will be provided at the ECC (and the Welcome Pavilion in the Near-Term Plan) and if bicycling is permitted on the Interpretive Path, racks may be installed at Kē‘ē near the special access parking lot. However, riders will be required to travel at low speeds since the path is also the main pedestrian and ADA-accessible route. They will also be required to walk their bicycles between the large viewing platform on the Interpretive Path and Kē‘ē due to the sensitivities along the sand dune and potential for pedestrian-bicycle conflicts in the Hau Tunnel and at the viewing platform. If conflicts between pedestrians and bicyclists arise, bicycle riding on the Interpretive Path may be discontinued.

As an alternative, bicyclists could be allowed on the limited access portion of the former highway but they would be permitted at their own risk of rockfalls. If permitted, bicycle racks should be installed at Kē‘ē. To encourage bicycle access to the park, bicycle parking, according to the Pedestrian and Bicycling Information Center, should include sturdy racks that are visible (for security), accessible, easy to use, and convenient. Ideally, bicycle racks should support the whole bicycle and not just one wheel, and enable the user to lock the frame and wheels.

### **2.5.1 VISION FOR HĀ‘ENA MASTER PLAN**

The following section provides conceptual descriptions of the key features of the master plan. It starts at the park entrance and continues toward Kē‘ē. The exact locations and designs of the proposed features are subject to change and refinement during the detailed design and construction phases based on conditions at the time of implementation.

### **2.5.1.1 Park Entry, Turnaround, and New Main Gate**

A new vehicle gate is recommended to be installed at the park entry when the highway is transferred to State Parks. Only those with special access to Kēʻē, such as the lifeguards and rescue personnel, those with valid ADA parking placards or plates, park staff, the Hula Complex and other cultural practitioners, will be allowed to drive along the former highway as needed to reduce visitor exposure to the rockfall hazards. It will have a separate entry off the turnaround. Rockfall hazard warning signs will be installed on the gate across the highway and a swing gate on the mauka half of the right-of-way could be automated to open for exiting traffic only. The design of the gate will be open and remain low in height to minimize the visual impact towards Kēʻē.

A vehicle turnaround is provided just past the park entry and provides separate accesses to and from the main parking lot, as well as the special access parking at Kēʻē, and a separate staging area that could be used for various park purposes. The turnaround is designed to include the shuttle stop and/or bus stop if/when such services become available and allow those dropping off visitors to pull over at the curb without blocking traffic. Shade structures are also provided to shelter those waiting at the visitor drop-off and pick-up areas. Shuttle and bus schedules should be posted at the stop if they are established. Should shuttle or transit service to the park become successful enough to eliminate or reduce the need for the parking lot, the shuttle stop area can be enlarged to accommodate the required passenger drop offs and pick-ups. The shade structures could also be designed with photovoltaic panels to help power the nearby facilities.

### **2.5.1.2 Parking**

Most of the visitor parking will be consolidated into one main visitor parking lot near the park entry as much of the highway will be closed to general traffic. Only a small special access parking area will remain at Kēʻē as noted earlier for ADA accessibility, the lifeguards, park staff, the Hula Complex and other cultural practices. It will also be accessible for emergencies as well as safety and rescue operations.

The preferred medium for the parking lot is permeable pavement or structural grass over the entire parking lot or at least half of the parking lot so it can be used for multiple purposes. The parking lot as shown in the plan is large enough to accommodate roughly 100 vehicles. However, to encourage the use of a shuttle or transit system being planned for the North Shore, the number of available stalls may be reduced as appropriate and the grassed areas around the parking lot can be used for outdoor activities, staging areas, or educational purposes related to the adjacent traditional house site and loʻi. Eventually, if the shuttle or transit system proves successful, the areas no longer needed for parking could permanently be converted into an expanded shuttle stop area or other park uses. In the interim, the areas shown in different shades of green in Figure 1 show how the parking lot could be partitioned for different users, whether they are fee-paying visitors or non-fee paying visitors, and can be adjusted with movable bollards and cordons depending on the number of cars for each user group. The division between the two can be adaptively managed weekly, daily, or even hourly throughout the day depending on demand. This design gives State Parks the flexibility to provide enough parking until the shuttle/transit system is operational and to adjust as needed the number of parking

stalls that are available for the different user groups while also encouraging multimodal access to the park.

Pedestrian paths should be provided throughout the parking lot and drop-off/pick up areas to clearly delineate safe places where people should walk and direct visitors towards the park entry. The pedestrian paths could be curbed or edged for easier maintenance and should be surfaced with permeable pavers or pavements or natural soil hardeners to increase rainwater infiltration while providing a stable, weatherproof surface. If electric vehicle parking and charging stations are provided, they must comply with the State Disability and Communications Access Board (DCAB) Interpretive Opinion 2012-01, which states, 'Where EV charging stations are provided, 5%, but not less than one of each type of EV station shall be accessible.

At the special access parking area, bicycle racks should also be installed and drainage improvements should be made in the area to prevent ponding, soil erosion, and beach washouts as has happened at Kē'ē during heavy rainfall events. It is also recommended that access to this special access parking area be managed by special permit or access codes at a controlled entry off the turnaround. Access should also be coordinated with safety and rescue personnel during emergencies and rescue operations.

#### **2.5.1.3 Welcome Hale and Restrooms**

The Welcome Hale is envisioned as an open pavilion without walls where information about the park can be posted. The displays should include a park map and orientation information, park rules and cultural protocols. Daily weather, ocean and hazard conditions could also be posted at the Welcome Hale.

New public restrooms and bicycle parking are provided outside of the hale near the main parking lot. This second set of restrooms will help reduce the use of the Kē'ē comfort station, which is located near sensitive archaeological sites. Technological advances in individual wastewater treatment systems are providing higher-quality effluents and should be considered when designing the new restrooms. If possible, the effluent should be reused and the leach field for the new restrooms could be located beneath the parking lot. Dual waterlines and rainwater catchment systems can also be installed for the restrooms and the lo'i to minimize potable water use. Solar photovoltaic systems can also be installed to support electrical needs.

#### **2.5.1.4 Pedestrian Path**

Due to the potential for rockfall hazards along the highway, a pedestrian path will be provided makai of the highway, connecting the Welcome Hale to Kē'ē Beach. It will traverse the lo'i along the first berm separating the first two rows of lo'i and then turn north to avoid the wetlands. It will cross an 'auwai over a footbridge and connect to a path through the hau tunnel. This path will then connect to the trail behind the dunes and turn south, leading visitors past the comfort stations and lifeguard tower to Kē'ē. The path will remain low to the ground but just above the berm, with structural supports located to avoid any archaeological sites. Handrails or path edging will be provided for safety if needed. It should also be designed with

lightweight, durable, and easy-to-maintain materials that are resistant to vandalism and weathering.

Interpretive displays and wayside exhibits will be installed along this path, including directional signage and educational information for the varied sights along this trail. From here, distant views of Wai a Kanaloa can be seen as well as spectacular views of Makana, the lo'i, loko and the wetlands.

#### **2.5.1.5 Restored 'Auwai**

The master plan shows an 'auwai running along the mauka edge of the parking lot. It is in roughly the same alignment as the original 'auwai that used to cut through this area before it was cleared for the dirt parking lot. There have been requests by some members of the MPAC to determine whether it can be restored and made functional again, connecting to the rest of the 'auwai system. Further investigation to see if the 'auwai can be restored to serve the lo'i without extreme requirements or costs should be done prior to detailed design of the parking lot. If it is found that it can be restored, the grading and landscaping of this area should be done so that stormwater runoff from the parking lot is diverted away from the 'auwai and directed to flow across the grassed areas of the parking lot or bioswales and adjacent landscaped areas which could be designed as rain gardens. In addition, overflow drainage swales could be designed in this area to help mitigate larger rainfall flows that may overtop the 'auwai. If it cannot be restored as an 'auwai, another alternative is to aesthetically integrate its design into the drainage system and to see if it has potential for microhydro power generation. This area can also double as a catchment ditch for rockfall events. Native or Polynesian-introduced trees could also be planted in a thick screen along the highway and parking lot as an added rockfall mitigation measure and to soften the view of the highway from the pedestrian path.

#### **2.5.1.6 Reconstructed Hale and Lo'i Interpretive Site**

A traditional house site (Feature 8, Site 1600-8) is located on the northern side of the main parking lot. According to the State Parks archaeologists, it likely has been modified by the addition of a lanai in historic times. Recent reconnaissance of the site shows it to be in relatively good condition and provides an opportunity for a reconstructed hale pili and lo'i interpretive site at the entrance to the park. Final design of this area will be done once a more detailed condition analysis of the site is conducted and the feasibility of reconstruction is determined. The layout shown in the master plan is purely conceptual and subject to revision based on the condition analysis. Access to the site should be designed to be ADA accessible from the parking lot if possible.

#### **2.5.1.7 DLNR Helipad and Staging Area**

The helipad and staging area will be used only by DLNR for maintenance of their facilities including the Nāpali trails and sites. One potential location is makai of the entry turnaround and will need to be designed with the new turnaround so the area is large enough and does not impact archaeological sites. Since it is infrequently used, the helicopter landing area can be

designed as a level, grassed site. The final design and location, however, will be decided upon as part of the detailed design process for the main parking lot and entry complex.

For emergency helicopter landings, the Fire Department prefers the open grassy area near the Hui's current shelter, which is marked on the master plan as an alternate landing area. This area may continue to be used as an emergency landing zone as it is unsuitable for lo'i restoration and proposed to remain as an open grassy field for educational and special events makai of the Welcome Hale. However, the Fire Department noted they will land wherever they need to as appropriate for the emergency situation.

#### **2.5.1.8 Limited Access Corridor**

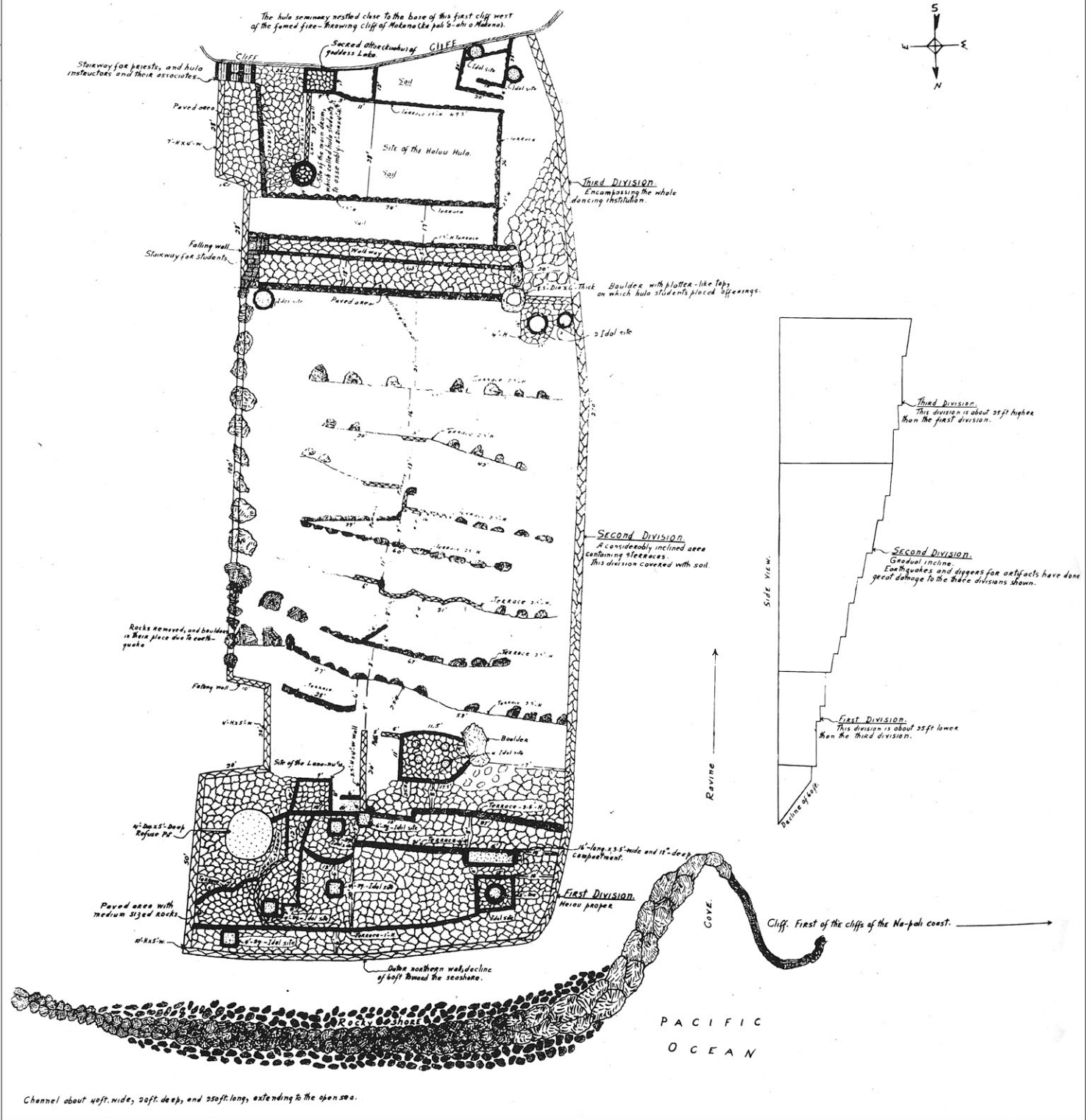
The highway between the turnaround and Kē'ē will be closed to general vehicle traffic and used only for special vehicle access due to the potential rockfall hazard. The only vehicles that will be permitted beyond the gate will be special access vehicles such as the lifeguards and emergency and rescue teams, park staff, hula and other cultural practitioners, and ADA vehicles. Because this segment of the highway is currently owned by the State Department of Transportation, it will need to be transferred to State Parks or an agreement must be made between the two state agencies for State Parks to take over management of it. In emergency situations such as tsunami warnings, visitors will be able to evacuate along this corridor to escape to higher ground and out of the park if it is deemed safe.

#### **2.5.1.9 Hula Complex**

Given the extreme importance of the ancient Ka Ulu a Paoa Heiau and Ke Ahu a Laka and their worldwide recognition as a wahi kapu, the entire area makai of the Kalalau Trailhead and encompassing the area around the heiau and former Allerton Estate is designated as the Hula Complex. It is the first priority of the MPAC to restore the area and to develop a culturally appropriate management plan. Restoration of the heiau and Ke Ahu a Laka utilizing Kekahuna's map (Figure 10) and all available maps is recommended.

The County has established a stewardship agreement with Hui Maka'āinana o Makana to care for the sites within its parcel and is working with State Parks on access and coordination. It is recommended that appropriate cultural protocols be established as part of the management, access, and use of the area. Review by both KHPRC and SHPD will be required for any improvements and proposed management plans.





**FIGURE 10**  
Kekahuna's 1959 Drawing  
of Ka Ulu A Paoa Heiau  
**HĀ'ENA STATE PARK**

Department of Land and Natural Resources

Island of Kaua'i

NOT TO SCALE



Rehabilitation of the historic Allerton Caretaker's Cottage is currently underway for reuse to support park use, including the Hula Complex. The Allerton house site and existing foundation should be maintained as an open, grassed platform as hula hālau often use that area. State Parks notes that recent changes at the site may require emergency improvements to preserve it in place. If restroom facilities are provided, potable water and an individual wastewater treatment system will be needed due to the remoteness of this facility. Sustainable design elements should be considered to make it as self-sufficient as possible including high efficiency fixtures, renewable energy, rainwater catchment, and wastewater treatment and reuse.

#### **2.5.1.10 Dune Restoration**

The dunes and beach strand were identified by both the MPAC and biologists at Geometrician Associates as priority sites for restoration. For the MPAC, it would be an opportunity to take care of the iwi kūpuna interred there. According to the biologists, the restoration of a native dune ecosystem would involve the removal of alien species and the planting of natives and Polynesian-introduced plants such as pōhuehue, naupaka, nanea, pōhinahina, nehe, pa'u-o-Hi'iaka, 'aki'aki grass, milo, hala and kou. Not only would they provide improved and more authentic vegetation but they could also be used to help reduce coastal erosion if carefully planted. Restoration of the dune system would also improve habitat for common native shorebirds, including kōlea, 'ūlili, 'akekeke or ruddy turnstone, kioea or bristle-thighed curlew, hunakai or sanderling, and sandpiper.

Also, because the beach is one of the primary recreational resources at the park, visitors should clearly be instructed to be careful as they walk along the coast, especially east of the proposed lifeguard station since shoreline erosion is unearthing iwi and other cultural resources. The formal picnic areas that were shown on the dunes with tables in the 2001 Draft Park Plan have been removed and a new picnic area will be located at the end of the existing highway pavement at Kē'ē. Visitors, however, will still be permitted to picnic on the beach, but not on the dunes, and all trash will be encouraged to be carried out with them. Recreational activities that negatively impact the beach and dunes should be prohibited.

#### **2.5.1.11 Lifeguard Tower**

A new permanent location for the lifeguard tower has been identified with input from the MPAC and the Kē'ē lifeguards. It is roughly 50 feet north of the highway pavement and 50 feet mauka of the 2009 certified shoreline to allow views from the end of the path to open up to the ocean and improve visibility for the lifeguards. The site is located outside any known flood hazard zone or wetland. To avoid potential impact to subsurface resources, the foundation should be built up rather than excavating down into the dunes, if possible. Also, some of the existing ironwood trees may have to be cut. When asked, the lifeguards agreed the proposed site will improve their ability to see key areas of the lagoon and Kē'ē Channel compared to their current temporary location at the end of the highway pavement.

#### **2.5.1.12 Picnic Area at Kēʻē**

Picnicking is permitted at Kēʻē Beach. However, a formal picnic area with picnic tables will be located at the end of the former highway pavement at the entrance to Kēʻē Beach. The area is shaded by trees and overlooks the beach and lagoon. The tables can be placed on the old highway pavement to provide ADA accessibility.

#### **2.5.1.13 Loko and Wetland Restoration**

Some members of the MPAC expressed a desire to restore the loko and wetland areas for endangered native birds and possible agricultural uses. Loko Naia is believed to have been a loko kalo and Loko Kēʻē either a fishpond or loko kalo. However, Geometrician Associates do not recommend modifying these areas specifically to attract endangered birds for practical and legal reasons. There are several binding agreements and permits that must be obtained with the U.S. Fish and Wildlife Service in order to do so, such as a Safe Harbor Agreement and associated enhancement of survival permit as well as increased responsibility to protect the native birds once they are established at the park. They also caution its location near the main public corridor would also increase the potential for endangered birds to be harassed, injured or killed directly or indirectly by people or their pets and may be difficult to manage.

They do, however, recommend restoring the native flora which would increase native plant conservation and opportunities to educate the public. This may also indirectly support native birds including endangered and threatened species without a formal effort to create an endangered species habitat. The State could also consider a third-party agreement with a local organization that may want to take on the responsibility of creating and maintaining such a habitat if a formal endangered species habitat is desired. If pursued, the wetlands should be protected through fringing vegetation that encourages viewing but discourages direct entry and possibly fencing shielded by landscaping to help minimize access by predators.

#### **2.5.1.14 Limahuli Stream Restoration**

Based on recommendations from Geometrician Associates, the restoration of the riparian areas around Limahuli Stream is another natural area with the potential for multiple beneficial impacts. The alien tree species that form a dense, closed canopy around the stream are especially problematic since they effectively prevent sunlight from reaching the ground and prevent the mid-canopy and ground cover layers in the forest from developing. This in turn increases sediment loading in the stream due to erosion and tree litter. Reduced sunlight also limits the growth of benthic algae in streams. The algae are a major food source for many rare and federally endangered native fish and invertebrates. A reduction in this important food source, coupled with increased sediment loading, could ultimately result in decreased habitat quality of streams. They recommend careful clearing of the alien trees along Limahuli Stream and the planting of appropriate native and Polynesian-introduced plants to stabilize the slopes.

In order to prevent potential impacts to ʻōpeʻapeʻa, the native Hawaiian hoary bats, State Parks will restrict any cutting of large shrubs or trees taller than fifteen feet in height to periods outside the June 1 through September 15 breeding season for the ʻōpeʻapeʻa. State Parks will continue to cooperate with the State Division of Aquatic Resources to keep new alien fish out

of the ‘auwai and stream and in ridding the stream of periodic invasions of swordtails, guppies, and other alien fish. Additional consideration should be given to working with neighboring landowners as well as those ma uka up Limahuli Valley if restoration is pursued.

#### **2.5.1.15    *Agricultural Complex***

In order to create a living cultural agricultural complex, it is recommended that community gardening practices continue the restoration of the lo‘i as recommended in the restoration plans already in place. One request of the MPAC was to allow for other cultural crops to be planted in addition to kalo. Historically, the complex was known to be flexible; water was redirected to allow certain areas to be used for dryland cultivation. ‘Uala, or sweet potatoes, were known to be grown in sandy areas and mai‘a (bananas), kō (sugar cane), and ‘awa (*Piper methysticum*) were grown in the valleys.

Restoration of the ‘auwai is also recommended wherever feasible, particularly in actively cultivated areas of the lo‘i. Special care, however, needs to be taken not to hydraulically connect the lo‘i and ‘auwai back to Limahuli Stream to prevent the spread of apple snails. Limahuli Stream is one of the few places in the state that does not have apple snails and the snails are currently in the park’s lo‘i.

The 2001 Draft Park Plan also included pedestrian and bicycle pathways throughout the lo‘i, primarily along and sometimes through the ‘auwai. This is no longer recommended since the goal is to reestablish the ‘auwai as the primary means of irrigating the lo‘i. The plan currently locates the main pedestrian path over the first berm within the lo‘i and will provide visitors a close-up view of the lo‘i on their way to Kē‘ē. There may also be opportunities for interactive educational activities within the first row of lo‘i for visitors, away from the Hui's restoration work, which will continue makai and east.

Access to and/or through certain areas of the lo‘i is required for both people and equipment as a part of ongoing maintenance and harvesting. For safety reasons, access within the working lo‘i should therefore be managed and primarily reserved for those restoring the lo‘i as well as for educational and work groups tending to the lo‘i.

#### **2.5.1.16    *Montgomery House***

The historic Montgomery House situated within the Agricultural Complex is recommended for rehabilitation to support park uses. The facility could be used to support the agricultural activities or other park uses and operations. Similar to the Allerton Caretaker’s Cottage, if restroom facilities are provided, potable water and an individual wastewater treatment system will be needed. Sustainable design elements should be considered to make it as self-sufficient as possible including high efficiency fixtures, renewable energy, rainwater catchment, and wastewater treatment and reuse.

#### **2.5.1.17    *Cultural Gathering Place and Hālau Wa‘a***

Tucked between the lo‘i, Loko Naia and former coastal road, and up on higher ground, the Cultural Gathering Place (CGP) is envisioned as an outdoor gathering place to support

community and educational groups and where overnight stays would be permitted. The CGP is in an area of recent 20th century modification and encompasses the site of the historic poi mill.

An open hālau-type structure and Hālau Wa‘a, or canoe house, is also proposed on the makai side of the CGP. Approximate locations of these structures are shown in the master plan. However, because this area is located near potentially sensitive cultural sites, the exact extent of the area and location of the structures should be determined with input from State Parks archaeologists and staff, the community and cultural advisory groups, and kūpuna. In addition, the Hālau Wa‘a should be located as makai as possible without impacting sensitive sites and the dune system. For infrastructure, potable water will be needed. Composting toilets or other innovative wastewater treatment technologies should be considered for restroom facilities. Alien plant species should be removed and replaced with native and Polynesian-introduced plants.

#### **2.5.1.18 Poi Mill**

Interpretation of the historic poi mill is recommended. Remnants of the concrete foundation still remain and the MPAC discussed whether the poi mill could be rebuilt in order to process harvests from the lo‘i. However, the site is located in an area of potential flood hazard due to wave action (Figure 20), and if State Parks or another entity wishes to reestablish a poi mill on site or within the park, additional studies are recommended to determine the most suitable location, design, and size for such a facility. The historic site, however, can be interpreted with signage or displays and could be included on guided tours.

#### **2.5.1.19 Cemetery Areas**

The two modern cemeteries that are just north of the loko are currently maintained by descendent family members. In the 1996 Burial Treatment Plan, there are recommendations to install signage and fence or wall off and gate the cemetery areas, with access provided to lineal descendants and State personnel. However, during the MPAC meetings a request was made to eliminate the fencing and gates. Rather than using fences or walls, landscaping and the use of native and Polynesian-introduced plants should be considered as more natural buffers for the area. Any signage that is installed should be designed with input from the families of those buried there.

### **2.5.2 HAZARD MITIGATION MEASURES**

Due to the potential for rockfalls along the highway, all of the major facilities including the ~~Interpretive Path~~ pedestrian path to Kē‘ē will be located outside of the projected high rockfall hazard zones as described by AECOM in their Rockfall Hazard Assessment report (Appendix B). These improvements should be considered part of the rockfall mitigation and prioritized in capital improvement project funding. In addition, warning signs should be installed at appropriate locations along the highway, and Safety instructions should be made available online and in ~~during~~ visitor orientation materials distributed prior to park entry, and posted at the Welcome Hale.



Ocean safety signs should ~~also~~ be posted at both the main entry points by the Welcome Pavilion/ECC/Hale as well as along the major pathways leading to shoreline areas such as at Kēʻē Beach, near the Hālau Waʻa, and at the Cultural Gathering Place. Additional safety signage should be installed as necessary throughout the park in appropriate areas.

Emergency evacuation routes will be planned and ~~shown~~ provided on maps and directional signage located at key locations at the park ~~during the visitor orientation sessions~~ as well as indicated on visitor brochures and materials provided on the website and prior to park entry and park signage. ~~The loop paths through the loʻi can be used as an emergency route between Kēʻē and the Welcome Pavilion/ECC.~~ If people need to be airlifted out of the park, the emergency helipad and landing zones shown on the plan can be accessed from multiple locations.

Additional discussion about the natural hazards and mitigation measures are discussed in Section 3.10.

### **2.5.3 INFRASTRUCTURE IMPROVEMENTS**

The following recommendations for infrastructure improvements were developed by Kennedy/Jenks Consultants to support the goals of the proposed Master Plan and preferences of the MPAC. See Section 4.7 and Appendix G and Appendix H.

#### ***2.5.3.1 Integrated Water/Wastewater/Drainage System***

The proposed Master Plan recommends installing an integrated water/wastewater/drainage system to maximize the efficiency and use of on-site water resources. It includes collecting rainwater and using treated wastewater for nonpotable water uses to minimize demand for potable water, as well as restoring the ʻauwai wherever possible and improving the drainage of surface runoff to irrigate surrounding garden areas or the loʻi if it can be appropriately filtered.

Specific design considerations for the integrated water/wastewater/drainage systems include:

- Using treated wastewater effluent and collected rainwater for irrigating the landscaping around the facilities such as the ~~ECC, picnic area, Caretaker's Cottage and baseyard~~ Montgomery House, Allerton Caretaker's Cottage, Welcome Hale, parking lot, and new restrooms. There are three levels of treated wastewater recognized by the State Department of Health (DOH) as recycled water. R-1 has the highest level of treatment and R-3 the lowest (Kennedy/Jenks 2010). The Master Plan recommends aerobic wastewater treatment to at least R-2. If the treated water quality is R-2, irrigation systems must be subsurface with no over-ground sprays. If the effluent is treated to R-1, over-ground spray and drip systems can be installed.
- Using recycled water and collected rainwater for toilet flushing at the ~~ECC, Caretaker's Cottage~~ new restrooms, Allerton Caretaker's Cottage, and Montgomery House to conserve potable water.
- Reducing the need for stream diversions by restoring the ʻauwai and collecting, storing and using rainwater.

- Using non-potable water for fire protection. Collected rainwater or even ocean water can be used for fire protection in emergencies.
- Directing rainwater runoff from the main parking to landscaped areas and rain gardens. Where possible, collecting and storing rainwater for reuse such as irrigation and possibly toilet flushing.
- Redesigning Kūhiō Highway culverts so that rainwater that passes beneath it flows more naturally and can be filtered and used in the ‘auwai system.

Control measures to prevent the spread of apple snails from the park’s lo‘i to Limahuli Stream should be included in any design or implementation of the ‘auwai and irrigation systems for the Agricultural Complex. Some suggestions include but are not limited to:

- Elevating and extending the outfall pipes from the Limahuli Stream diversions above the receiving ‘auwai so that the snails cannot crawl directly into the stream. The snails are known to dislike cold, fast-moving water, which is what flows from Limahuli Stream, and so the risk is minimized.
- Grading the ‘auwai to flow makai and away from Limahuli Stream.

For items specific to wastewater treatment:

- Treatment for wastewater should be with aerobic systems to a minimum R-2 water quality, with aeration and non-chlorine treatment such as ultraviolet (UV) disinfection to improve effluent quality. Consider using renewable energy sources to provide power.
- Locate effluent absorption beds under parking lots and driveways if permitted. DOH requires the use of aerobic treatment units certified by NSF/ANSI 245 for systems that discharge directly into the groundwater.
- Provide aeration to the existing constructed wetlands primary treatment tanks, powered by a PV system and replace the plants at the constructed wetlands to high-nutrient removing plants to improve water quality.
- For remote, low use facilities, consider composting toilets or ~~temporary/portable facilities as needed~~ innovative wastewater technologies.
- Use non-chemical disinfectants and cleaning products for maintenance, particularly in composting toilets, to minimize impacts to wastewater treatment processes and effluent quality. Use environmentally-safe soaps that contain plant nutrients and biocompatible cleaners.
- Since the proposed wastewater facilities are currently not standard according to the State Department of Health (DOH), include maintenance manuals and provide instruction to ensure proper upkeep of all wastewater systems at the park.
- As an alternative, vault systems, which are fully contained and can be pumped and treated at an off-site facility are also being considered should effluent reuse not be possible onsite.

#### **2.5.3.2 Electrical Power**

Many of the proposed facilities will require electrical power. There is currently no electrical power service at the park. Kaua‘i Island Utility Cooperative (KIUC) service stops at the entrance to the park and should be extended to the turnaround for emergency lighting if desired

at the shuttle stop. ~~Welcome Pavilion/ECC and the Caretaker's Cottage.~~ Renewable energy should be used to service the remaining electrical demand ~~and as much as possible.~~ ~~Renewable energy is encouraged with~~ Potential renewable energy resources ~~such as include~~ solar hot water heating and solar ~~electric~~ photovoltaics (PV), wind and hydro power.

Solar hot water heaters and PV electric systems are well-established technologies that have been installed widely throughout the islands. According to data from the Hawai'i Sugar Planters Association collected in 1985, an estimated 350 solar calories per square centimeter fall on the area per day ( $\text{cal}/\text{cm}^2/\text{day}$ ). The higher the intensity, the better the resource is. The average for the island is  $350 \text{ cal}/\text{cm}^2/\text{day}$ , with ranges from 0 to  $500 \text{ cal}/\text{cm}^2/\text{day}$ . A solar hot water heater can be installed at the ~~Caretaker's Cottage, the ECC, and any of the other~~ facilities that may require hot water, such as the Montgomery House and Allerton Caretaker's Cottage, once they are renovated. PV panels installed as shade structures at the shuttle stop, turnaround, restrooms, and comfort station at Kē'ē is recommended to power any new equipment needed for an upgraded wastewater treatment system.

Micro wind and micro hydropower are other sources of renewable energy that should be considered in addition to solar. There are smaller wind turbines that can be installed on rooftops at the park or those that rotate on a vertical instead of horizontal axis to minimize any impact to birds. There are also evolving wind technologies, such as the Humdinger Windbelt, developed by a Hawai'i-based company, that do not have rotating airfoils but capture energy from aeroelastic flutter (<http://www.humdingerwind.com>). As technology evolves, State Parks and DLNR should continue to look into viable alternatives as improvements are phased in and developed.

A microhydropower system needs a consistently running source of water (as little as two gallons per minute) and a relatively small elevation change (as little as two to three feet of head) to turn a turbine to create power. However, more of each will increase output. Microhydropower systems are more efficient the closer they are to the energy source and therefore Limahuli Stream, the only perennial stream at the park, could be investigated to provide a source for microhydropower. Neighboring Limahuli Gardens uses a microhydropower system to power their entire visitor center which runs on a 24V system and includes lights, a computer and cash register (Winter, personal communication 2011). Care must be taken, however, to size and locate the microhydropower to minimize impacts to the stream ecosystem and to account for periods of low stream flow. To minimize the impacts of microhydropower systems on native Hawai'i amphidromous biota, the diversion intakes must be designed to have low-velocity intakes placed subsurface in relatively deep pool in the center of the stream in order to minimize entrainment of larval or post-larval stream animals. Also, as a potential in-stream use, any microhydropower system should be integrated with a public trust use such as the taro lo'i production should it be pursued.

#### **2.5.3.3 Communications**

In order to maintain communications and provide for public safety during emergencies, the existing hardline pay phone and emergency phone at Kē'ē Beach ~~is proposed to~~ should be

maintained. For similar reasons, hardline telephone service ~~is proposed to be provided~~ should be considered at the turnaround and Welcome Hale if desired. ~~Caretaker's Cottage and Welcome Pavilion/ECC. A second pay phone or at least a closed circuit phone which connects to the Caretaker also is proposed to be located on the outside of the Welcome Pavilion/ECC so that emergency calls can be made when the ECC is closed and hikers who need assistance can contact the Caretaker.~~ The remote and mountainous location limits wireless communications. Wireless services should be considered for visitor convenience and may be required for certain parking management technologies.

#### ***2.5.3.4 Artificial Lighting***

In order to minimize impacts to Hā'ena's wildlife which can become disoriented at night by artificial lighting, the following recommendations will be followed for any lights designed for the park's facilities.

- All exterior lights will be fully-shielded (completely opaque) and downward facing full-cut off fixtures with the lowest light level (lumens) possible, sufficiently large, and positioned so that the bulb is only visible from below to minimize distraction and disorientation of wildlife flying overhead. They can also be installed lower to the ground to minimize light pollution and motion sensors and/or timers can be utilized to activate the lights only when absolutely necessary.
- Lighting plans and management plans will be carefully designed and implemented so that no light from the park is visible from the beach to minimize impacts to nesting sea turtles or their hatchlings seeking the ocean.
- The use of artificial lights should be minimized or reduced as much as possible during the seabird fledging season of September to December, and during the sea turtle hatching period July to September, and yellow lighting invisible to honu should be used near the shoreline. Night time construction should be avoided.

### **2.5.4 KEY MANAGEMENT RECOMMENDATIONS**

The following key management recommendations and principles ~~may help~~ will be followed to balance continued public and recreational use with the protection of the cultural, natural, and historic resources at the park.

#### ***2.5.4.1 Adaptive Management***

The HSPCAC recommended that adaptive management be the primary management concept adopted at the park given the diverse and passionate feedback received from the community. This will allow State Parks to make adjustments as they implement various management actions and learn what the impacts are. The U.S. Department of the Interior describes adaptive management as "an iterative learning process producing improved understanding and improved management over time. ... It is not a 'trial and error' process, ... but rather a means to more effective decisions and enhanced benefits. Its true measure is in how well it helps meet environmental, social and economic goals, increases scientific knowledge, and reduces tensions among stakeholders" (Williams et al, 2009).

Due to the complexity of the park environment, uncertainty of outcomes given potential changes in management strategies, and the active community, adaptive management provides a methodology State Parks can follow in order to improve resource management decisions while addressing community concerns. As noted in the technical guide,

Often the uncertainty about management impacts is expressed as disagreements among stakeholders who have differing views about the direction and magnitude of resource change in response to management. An adaptive approach explicitly articulates these viewpoints, incorporates them into the decision making process, and uses management itself to help identify the most appropriate view about resource dynamics. In this way, understanding of the resource can be enhanced over time, and management can improve. ... Management of problems like these increasingly involves a systems approach with explicit and agreed-upon objectives, management alternatives, and analytical approaches that can identify the most appropriate management strategies. (Williams et al, 2009)

The technical guide provides the following list of activities that can assist with adaptive management strategies if performed in a structured approach:

- Engaging the relevant stakeholders in the decision making process
- Identifying the problem to be addressed
- Specifying objectives and tradeoffs that capture the values of the stakeholders
- Identifying the range of decision alternatives from which actions are to be selected
- Specifying assumptions about resource structures and functions
- Projecting the consequences of alternative actions
- Identifying key uncertainties
- Measuring risk tolerance for potential consequences of decisions
- Accounting for future impacts of present decisions
- Accounting for legal guidelines and constraints

#### ***2.5.4.2 Cultural and Community Advisory Group***

A Cultural Advisory Group (CAG) ~~should~~will be established to advise State Parks on ongoing improvements, educational and interpretive materials, and cultural matters regarding the park. State Parks may also consult the CAG as needed for proposed management actions and proposed construction projects as well as interpretive programs and ~~devices~~tools. The CAG may be composed of representatives from the original Hā'ena families, as well as those persons who specifically lived in, worked, or cared for the lands within the park boundaries, and those who have relatives buried within the park. It should also include cultural practitioners with knowledge specific to hula, Ke Ahu a Laka and Ka Ulu a Paoa, fishing, and other cultural practices specific to Hā'ena. Draft recommendations for the establishment and responsibilities of the CAG are contained in the Master Plan report. They ~~may~~should be viewed as a starting point for developing the CAG and are subject to change.

~~The MPAC also believes a broader community advisory group comprised of diverse community representatives such as the MPAC can provide ongoing support and consultation on general park issues as the Master Plan is implemented. This group could be created by combining the CAG with additional members from the community. The MPAC recommends the larger group meet regularly, at least once a year, with State Parks and any future park~~



~~management entity if established. Organization and membership of such a group is yet to be determined. Should any current MPAC members be willing to continue assisting State Parks on an advisory basis, they would be welcomed.~~

Separate from the CAG, the broader community advisory group, the Hā‘ena State Park Community Advisory Committee, or HSPCAC, has been established and will provide ongoing support and consultation on general park issues including the implementation of the master plan. The group has adopted a charter and plans to meet regularly, particularly when State Parks or the future management entity undertake any improvement projects or changes in park policy.

#### **2.5.4.3 Visitor Limits**

Visitor counts at the park have risen significantly over the past twenty years. Table 3 summarizes various visitor counts taken at the park since 1993. The most recent counts were taken in the summer months and show that there are roughly 2,000 people who enter the park on a daily basis.

**TABLE 1: SUMMARY TABLE OF DAILY VISITOR COUNTS**

| YEAR | MONTH/<br>SEASON | DAY OF<br>THE<br>WEEK | VISITORS<br>PER DAY | SOURCE                                  | NOTES                                                                                                       |
|------|------------------|-----------------------|---------------------|-----------------------------------------|-------------------------------------------------------------------------------------------------------------|
| 1993 | Off-peak         |                       | 50<br>(average)     | The Keith Companies<br>2001             |                                                                                                             |
| 1993 | August           |                       | 353<br>(average)    | The Keith Companies<br>2001             |                                                                                                             |
| 1998 | September        | Friday                | 1,501               | DLNR State Parks                        |                                                                                                             |
| 1999 |                  |                       | 1,700               | DLNR via Stepath 2006                   |                                                                                                             |
| 2008 | August           | Holiday<br>weekend    | 1,950 (est.)        | ATA 2011                                | Estimated based on 2.5<br>persons per vehicle                                                               |
| 2010 | February         | Wednesday             | 1,247 (est.)        | DLNR State Parks                        | Counts only conducted<br>from 9 a.m.-4 p.m.<br>Estimated based on 2.5<br>persons per vehicle                |
| 2011 | July             | Monday                | 2,028<br>(761 cars) | UH Hawaiian Studies<br>(informal count) | Measured from 6:00 a.m.<br>to 6:30 p.m. Includes 8 on<br>bicycles, 14 hikers, 5<br>joggers, 20 pedestrians. |

Currently, there are no visitor limits at the park. Many on the MPAC and in the community felt the current number of visitors is far too many and a limit should be set on the number of visitors to reduce impacts to the natural, cultural and scenic resources and to improve the overall visitor experience.

~~In response, State Parks plans to institute a daily visitor limit as part of the preferred plan. Initially, the number of people in the park would be limited to 900 people per day, which is less than half the number of daily visitors that typically enter the park during the summer months. State Parks may adjust the number over time depending on future improvements,~~

~~improved/increased maintenance, and/or other studies such as impact studies, particularly if harmful impacts to the natural, cultural and archaeological resources occur.~~

~~The daily visitor limit does not include cultural practitioners, special user groups such as hālau, lo‘i workgroups, cemetery caretakers, or school groups. It also does not include the 60 hikers who obtain valid camping permits for the Kalalau Trail or the 30 hunters who obtain valid hunting permits for the Nāpali Coast State Wilderness Park Hunting Unit G.~~

In addition to these recommendations, because of the extensive archaeological, natural and cultural resources at the park, State Parks is proposing to limit the number of people in the park to 900 people per day on average during the peak hours of park use. The initial hours over which this limit would be applied are 7:30 AM to 5:30 PM, but are subject to change. This number is an initial visitor limit which State Parks may adjust over time depending on future improvements, improved/increased maintenance, and/or other studies such as impact studies, particularly if harmful impacts to the natural, cultural, and archaeological resources arise. The daily visitor counts will be averaged over the course of a month so adjustments can be made for park closure days and is therefore a soft limit that can be adjusted as needed on a daily basis.

This initial visitor limit is higher than what was recommended by the MPAC because it includes day hikers on the Kalalau Trail who numbered well over 500 in 2009. Because the trailhead is located within the park, visitors venturing on the trail are anticipated to use the park’s restroom facilities, often go swimming, and use the showers when they return from hiking on the trail. However, they are not impacting the park while on the trail. The visitor limit also does not include the hikers with valid camping permits or the hunters with valid hunting permits for the Nāpali Coast State Wilderness Park Hunting Unit G since they are not expected to be in the park using the facilities for very long and additional facilities are available at Hanakoa and Kalalau. The daily visitor limit also would not include cultural practitioners, or special user groups such as hālau, lo‘i workgroups, cemetery caretakers, or school groups.

By instituting a daily visitor limit, this will encourage visitors to plan ahead and an informational system via the internet, text messages, and email could be developed to distribute real-time information on park access, entry ticket availability during managed visitor hours, special events, and weather, ocean and any hazardous conditions at the park. Park managers will also be able to better manage park operation and resource impacts. In addition, they are able to anticipate how busy the park will be on any given day and post notices online or distribute updates to the visitor industry early in the day whether entry tickets will be available during the managed visitor hours. This could also help reduce casual drop-ins and general traffic along the highway through neighboring North Shore communities. Prior to instituting the proposed visitor limits, a public information campaign must be made far in advance so people are able to plan their visit to the park. State Parks acknowledges that park access will be an ever-evolving operational issue and will likely change over time as new policies are implemented. However, the goal is to study the impacts of these proposed policies and to adjust them as appropriate to improve the long-term management of the park and visitor satisfaction.

#### ***2.5.4.4 Required Staff/Volunteer Education***

As representatives for the park, all park staff as well as volunteers should be trained and be knowledgeable on the cultural, historic, scenic and natural resources at the park. They should also be well-versed on park rules, potential hazards, safety training and emergency evacuation processes, and proper protocol at cultural sites.

#### ***2.5.4.5 Required Visitor Orientation Prior to Park Entry***

~~It is also proposed that all visitors attend an educational session upon entering the park similar to the Hanauma Bay Nature Preserve on O‘ahu. The sessions would be held at the Welcome Pavilion in the near term and at the ECC once built. All visitors will be provided with park rules and information prior to entering the park. The visitor orientation could be made available on the State Parks website, sent via text or email, and tied to ticket distribution, particularly if advanced reservations become a requirement in the future. The orientation session could be a short online video that would educate visitors on appropriate recreational activities and behavior, safety precautions as well as sensitivity to natural and cultural resources and to cultural activities that may be occurring in the park. It should also include~~ In addition, texts or emails could be sent to park visitors prior to entry to inform them of safety precautions and updates on any special events or weather conditions. Similar orientation information should be posted at the Welcome Hale. The CAG should be consulted on appropriate cultural information to be included in the orientation session.

~~Once visitors complete the orientation session, they would not need to attend on subsequent visits to the park for a full calendar year as long as they register upon entry. Registration and orientation attendance could also be tracked and tied to annual passes, if administered. These orientation sessions could be held at the proposed Welcome Pavilion/Education and Cultural Center or even a temporary facility at the park entry.~~

## PARK ENTRY

### ***2.5.1.1 Park Entry, Turnaround, and New Main Gate***

A new vehicle gate is recommended to be installed at the park entry when the highway is transferred to State Parks. Only those with special access to Kēʻē, such as the lifeguards and rescue personnel, those with valid ADA parking placards or plates, park staff, the Hula Complex and other cultural practitioners, will be allowed to drive along the former highway as needed to reduce visitor exposure to the rockfall hazards. It will have a separate entry off the turnaround. Rockfall hazard warning signs will be installed on the gate across the highway and a swing gate on the mauka half of the right-of-way could be automated to open for exiting traffic only. The design of the gate will be open and remain low in height to minimize the visual impact towards Kēʻē.

A vehicle turnaround is provided just past the park entry and provides separate accesses to and from the main parking lot, as well as the special access parking at Kēʻē, and a separate staging area that could be used for various park purposes. The turnaround is designed to include the shuttle stop and/or bus stop if/when such services become available and allow those dropping off visitors to pull over at the curb without blocking traffic. Shade structures are also provided to shelter those waiting at the visitor drop-off and pick-up areas. Shuttle and bus schedules should be posted at the stop if they are established. Should shuttle or transit service to the park become successful enough to eliminate or reduce the need for the parking lot, the shuttle stop area can be enlarged to accommodate the required passenger drop offs and pick-ups. The shade structures could also be designed with photovoltaic panels to help power the nearby facilities.

# PARKING

## **2.5.1.2 Parking**

Most of the visitor parking will be consolidated into one main visitor parking lot near the park entry as much of the highway will be closed to general traffic. Only a small special access parking area will remain at Kē'ē as noted earlier for ADA accessibility, the lifeguards, park staff, the Hula Complex and other cultural practices. It will also be accessible for emergencies as well as safety and rescue operations.

The preferred medium for the parking lot is permeable pavement or structural grass over the entire parking lot or at least half of the parking lot so it can be used for multiple purposes. The parking lot as shown in the plan is large enough to accommodate roughly 100 vehicles. However, to encourage the use of a shuttle or transit system being planned for the North Shore, the number of available stalls may be reduced as appropriate and the grassed areas around the parking lot can be used for outdoor activities, staging areas, or educational purposes related to the adjacent traditional house site and lo'i. Eventually, if the shuttle or transit system proves successful, the areas no longer needed for parking could permanently be converted into an expanded shuttle stop area or other park uses. In the interim, the areas shown in different shades of green in Figure 1 show how the parking lot could be partitioned for different users, whether they are fee-paying visitors or non-fee paying visitors, and can be adjusted with movable bollards and cordons depending on the number of cars for each user group. The division between the two can be adaptively managed weekly, daily, or even hourly throughout the day depending on demand. This design gives State Parks the flexibility to provide enough parking until the shuttle/transit system is operational and to adjust as needed the number of parking stalls that are available for the different user groups while also encouraging multimodal access to the park.

Pedestrian paths should be provided throughout the parking lot and drop-off/pick up areas to clearly delineate safe places where people should walk and direct visitors towards the park entry. The pedestrian paths could be curbed or edged for easier maintenance and should be surfaced with permeable pavers or pavements or natural soil hardeners to increase rainwater infiltration while providing a stable, weatherproof surface. If electric vehicle parking and charging stations are provided, they must comply with the State Disability and Communications Access Board (DCAB) Interpretive Opinion 2012-01, which states, 'Where EV charging stations are provided, 5%, but not less than one of each type of EV station shall be accessible.

At the special access parking area, bicycle racks should also be installed and drainage improvements should be made in the area to prevent ponding, soil erosion, and beach washouts as has happened at Kē'ē during heavy rainfall events. It is also recommended that access to this special access parking area be managed by special permit or access codes at a controlled entry off the turnaround. Access should also be coordinated with safety and rescue personnel during emergencies and rescue operations.



### 4.3.2 PARKING

#### *Existing Conditions*

Within the park, there are two designated parking areas, one approximately 800 feet from the park entrance and one at the terminus of the highway near Kē‘ē Beach. The parking lot nearest the park entrance is unpaved and measures approximately 30,000 square feet in area, it is unsigned and unstriped. In the absence of striping, visitor parking patterns are informal and at times inefficient. During wet weather conditions the dirt/gravel surface becomes muddy and deeply grooved from vehicle maneuvering. As the parking surface dries, the grooved mud becomes hard packed ruts creating an uneven surface that further reduces the area available for parking.

The parking area near Kē‘ē beach is hard-packed dirt on each side of the highway. Two ADA accessible spaces are paved, striped and signed.

ATA also noted the considerable amount of vehicles that were parked alongside the highway within the park leading to Kē‘ē, many illegally parked despite the posted “no parking” signs. Visitors who park along the roadway or park in the lot closer to the entrance were exposed to oncoming traffic due to a lack of pedestrian sidewalks.

#### *Potential Impacts and Mitigation Measures*

The Master Plan recommends closing the highway within the park to general through traffic which will effectively eliminate the illegal parking that currently occurs along the highway. Parking will be simplified and better organized by limiting it to two lots; the main one at the entrance and the special access parking lot at Kē‘ē. The turnaround at the entrance will also keep traffic moving rather than allowing drivers to idle or requiring a multi-point turn to turnaround should the parking area be full. This should ease congestion and backups along the highway approaching the park and reduce the potential for conflicts between vehicles and pedestrians.

The main parking area is proposed to be surfaced with pervious paving material or structured grass that is ADA accessible over the entire parking lot or at least half of the parking lot so it can be used for multiple purposes and can be striped to create an efficient parking layout. Beneficial impacts are expected to include more orderly and efficient use of the parking area, an improved driving surface, and a reduction in sediment runoff. Bioswales around the parking area are also proposed to capture and help filter runoff. Methods for stormwater systems will be integrated with the overall water/wastewater/drainage system designed for the park as well as investigation of whether the ‘auwai can be restored or not. The area between the parking lot and the highway should be designed to provide rockfall catchment as recommended in the Master Plan as well as drainage and ‘auwai restoration as appropriate. Therefore, the design of the main parking lot should be coordinated with the design of the entry facilities and based on sustainability, cost, and availability of materials/technology.

The parking lot as shown in the Master Plan is large enough to park roughly 100 vehicles. However, to encourage use of the shuttle or transit system being planned for the North Shore, the number of available stalls may be reduced and the grassed areas of the lot can be used for outdoor activities, staging areas, lo'i, or educational purposes. The area shaded in a darker green in the plans shows how the parking lot could be partitioned for the different uses park users, whether they are fee-paying visitors or non-fee paying visitors, and can be adjusted with movable bollards and cordons depending on the number of cars for each user group. The division between the two can be adaptively managed weekly, daily, or even hourly throughout the day depending on demand. This design gives State Parks the flexibility to provide enough parking until the shuttle/transit system is operational and to adjust as needed the number of parking stalls that are available for the different user groups while also encouraging multimodal access to the park. Overnight parking could also be reduced or restricted and parking lot time limits could be proposed as needed to encourage turnover of the stalls. If the transit system proves successful once implemented, the areas ~~may~~ no longer ~~be~~ needed for parking ~~and~~ could permanently be converted into an expanded shuttle stop area or other park uses such as additional educational gardens and picnic areas, event space with a grand entry lawn, or expanded staging areas.

The beneficial impacts of removing the illegal parking include fewer cars parked within rockfall hazard areas, elimination of vehicles from scenic views such as Wai a Kanaloa and Kē'ē Lagoon, the reduction of wear and erosion along the highway, and the reduction of car fluids seeping into the ground particularly near sensitive cultural and natural resources. The potential negative impacts of removing the illegal parking include an increased demand for legal parking spaces within the park, the potential displacement of parking to the highway or other areas and communities outside the park (also illegal), increased visitor use at Hā'ena Beach Park and other nearby coastal resources, and driver frustration at the park entry for those who do not plan ahead and check parking availability prior to driving to the park in the event parking is not available when they arrive. However, the reduction in the number of visitors ~~permitted~~ at the park on average during peak hours will serve to reduce the overall demand for parking and it is recommended that State Parks or the future management entity institute public information processes to inform visitors ahead of time whether parking is available or not. This can be done via social media, text messages and emails, the State Parks webpage, and daily information disseminated to the visitor industry and media outlets. The limited parking will also force visitors to plan their trips to Hā'ena ahead of time and may encourage visitors to use a shuttle, if available.

When visitors plan ahead, park managers will be better able to anticipate park operation needs and potential resource impacts. In addition, it could help reduce the number of drop-ins at the park and reduce general traffic along the highway through neighboring North Shore communities. Prior to instituting the proposed visitor limits, a public information campaign must be made far in advance so people are able to prepare for the changes proposed to the park.

## WELCOME HALE

### **2.5.1.3 Welcome Hale and Restrooms**

The Welcome Hale is envisioned as an open pavilion without walls where information about the park can be posted. The displays should include a park map and orientation information, park rules and cultural protocols. Daily weather, ocean and hazard conditions could also be posted at the Welcome Hale.

New public restrooms and bicycle parking are provided outside of the hale near the main parking lot. This second set of restrooms will help reduce the use of the Kē'ē comfort station, which is located near sensitive archaeological sites. Technological advances in individual wastewater treatment systems are providing higher-quality effluents and should be considered when designing the new restrooms. If possible, the effluent should be reused and the leach field for the new restrooms could be located beneath the parking lot. Dual waterlines and rainwater catchment systems can also be installed for the restrooms and the lo'i to minimize potable water use. Solar photovoltaic systems can also be installed to support electrical needs.

## PEDESTRIAN PATH

### **2.5.1.4 Pedestrian Path**

Due to the potential for rockfall hazards along the highway, a pedestrian path will be provided makai of the highway, connecting the Welcome Hale to Kēʻē Beach. It will traverse the loʻi along the first berm separating the first two rows of loʻi and then turn north to avoid the wetlands. It will cross an ʻauwai over a footbridge and connect to a path through the hau tunnel. This path will then connect to the trail behind the dunes and turn south, leading visitors past the comfort stations and lifeguard tower to Kēʻē. The path will remain low to the ground but just above the berm, with structural supports located to avoid any archaeological sites. Handrails or path edging will be provided for safety if needed. It should also be designed with lightweight, durable, and easy-to-maintain materials that are resistant to vandalism and weathering.

Interpretive displays and wayside exhibits will be installed along this path, including directional signage and educational information for the varied sights along this trail. From here, distant views of Wai a Kanaloa can be seen as well as spectacular views of Makana, the loʻi, loko and the wetlands.

## LIMITED ACCESS CORRIDOR

### ***2.5.1.8 Limited Access Corridor***

The highway between the turnaround and Kē‘ē will be closed to general vehicle traffic and used only for special vehicle access due to the potential rockfall hazard. The only vehicles that will be permitted beyond the gate will be special access vehicles such as the lifeguards and emergency and rescue teams, park staff, hula and other cultural practitioners, and ADA vehicles. Because this segment of the highway is currently owned by the State Department of Transportation, it will need to be transferred to State Parks or an agreement must be made between the two state agencies for State Parks to take over management of it. In emergency situations such as tsunami warnings, visitors will be able to evacuate along this corridor to escape to higher ground and out of the park if it is deemed safe.



## AGRICULTURAL COMPLEX

### 2.5.1.15 Agricultural Complex

In order to create a living cultural agricultural complex, it is recommended that community gardening practices continue the restoration of the lo'i as recommended in the restoration plans already in place. One request of the MPAC was to allow for other cultural crops to be planted in addition to kalo. Historically, the complex was known to be flexible; water was redirected to allow certain areas to be used for dryland cultivation. 'Uala, or sweet potatoes, were known to be grown in sandy areas and mai'a (bananas), kō (sugar cane), and 'awa (*Piper methysticum*) were grown in the valleys.

Restoration of the 'auwai is also recommended wherever feasible, particularly in actively cultivated areas of the lo'i. Special care, however, needs to be taken not to hydraulically connect the lo'i and 'auwai back to Limahuli Stream to prevent the spread of apple snails. Limahuli Stream is one of the few places in the state that does not have apple snails and the snails are currently in the park's lo'i.

The 2001 Draft Park Plan also included pedestrian and bicycle pathways throughout the lo'i, primarily along and sometimes through the 'auwai. This is no longer recommended since the goal is to reestablish the 'auwai as the primary means of irrigating the lo'i. The plan currently locates the main pedestrian path over the first berm within the lo'i and will provide visitors a close-up view of the lo'i on their way to Kē'ē. There may also be opportunities for interactive educational activities within the first row of lo'i for visitors, away from the Hui's restoration work, which will continue makai and east.

Access to and/or through certain areas of the lo'i is required for both people and equipment as a part of ongoing maintenance and harvesting. For safety reasons, access within the working lo'i should therefore be managed and primarily reserved for those restoring the lo'i as well as for educational and work groups tending to the lo'i.

# ADAPTIVE MANAGEMENT

## **2.5.4.1 Adaptive Management**

The HSPCAC recommended that adaptive management be the primary management concept adopted at the park given the diverse and passionate feedback received from the community. This will allow State Parks to make adjustments as they implement various management actions and learn what the impacts are. The U.S. Department of the Interior describes adaptive management as "an iterative learning process producing improved understanding and improved management over time. ...It is not a 'trial and error' process, ... but rather a means to more effective decisions and enhanced benefits. Its true measure is in how well it helps meet environmental, social and economic goals, increases scientific knowledge, and reduces tensions among stakeholders" (Williams et al, 2009).

Due to the complexity of the park environment, uncertainty of outcomes given potential changes in management strategies, and the active community, adaptive management provides a methodology State Parks can follow in order to improve resource management decisions while addressing community concerns. As noted in the technical guide,

Often the uncertainty about management impacts is expressed as disagreements among stakeholders who have differing views about the direction and magnitude of resource change in response to management. An adaptive approach explicitly articulates these viewpoints, incorporates them into the decision making process, and uses management itself to help identify the most appropriate view about resource dynamics. In this way, understanding of the resource can be enhanced over time, and management can improve. ... Management of problems like these increasingly involves a systems approach with explicit and agreed-upon objectives, management alternatives, and analytical approaches that can identify the most appropriate management strategies. (Williams et al, 2009)

The technical guide provides the following list of activities that can assist with adaptive management strategies if performed in a structured approach:

- Engaging the relevant stakeholders in the decision making process
- Identifying the problem to be addressed
- Specifying objectives and tradeoffs that capture the values of the stakeholders
- Identifying the range of decision alternatives from which actions are to be selected
- Specifying assumptions about resource structures and functions
- Projecting the consequences of alternative actions
- Identifying key uncertainties
- Measuring risk tolerance for potential consequences of decisions
- Accounting for future impacts of present decisions
- Accounting for legal guidelines and constraints

## CULTURAL AND COMMUNITY ADVISORY GROUP

### *2.5.4.2 Cultural and Community Advisory Group*

A Cultural Advisory Group (CAG) ~~should~~will be established to advise State Parks on ongoing improvements, educational and interpretive materials, and cultural matters regarding the park. State Parks may also consult the CAG as needed for proposed management actions and proposed construction projects as well as interpretive programs and ~~devices~~tools. The CAG may be composed of representatives from the original Hā'ena families, as well as those persons who specifically lived in, worked, or cared for the lands within the park boundaries, and those who have relatives buried within the park. It should also include cultural practitioners with knowledge specific to hula, Ke Ahu a Laka and Ka Ulu a Paoa, fishing, and other cultural practices specific to Hā'ena. Draft recommendations for the establishment and responsibilities of the CAG are contained in the Master Plan report. They ~~may~~should be viewed as a starting point for developing the CAG and are subject to change.

~~The MPAC also believes a broader community advisory group comprised of diverse community representatives such as the MPAC can provide ongoing support and consultation on general park issues as the Master Plan is implemented. This group could be created by combining the CAG with additional members from the community. The MPAC recommends the larger group meet regularly, at least once a year, with State Parks and any future park management entity if established. Organization and membership of such a group is yet to be determined. Should any current MPAC members be willing to continue assisting State Parks on an advisory basis, they would be welcomed.~~

Separate from the CAG, the broader community advisory group, the Hā'ena State Park Community Advisory Committee, or HSPCAC, has been established and will provide ongoing support and consultation on general park issues including the implementation of the master plan. The group has adopted a charter and plans to meet regularly, particularly when State Parks or the future management entity undertake any improvement projects or changes in park policy.

## VISITOR LIMITS

### 2.5.4.3 Visitor Limits

Visitor counts at the park have risen significantly over the past twenty years. Table 3 summarizes various visitor counts taken at the park since 1993. The most recent counts were taken in the summer months and show that there are roughly 2,000 people who enter the park on a daily basis.

**TABLE 1: SUMMARY TABLE OF DAILY VISITOR COUNTS**

| YEAR | MONTH/<br>SEASON | DAY OF<br>THE<br>WEEK | VISITORS<br>PER DAY | SOURCE                                  | NOTES                                                                                                       |
|------|------------------|-----------------------|---------------------|-----------------------------------------|-------------------------------------------------------------------------------------------------------------|
| 1993 | Off-peak         |                       | 50<br>(average)     | The Keith Companies<br>2001             |                                                                                                             |
| 1993 | August           |                       | 353<br>(average)    | The Keith Companies<br>2001             |                                                                                                             |
| 1998 | September        | Friday                | 1,501               | DLNR State Parks                        |                                                                                                             |
| 1999 |                  |                       | 1,700               | DLNR via Stepath 2006                   |                                                                                                             |
| 2008 | August           | Holiday<br>weekend    | 1,950 (est.)        | ATA 2011                                | Estimated based on 2.5<br>persons per vehicle                                                               |
| 2010 | February         | Wednesday             | 1,247 (est.)        | DLNR State Parks                        | Counts only conducted<br>from 9 a.m.-4 p.m.<br>Estimated based on 2.5<br>persons per vehicle                |
| 2011 | July             | Monday                | 2,028<br>(761 cars) | UH Hawaiian Studies<br>(informal count) | Measured from 6:00 a.m.<br>to 6:30 p.m. Includes 8 on<br>bicycles, 14 hikers, 5<br>joggers, 20 pedestrians. |

Currently, there are no visitor limits at the park. Many on the MPAC and in the community felt the current number of visitors is far too many and a limit should be set on the number of visitors to reduce impacts to the natural, cultural and scenic resources and to improve the overall visitor experience.

~~In response, State Parks plans to institute a daily visitor limit as part of the preferred plan. Initially, the number of people in the park would be limited to 900 people per day, which is less than half the number of daily visitors that typically enter the park during the summer months. State Parks may adjust the number over time depending on future improvements, improved/increased maintenance, and/or other studies such as impact studies, particularly if harmful impacts to the natural, cultural and archaeological resources occur.~~

~~The daily visitor limit does not include cultural practitioners, special user groups such as hālau, lo‘i workgroups, cemetery caretakers, or school groups. It also does not include the 60 hikers who obtain valid camping permits for the Kalalau Trail or the 30 hunters who obtain valid hunting permits for the Nāpali Coast State Wilderness Park Hunting Unit G.~~

In addition to these recommendations, because of the extensive archaeological, natural and cultural resources at the park, State Parks is proposing to limit the number of people in the park to 900 people per day on average during the peak hours of park use. The initial hours over which this limit would be applied are 7:30 AM to 5:30 PM, but are subject to change. This number is an initial visitor limit which State Parks may adjust over time depending on future improvements, improved/increased maintenance, and/or other studies such as impact studies, particularly if harmful impacts to the natural, cultural, and archaeological resources arise. The daily visitor counts will be averaged over the course of a month so adjustments can be made for park closure days and is therefore a soft limit that can be adjusted as needed on a daily basis.

This initial visitor limit is higher than what was recommended by the MPAC because it includes day hikers on the Kalalau Trail who numbered well over 500 in 2009. Because the trailhead is located within the park, visitors venturing on the trail are anticipated to use the park's restroom facilities, often go swimming, and use the showers when they return from hiking on the trail. However, they are not impacting the park while on the trail. The visitor limit also does not include the hikers with valid camping permits or the hunters with valid hunting permits for the Nāpali Coast State Wilderness Park Hunting Unit G since they are not expected to be in the park using the facilities for very long and additional facilities are available at Hanakoa and Kalalau. The daily visitor limit also would not include cultural practitioners, or special user groups such as hālau, lo'i workgroups, cemetery caretakers, or school groups.

By instituting a daily visitor limit, this will encourage visitors to plan ahead and an informational system via the internet, text messages, and email could be developed to distribute real-time information on park access, entry ticket availability during managed visitor hours, special events, and weather, ocean and any hazardous conditions at the park. Park managers will also be able to better manage park operation and resource impacts. In addition, they are able to anticipate how busy the park will be on any given day and post notices online or distribute updates to the visitor industry early in the day whether entry tickets will be available during the managed visitor hours. This could also help reduce casual drop-ins and general traffic along the highway through neighboring North Shore communities. Prior to instituting the proposed visitor limits, a public information campaign must be made far in advance so people are able to plan their visit to the park. State Parks acknowledges that park access will be an ever-evolving operational issue and will likely change over time as new policies are implemented. However, the goal is to study the impacts of these proposed policies and to adjust them as appropriate to improve the long-term management of the park and visitor satisfaction.



## VISITOR ORIENTATION

### ***2.5.4.5 Required Visitor Orientation Prior to Park Entry***

~~It is also proposed that all visitors attend an educational session upon entering the park similar to the Hanauma Bay Nature Preserve on O'ahu. The sessions would be held at the Welcome Pavilion in the near term and at the ECC once built. All visitors will be provided with park rules and information prior to entering the park. The visitor orientation could be made available on the State Parks website, sent via text or email, and tied to ticket distribution, particularly if advanced reservations become a requirement in the future. The orientation session could be a short online video that would educate visitors on appropriate recreational activities and behavior, safety precautions as well as sensitivity to natural and cultural resources and to cultural activities that may be occurring in the park. It should also include~~ In addition, texts or emails could be sent to park visitors prior to entry to inform them of safety precautions and updates on any special events or weather conditions. Similar orientation information should be posted at the Welcome Hale. The CAG should be consulted on appropriate cultural information to be included in the orientation session.

~~Once visitors complete the orientation session, they would not need to attend on subsequent visits to the park for a full calendar year as long as they register upon entry. Registration and orientation attendance could also be tracked and tied to annual passes, if administered. These orientation sessions could be held at the proposed Welcome Pavilion/Education and Cultural Center or even a temporary facility at the park entry.~~

# ROCKFALL HAZARD

## 3.10.5 ROCKFALL HAZARD

A Rockfall Hazard Assessment was performed by AECOM during the months of August and September, 2008 and updated in 2013 with a supplemental rockfall analysis and computer simulation in the area between the main parking lot and Wai a Kanaloa. The assessment, attached in its entirety as Appendix B, included a geological survey of the site and rockfall hazard identification which included a visual assessment and preparation of a geological report, locating rock outcroppings with GPS readings, and color photography. The Assessment also included an engineering planning study of the rockfall condition, development of preliminary rockfall protection design options, and cost estimates. A summary of their findings is presented graphically in Figure 22.

To evaluate rockfall risk, AECOM utilized the U.S. DOT Federal Highway Administration Rockfall Hazard Rating System methods and guidelines. This rating system evaluates a number of criteria including: slope height, ditch effectiveness, structural conditions, rock friction, erosion rates, volume of rockfall events, climate and presence of water on slope, rockfall history and slope topography. It uses a three-class rating system for hazardous conditions based on its potential to impact adjacent properties.

- **Class A** – high estimated potential for rockfall on adjacent properties with high historical rockfall activity. Chances for rockfall is moderate to high and when rockfalls occur, they will more than likely reach adjacent properties.
- **Class B** – moderate estimated potential for a rock to fall on adjacent properties with moderate historical rockfall activity. Class B rating indicates that although a rockfall is probable, the chances of it reaching adjacent properties are low to moderate. This could involve scenarios where risk is mitigated by the presence of catchment ditches or large flat areas that can contain rockfalls.
- **Class C** – low to no estimated potential for rockfall on adjacent properties with low historical rockfall activity.

AECOM also analyzed the chance of rockfall. This is primarily based on the stability of the rock face and condition of the supporting materials. There are four categories:

- **Category 1** – imminent potential for rockfall (could happen anytime)
- **Category 2** – short term potential for rockfall (within several to a dozen years)
- **Category 3** – medium term potential for rockfall (within dozens of years)
- **Category 4** – long term potential for rockfall (up to or more than a hundred years)

Please note that the time scale references are used symbolically and are not meant to represent an actual timeframe within which the rockfall events may occur.

AECOM used computer simulation to model rockfall events along five transects within the park. They determined that the rockfall hazard conditions at Hā'ena State Park consists of both Class A and Class B rockfall ratings based on the potential for rockfalls to reach the highway

at various positions as well as at Kēʻē Beach and the Kalalau Trailhead. See Figure 22. The area around Wai a Kanaloa is the most hazardous rockfall area (Class A) because: 1) many rockfall features exist here; 2) the very high probability for rockfalls to reach the highway and Wai a Kanaloa; and 3) the almost constant presence of visitors. Rockfalls are less likely to reach the highway or beach at the other areas (Class B). AECOM also analyzed the chance of rockfall at specific locations within the park which are also shown on Figure 22. They range from Category 1 through 3. AECOM performed supplemental analysis in the area between the main parking lot and Wai a Kanaloa to help guide the design of the proposed park Master Plan. Using computer modeling, they provided a baseline estimate of how far simulated rockfalls would reach. The 0% and 5% chance of simulated rockfall lines were determined based on computer modeling and then used to help locate all major facilities outside of the rockfall zones. The approximate location of these lines are also shown on Figure 22 in green and red, respectively.

### ***Potential Impacts and Mitigation Measures***

The health and safety impacts of rockfalls are proposed to be mitigated by siting all of the major visitor facilities and paths, including the Interpretive Pedestrian Path to Kēʻē, Welcome Hale, and main parking lot outside of the 0% chance of modeled rockfalls as mapped by AECOM in their Rockfall Hazard Assessment report (Appendix B). Specifically, these improvements along with the Welcome Pavilion/ECC, Interpretive Path, proposed highway closure to through traffic and installation of warning with signage and gates, and the main parking lot/shuttle improvements should be considered elements of rockfall mitigation and therefore prioritized in capital improvement project funding as they will shift the park's major visitor traffic away from the area of potential rockfall hazard. In addition, warning signs should be installed at appropriate locations at both ends of the highway and between the turnaround and Kēʻē. Safety warnings information should also be given ~~during the visitor orientation session as part of the visitor orientation materials~~ prior to park entry. The only vehicles that will be permitted on the highway to Kēʻē beyond the gate will be special access vehicles such as the lifeguards, hula practitioners, lawaiʻa and hunters, family caretakers of the cemeteries, and vehicles with the appropriate ADA placard to minimize the public's exposure to rockfall hazards. A dense native tree screen is also recommended along Kūhiō Highway, especially near the main parking lot, as trees may serve to catch or slow smaller rockfall events. Thus, general tree removal north of the highway is also not proposed unless the tree itself poses a hazard. The Master Plan elements also include features to restrict the public from standing immediately in front of the wet cave, Wai a Kanaloa, where the cliffs above are identified as Class A hazards should they choose to traverse the highway despite the rockfall warnings. Native and Polynesian-introduced landscaping are recommended as aesthetic and culturally appropriate screens for the safety devices or barriers.

## ROADWAYS AND TRAFFIC

### 4.3.1 ROADWAYS AND TRAFFIC

#### *Existing Roadway Conditions*

Public vehicular access to Hā'ena State Park is limited to Kūhiō Highway (State Highway 560), which runs the length of the park and terminates at Kē'ē Beach. The highway is owned and managed by the State DOT and consists of two paved twelve-foot lanes. Approaching Hā'ena State Park, the highway has gravel and asphalt concrete pavement shoulders. The highway enters into the park over Limahuli stream by a single lane, 10-foot wide by 12-foot long concrete bridge. Within the park, the highway becomes two lanes again and measures approximately 24 feet in width. The pavement structure is unknown.

The North Shore section of the highway is listed on the National Register of Historic Places, including the segment that leads up to and enters the park. It is the only remnant of the Belt Highway system on Kaua'i to retain a high degree of integrity (Duensing 2003). However, paved shoulder lanes were installed along the highway within the park in 1985 and in 2002 guardrails were added (Kennedy/Jenks 2011). The shoulders are often used for illegal parking, particularly in areas around Wai a Kanaloa and closer to Kē'ē.

The narrow lanes and one-lane stream crossings give the highway its unique and scenic character. The narrowness and weight limits of these bridges also eliminates the passage of large tour buses and trucks through this portion of the North Shore. Passenger vehicles are limited to a 15-20-person maximum and the vehicle weight limits for the bridges range between 16,000 and 50,000 pounds (gross vehicular weight) according to the State DOT (DOT personal communication 2011). However, these are not the tested strengths of these historic bridges and it could be far less in reality. A typical 15-passenger van has a gross weight limit (includes passengers and load) of 10,000 pounds (Austin Tsutsumi and Associates 2011).

The highway within the park has no pedestrian or bicycle amenities. Narrow shoulders on both sides of the highway often require pedestrians and bicyclists to traverse the vehicle travel lanes, creating potential conflict points. Pervasive illegal parking occurs along both sides of Kūhiō Highway within the park, despite the posted "no parking" signs. Cars park on the narrow shoulders, further blocking passage of pedestrians and bicyclists as well as narrowing the travel lanes for vehicles.

Unpaved access roads exist within the park, including the coastal beach road which runs behind the sand dunes and is gated at Kē'ē. There are also unpaved access roads to the Montgomery House, to the cleared lo'i (Phase I), and the driveway/access road to the former Allerton property. All of these roads are gated or chained along the highway.

#### *Existing Traffic Conditions*

Access to Hā'ena State Park is dominated by the personal vehicle, whether rented or privately owned. According to a 2007 OmniTrak survey of 283 park users performed for the Hawai'i Tourism Authority (HTA), 69 percent of visitors from Hawai'i and 42 percent of non-Hawai'i

visitors arrived by private vehicle and another 19 percent of visitors from Hawai‘i and 55 percent of non-Hawai‘i visitors arrived by rental cars.

Austin, Tsutsumi and Associates, Inc. (ATA) prepared a Traffic Impact Analysis Report (TIAR) for the Master Plan, which is attached as Appendix F. According to historic data, Kē‘ē experiences its highest attendance during the summer months. Recent traffic data was collected via pneumatic tubes placed at the Hā‘ena State Park entrance between August 14, 2008 and August 18, 2008. During this analysis period, the three-day Admission’s Day weekend was included in the counts. This was also prior to the recession and downturn in Hawai‘i visitor counts.

Weekend peak hour traffic occurred between 12:00 p.m. and 1:00 p.m. However, a large influx and efflux of traffic generally occurred between 10:45 a.m. and 3:45 p.m. Regional weekday morning and afternoon commuter traffic was assumed to occur between 8:00 a.m. and 9:00 a.m. and between 3:00 p.m. and 4:00 p.m. respectively.

A total of 1,550 vehicles per day were counted entering and exiting Hā‘ena State Park. On the average over the study period, there are 781 vehicles entering the park and 767 vehicles leaving the park. Peak traffic was observed on Sunday, August 17<sup>th</sup> between 12:00 p.m. and 1:00 p.m. where a total of 107 vehicles entered and 85 exited the park. ATA concluded that observed traffic was well below the potential capacity of a two-lane highway; two-lane highways have the potential capacity of 1,700 passenger vehicles per hour per direction of travel. However, congestion within the park occurred due to the slow speeds resulting from pedestrians on the roadways and cars waiting for parking stalls. Some waited as long as five minutes for a stall.

Although no standards exist for determining the capacity of the one-lane bridges along the highway leading up to the park, ATA used Simtraffic Analysis software to estimate a baseline for the existing traffic. The Waipā Bridge was used for the analysis since it has the longest one-lane span and is located near the State DOT’s count location. With 487 vehicles crossing the bridge in both directions per hour and an estimated bridge capacity of 1,250 vehicles per hour, the existing volume-to-capacity (VTC) ratio for the bridge is about 39 percent. This number was used to compare different scenarios for the master plan.

The most recent biennial DOT traffic counts in June 2013 registered 6,700 vehicles per day on the stretch of highway just before the County’s Hā‘ena Beach Park. This includes vehicles traveling in both directions with the counts split almost exactly in half for each direction, or roughly 3,350 traveling in each direction (DOT Kaua‘i District 2015). This is a roughly 55 percent increase since the 2003 biennial counts, which recorded over 2,100 vehicles per day in each direction in August (DOT Kaua‘i District 2007).

The overwhelming sentiment from the public and project team is that the traffic congestion is a significant problem that needs to be addressed as it continues to worsen. It causes safety concerns for pedestrians and bicyclists, backs up traffic into the neighboring areas, discourages local residents from going to the park, and negatively impacts the overall experience at the park. Community members also voiced the desire to continue to allow early morning and late



afternoon access to the park and Kēʻē Beach for recreational jogging, walking, and biking and to institute a shuttle from Princeville as the main means of bringing visitors to the park.

### ***Potential Traffic Impacts and Mitigation Measures***

Because of the unique nature of the traffic congestion and circulation issues at the park, ATA took an innovative approach to the TIAR. ATA provided analyses of engineering considerations and potential traffic impacts as well as five example shuttle service scenarios to help inform the direction and design of the preferred Master Plan. They also considered varying amounts of parking spaces at the park and estimated the potential costs and break even requirements for the shuttle.

Scenario 1 describes baseline projection of traffic with the 900-daily visitor limit but without a shuttle. Traffic is reduced and remains well below the estimated roadway capacities for two-lane highways and the one-lane bridge. However, ATA noted that there may be backups at the parking lot unless parking passes or some other parking management system is instituted.

Scenarios 2 and 3 are the shuttle scenarios, comparing the proposed 900 daily visitor limit with a smaller 50-stall parking lot and with no parking lot. The reduced parking lots were requested by members of the MPAC since it was discussed that the demand for a shuttle may not be high enough if there is ample parking at the park. For comparison's sake, ATA also studied what the shuttle requirements would be if there were no visitor limit with both a 50-stall parking lot and no parking lot in Scenarios 4 and 5.

In Scenarios 2 and 3, ATA estimated that six or seven 15-person capacity vans making nine trips per day would be needed to serve the 50-stall parking lot and no parking lot scenarios, respectively. They estimated it would cost \$10.28 and \$10.18, respectively, per person for the system to be self-sustaining. It also included a 30% contingency for low or sporadic ridership.

Scenarios 4 and 5 estimated the requirements of the current unconstrained situation with 2,000 visitors per day and found that 15 vans operating constantly from a remote parking lot would be needed to shuttle all visitors to the park or 14 vans with a 50-stall parking lot. Roundtrip shuttle tickets would need to be about \$10.80 to break even with a 50% contingency for low or sporadic ridership.

In a previous analysis, ATA provided a reverse calculation and estimated that it would take 245 riders per day at \$10 per roundtrip ticket to make a two van (15-passenger capacity) system sustainable. This is comparable to what the owners of the Experience Kauaʻi shuttle service shared with the County of Kauaʻi's North Shore Shuttle Committee in March 2014. In all the shuttle scenarios, there was not much difference in estimated costs per rider or difference in traffic impacts based on the Waipā Bridge's volume-to-capacity (VTC) ratio. The VTC ranged from 27% to 31%, compared with the existing traffic's 39%, a difference of about 55 cars per hour. The reduction in daily visitors alone is estimated to reduce the hourly flow by 100 vehicles per hour, which is less than two cars every minute.

During the meetings with the MPAC and community, various suggestions were made to encourage or even require that visitors arrive at the park by different modes of transportation

to help reduce traffic. Three concepts were explored with the MPAC: (a) Princeville-based park entry, (b) Combination on-site parking and Princeville entry facility, and (c) On-site parking only. ~~The preferred scenario, which best mitigates the potential traffic and parking impacts of the Master Plan, is described as follows.~~

The MPAC's originally preferred scenario is to implement the shuttle from the Princeville facility at the start of Phase I, minimizing the need for visitor parking in the parking lot in the park. However, the remote Princeville entry was rejected by the community due to the inconvenience of this and the fact that it might actually increase traffic for those who live closer to the park since they would have to find their way to Princeville and then double back to the park. Therefore, the Master Plan includes space to accommodate a parking lot for up to 100 vehicles ~~if needed~~. The design and materials of the parking lot would allow its size to be adjusted as the Master Plan is implemented. It could be reduced to accommodate as few as zero vehicles if the shuttle service is fully implemented and meets all needs, or expanded to accommodate up to 100 vehicles to address the possibility that the shuttle service might not be implemented on schedule or to accommodate special needs that could only be met by additional on-site parking (for example, the need for after-hours on-site parking, or additional parking for cultural practitioners, kūpuna, subsistence fishermen or ~~handicapped~~ visitors requiring ADA accessibility). This scenario should significantly reduce traffic in the park and surrounding neighborhoods. By providing visitors an alternative means to get to the park at the outset of the improvements, this will also reduce the potential for “spillover” parking issues in the surrounding neighborhoods that could happen if parking is limited without providing an alternative for visitors to access the park.

### ***Potential Roadway Impacts and Mitigation Measures***

The Master Plan includes a combination of physical improvements and programmatic options that when applied in combination will have a positive impact on the existing roadway conditions.

Vehicle access beyond the main parking area to Kē‘ē beach is proposed to be reduced from the currently unrestricted conditions to special access only (ADA, lifeguards, and cultural practitioners). Restricting general vehicular access from the main parking area to Kē‘ē Beach will effectively eliminate illegal parking along the highway’s shoulder, reduce the wear on the historic roadway’s macadam surface, and reduce the number of visitors traveling in a potential rockfall hazard area. It will also reduce the potential conflicts between vehicles and pedestrians and bicyclists as the ~~Interpretive Pedestrian~~ Path becomes the main visitor path to Kē‘ē and the highway is limited to special access vehicles, and it will reduce roadway maintenance costs for the State. Reducing the number of vehicles turning around and/or idling while waiting for parking at Kē‘ē is expected to be a beneficial impact by reducing vehicle/pedestrian conflicts; reducing dust, noise and exhaust fumes; and reducing the amount of pollutants running off vehicles and washing into the lagoon and surrounding park areas.

# SHUTTLE SERVICE

## 4.3.3 PUBLIC TRANSIT AND SHUTTLE SERVICE

### *Existing Conditions*

The County of Kauaʻi Transportation Agency provides public transit service between Hanalei and Kekaha via the Kauaʻi Bus. Service between Līhuʻe and Hanalei is provided ~~six~~seven days a week, ~~Monday through Saturday~~, between ~~6:20-5:25~~ a.m. and ~~8:00-10:40~~ p.m. Route ~~400/450~~ runs from the Hanalei Courthouse to Kauaʻi Community College and Route 500 runs in the opposite direction. Fares are \$2.00 per trip for adults, \$1.00 per trip for seniors (60+ years) and youth (7–18 years). The County also offers monthly passes for ~~\$35.00~~\$40.00 and annual passes for \$400.00. All buses are wheelchair accessible. Folding baby strollers, musical instruments, and body boards are permitted onboard. However, surfboards, large backpacks and other bulky items that block the aisle or seat are not permitted onboard. Currently, there is no public transportation service to Hāʻena. Private shuttles and taxis can be arranged for a fee.

In 2014, the County provided a \$75,000 grant to a private shuttle operator, Experience Kauaʻi, to supplement the County’s transit service between Princeville and Kēʻē in an experiment to see what the ridership potential would be and to reduce traffic along this stretch of the highway. In its first month of operation in November 2014, they had over 1,000 passengers. In January 2015, ridership peaked with nearly 1,900 riders and average monthly ridership was over 1,500. The shuttle used two 15-passenger vehicles and charged introductory fares of \$2 each way for visitors and \$1 each way for residents during its first two weeks. After that, the fares increased to \$4 and \$2, respectively. Between 41 and 50 percent of riders were residents.

The shuttle service runs-ran from 6:00 AM until 7:00 PM originating at the Westin Princeville, stopping at major resorts, the Princeville Center, Hanalei Town, the Wainiha Store, Hanalei Colony Resort, and Hāʻena Beach Park before heading to Kēʻē. The shuttle then ~~reverses~~reversed its route back to Hanalei Town. At 9:00 AM, the second shuttle ~~starts-began~~ running between Princeville and Hanalei, while the earlier shuttle ~~loops-looped~~ between Hanalei and Kēʻē to increase frequency of service. Funding to support the shuttle, however, was not provided in the 2015-2016 County budget approved by the County Council in June 2015.

### *Potential Impacts and Mitigation Measures*

The preferred scenario described in the Master Plan proposes a combination of shuttle service to the park with ~~reduced~~ parking on-site as part of Phase I of implementation. While State Parks is unlikely to initiate its own shuttle service, several options for a shuttle system are identified in the Master Plan including extending the County public transit service to Kēʻē, contracting with a third-party operator to provide the service, or allowing independent private shuttles to stop at the park, or a combination of the above. The Master Plan identifies a shuttle stop in the proposed Master Plan with sheltered seating areas along the turnaround at the entry to the park. The turnaround should be designed to allow other vehicles to pass while shuttles are stopped at the shuttle stop in order to reduce backups and congestion along the highway. In order to encourage ridership, the shuttle service should be initiated in Phase I and the parking lot should be sized appropriately. Various management strategies including parking and entry

fees, point of entry tickets sales are also discussed in the Master Plan report to provide a range of options to support the shuttle.

If the shuttle service is implemented, it has the potential benefit of serving multiple populations including residents and not just park visitors depending on the stop locations, frequency, cost, and quality of the service. Recent record rainfall events, mudslides, and highway closures have brought a new focus and opportunity to change how transportation operates on the North Shore as a whole. State Parks is actively working with the County and the community to discuss potential solutions to these issues. If shuttle service to the park is not implemented, the larger parking lot will need to be constructed to serve the park and a grass surface is not recommended since grass would require that the parking lot be uncovered for at least three days out of the week to receive adequate sun. If the parking spaces turn over two to three times during the peak hours, the 100 stalls are estimated to be sufficient if visitors are carpooling and arriving with an average of three people per vehicle. Green vehicles such as electric vehicles that can be charged with renewable energy sources such as solar PV or vehicles that use alternative fuels and have low or no emissions are recommended to reduce the impact to air quality and consumption of fossil fuels.

# WASTEWATER

## 4.7.2 WASTEWATER

### *Existing Conditions*

Hā'ena State Park's first comfort station was built in 1979 at Kē'ē Beach by DLNR and wastewater previously emptied into a six by eight-foot diameter cesspool. In 2001, a 2,500-gallon individual wastewater system including a 2,500 gallon septic tank and 2,700 s.f. leach field was built for the comfort station to comply with EPA's large capacity cesspool closures.

In 2008, the original comfort station was demolished and replaced by a new one built in the same location. It maintains the same number of fixtures as the original – three water closets, one urinal, and two lavatories (sinks). These fixtures are estimated to generate 2,016 gpd (Kennedy/Jenks 2011). According to DOH standards for picnic parks, this equates to approximately 403 visitors per day based on an average 5 gpd per person (toilet wastes only). An outdoor shower with multiple shower heads and spigots is located to the south of the comfort station and runoff water is allowed to drain and infiltrate into the surrounding soils.

In the years 2007-2010, DLNR and members of the Hā'ena community collaborated on the design of an alternate individual wastewater system to mitigate impacts to cultural and archaeological resources beneath the existing leach field. The preferred design of a more natural system, or constructed wetland, was installed in 2011. The constructed wetland is a subsurface flow-based wastewater treatment system, or one where the constructed wetland is contained within a liner, but the wastewater flows beneath the surface of a gravel medium within the liner so there is no exposed water under normal operating conditions. Native plants such as makaloa (*Cyperus laevigatus*) and ahu'awa (*Cyperus javanicus*), two perennial sedges, are native species that were planted within the constructed wetland. Wastewater is first treated within a primary treatment tank. Then, the effluent flows to the constructed wetland where it is further treated by having the plants take up nitrogen and more importantly, create an environment where organisms that thrive in the root systems can feed on bacteria in the wastewater, further improving water quality before discharging it into the leaching chambers. The new infiltration field is located to the east of the archaeological site but west of the delineated natural wetlands of the two loko. The new comfort station and treatment facilities are sized to manage the same amount of wastewater, 2,016 gpd, or roughly 403 visitors per day, based on DOH standards (Kennedy/Jenks 2011). The existing septic tank and leach field will continue to serve as an emergency backup system in the event the constructed wetlands system is not operational.

Greywater from the outdoor shower at Kē'ē is allowed to infiltrate into the surrounding ground.

In addition to the existing comfort station wastewater system, an abandoned cesspool was found at the Montgomery House. The existing Allerton House and Caretaker's Cottage also likely have abandoned cesspools.



### ***Potential Impacts and Mitigation Measures***

Due to the remoteness of the park, Kennedy/Jenks does not propose connection to any public sanitary sewer systems and recommends that all wastewater be treated with an aerobic system with aeration to a minimum of R-2 water quality and disposed of on-site. As noted by the DOH, the project is located in a critical wastewater disposal area as determined by the Kauaʻi County Wastewater Advisory Committee and no new cesspools are permitted. All individual wastewater systems proposed for the park will be set back as required from State surface waters such as wetlands. All wastewater plans must conform to applicable provisions of the DOH Administrative Rules Chapter 11-62, “Wastewater Systems” and the DOH reserves the right to review the detailed wastewater plans for conformance to applicable rules.

The addition of the ~~Welcome Pavilion/ECC, Caretaker’s Cottage, and Hale at the Cultural Gathering Place~~ new restrooms near the Welcome Hale as well as the restoration of the Allerton Caretaker’s Cottage and Montgomery House will include additional restroom facilities. However, as noted, the actual number of people using the facilities will decrease with the recommended reduction in daily visitor counts. In addition, toilets and water fixtures are becoming more efficient, which will also contribute to the reduction of projected water use per person. Therefore the overall volume of projected wastewater generated at the park will be less than current conditions.

The availability of new restroom facilities ~~at~~ near the Welcome ~~Hale Pavilion/ECC~~ is anticipated to help reduce the use of the Kēʻē comfort stations and therefore lessen the impact to nearby cultural and archaeological sites. Due to the remoteness of the Allerton Caretaker’s Cottage and Montgomery House, they will require individual wastewater systems, which should also consider using natural systems to treat and improve water quality to minimize potential impacts and allow the effluent to be reused.

Based on strong community preference, the Master Plan proposes that any new wastewater systems include an aerobic wastewater treatment system that brings wastewater to an R-2 water quality level at a minimum and to reuse the effluent as much as possible to minimize impacts to the sensitive natural and cultural resources at the park. The following details the suite of mitigation measures under consideration to offset any impacts that could be caused by wastewater treatment and disposal:

- Treatment for wastewater should be with aerobic systems to a minimum R-2 water quality, with aeration and non-chlorine treatment such as UV disinfection to improve effluent quality. Consider using renewable energy sources to provide power.
- To minimize the footprint of wastewater facilities on ecological, cultural and archaeological resources, locate effluent absorption beds under parking lots and driveways if permitted. DOH requires the use of aerobic treatment units certified by NSF/ANSI 245 for systems that discharge directly into the groundwater.
- Add aeration to the existing constructed wetlands primary treatment tanks, powered by a PV system and replace the plants at the constructed wetlands to high-nutrient removing plants to improve water quality.
- For remote, low-use facilities, such as the Cultural Gathering Place, Montgomery House, and the Hula Complex, utilize composting toilets or ~~temporary/portable facilities as needed~~ innovative wastewater technologies.

- Use non-chemical disinfectants and cleaning products for maintenance, particularly in composting toilets, to minimize impacts to wastewater treatment processes and effluent quality. Use environmentally-safe soaps that contain plant nutrients and biocompatible cleaners.
- ~~Since the proposed wastewater facilities are currently not standard according to the DOH,~~ Include maintenance manuals and provide instruction to ensure proper upkeep of all wastewater systems at the park.
- Reuse effluent for irrigation, dust control, or toilet flushing rather than disposal.
- As an alternative, vault systems, which are fully contained and can be pumped and treated at an off-site facility are also being considered should effluent reuse not be possible onsite.

Kennedy/Jenks also provides a matrix of design alternatives in their Wastewater Preliminary Engineering Report (Appendix H), which will assist State Parks in selecting the appropriate wastewater treatment system at the time of building design. Beyond recommending that secondary treatment be provided at a minimum, the Master Plan does not prescribe the specific type of systems to be employed, allowing maximum flexibility for building designers to take advantage of emerging technologies in wastewater management. If defunct cesspools are located during the construction process, they will be abandoned in accordance with current regulations.

#### ***2.5.3.1 Integrated Water/Wastewater/Drainage System***

The proposed Master Plan recommends installing an integrated water/wastewater/drainage system to maximize the efficiency and use of on-site water resources. It includes collecting rainwater and using treated wastewater for nonpotable water uses to minimize demand for potable water, as well as restoring the ‘auwai wherever possible and improving the drainage of surface runoff to irrigate surrounding garden areas or the lo‘i if it can be appropriately filtered.

Specific design considerations for the integrated water/wastewater/drainage systems include:

- Using treated wastewater effluent and collected rainwater for irrigating the landscaping around the facilities such as the ~~ECC, picnic area, Caretaker’s Cottage and baseyard~~ Montgomery House, Allerton Caretaker’s Cottage, Welcome Hale, parking lot, and new restrooms. There are three levels of treated wastewater recognized by the State Department of Health (DOH) as recycled water. R-1 has the highest level of treatment and R-3 the lowest (Kennedy/Jenks 2010). The Master Plan recommends aerobic wastewater treatment to at least R-2. If the treated water quality is R-2, irrigation systems must be subsurface with no over-ground sprays. If the effluent is treated to R-1, over-ground spray and drip systems can be installed.
- Using recycled water and collected rainwater for toilet flushing at the ~~ECC, Caretaker’s Cottage~~ new restrooms, Allerton Caretaker’s Cottage, and Montgomery House to conserve potable water.
- Reducing the need for stream diversions by restoring the ‘auwai and collecting, storing and using rainwater.
- Using non-potable water for fire protection. Collected rainwater or even ocean water can be used for fire protection in emergencies.

- Directing rainwater runoff from the main parking to landscaped areas and rain gardens. Where possible, collecting and storing rainwater for reuse such as irrigation and possibly toilet flushing.
- Redesigning Kūhiō Highway culverts so that rainwater that passes beneath it flows more naturally and can be filtered and used in the ‘auwai system.

Control measures to prevent the spread of apple snails from the park’s lo‘i to Limahuli Stream should be included in any design or implementation of the ‘auwai and irrigation systems for the Agricultural Complex. Some suggestions include but are not limited to:

- Elevating and extending the outfall pipes from the Limahuli Stream diversions above the receiving ‘auwai so that the snails cannot crawl directly into the stream. The snails are known to dislike cold, fast-moving water, which is what flows from Limahuli Stream, and so the risk is minimized.
- Grading the ‘auwai to flow makai and away from Limahuli Stream.

For items specific to wastewater treatment:

- Treatment for wastewater should be with aerobic systems to a minimum R-2 water quality, with aeration and non-chlorine treatment such as ultraviolet (UV) disinfection to improve effluent quality. Consider using renewable energy sources to provide power.
- Locate effluent absorption beds under parking lots and driveways if permitted. DOH requires the use of aerobic treatment units certified by NSF/ANSI 245 for systems that discharge directly into the groundwater.
- Provide aeration to the existing constructed wetlands primary treatment tanks, powered by a PV system and replace the plants at the constructed wetlands to high-nutrient removing plants to improve water quality.
- For remote, low use facilities, consider composting toilets or ~~temporary/portable facilities as needed~~ innovative wastewater technologies.
- Use non-chemical disinfectants and cleaning products for maintenance, particularly in composting toilets, to minimize impacts to wastewater treatment processes and effluent quality. Use environmentally-safe soaps that contain plant nutrients and biocompatible cleaners.
- Since the proposed wastewater facilities are currently not standard according to the State Department of Health (DOH), include maintenance manuals and provide instruction to ensure proper upkeep of all wastewater systems at the park.
- As an alternative, vault systems, which are fully contained and can be pumped and treated at an off-site facility are also being considered should effluent reuse not be possible onsite.

## SOLID WASTE

### 4.7.5 SOLID WASTE DISPOSAL

#### *Existing Conditions*

Trash receptacles and recycle bins are stationed throughout the Kēʻē Beach area. State Parks staff provides trash removal on a daily basis.

#### *Potential Impacts and Mitigation Measures*

Although fewer users to the park will likely result in less trash generated at the park, State Parks will also recommend that all visitors carry in what they carry out. In addition, new trash receptacles will be provided at the Welcome Pavilion/ECC-Hale, picnic areas, ~~Caretaker's Cottage~~, Montgomery House, and Allerton Caretaker's Cottage so that waste disposal is convenient to park users. Recycle bins are recommended to be installed along with trash receptacles and all receptacles are proposed to have animal-proof lids to minimize foraging by feral cats, dogs, rats and chickens and reduce the potential for windblown debris. Daily maintenance and removal of trash and recyclables is recommended to be continued at the park to minimize the amount of solid waste at the park that may be windblown or washed into the ocean, stream, and other sensitive natural and cultural environments. There may be hazardous substances, pollutants, or contaminants to be present in the soils in the areas where there were abandoned vehicles. However, no work is anticipated in these areas at this time. State Parks will work with the State HEER Office to determine the appropriate actions to comply with the relevant environmental laws if applicable should any work occur in those areas.

# ENDANGERED SPECIES ACT

## 5.1.2 ENDANGERED SPECIES ACT

The Endangered Species Act of 1973 provides a program for the conservation of threatened and endangered plants and animals and their habitats. The lead federal agencies for implementing the Act are the USFWS and the NOAA Fisheries Service.

**Discussion:** Hā'ena's biological resources, along with mitigation measures are discussed in greater detail later in this report, in Sections 3.5-3.9. The USFWS provided a Technical Assistance letter in response to the pre-consultation process (see Section 11.0). The letter confirms that there is no federally-designated critical habitat within the park. However, endangered and threatened species are known to either frequent or to exist within the park. USFWS confirmed this in their subsequent comment letter on the EISPN (see Section 12.0). The letter provides additional recommendations to minimize impacts to protected species which have been incorporated into this DEIS and discussed further in Chapter 3.0. 'Īlio-holo-i-ka-uaua, the Hawaiian monk seal (*Monachus schauinslandi*), 'ōpe'ape'a or Hawaiian hoary bat (*Lasiurus cinereus semotus*), honu or native green sea turtle (*Chelonia mydas*), and honu 'ea or hawksbill turtle (*Eretmochelys imbricata*), along with a number of native Hawaiian waterbirds are listed by the Endangered Species Act as "Threatened" or "Endangered" and are among those that may frequent the park. In August 2015, the National Marine Fisheries Service (NMFS) issued a final rule revising the critical habitat for the Hawaiian monk seals to include the marine habitat fronting Hā'ena State Park from the 200-meter depth contour line, including the seafloor, through the water's edge and 5 meters into the terrestrial environment from the shoreline (50 Code of Federal Regulations Part 226). Therefore, any changes in these areas will require consultation with the NMFS. Also, if habitats are created within the park specifically for endangered or threatened wildlife, additional permits and approvals may be required such as a Habitat Conservation Plan. USFWS recognizes that the proposed Master Plan is a programmatic project and recommends that State Parks contact them for technical assistance should any proposed actions be determined to affect federally-listed species.



# KAUA‘I GENERAL PLAN

## 5.4.1 KAUA‘I GENERAL PLAN

The General Plan (GP) of the County of Kaua‘i is a policy document that fulfills legal mandates of State law and the Charter of the County of Kaua‘i. It is intended to help guide long-range development for the enhancement and improvement of life on Kaua‘i, advancement of the County’s vision for Kaua‘i, and the establishment of strategies to help achieve that vision including recommended land uses. The most recent GP ~~is currently undergoing another update~~ was adopted in March 2018. ~~However, it was last adopted in 2000 and~~ It designates the park as “Parks and Recreation” on the North Shore Land Use Map (Figure 32). The GP North Shore Planning District Heritage Resources Map identifies the park as a ~~conservation area~~ “State & County Park” and notes that ~~heiau~~ cultural sites ~~and traditional cultivation areas~~ are located within the park ~~and a regulated fishing area and coral reefs are located offshore fronting the park~~ (Figure 33).

~~Various policies in the GP cover parks, some with specific reference to Hā‘ena State Park.~~

~~The GP identifies “sharing of recreation resources with visitors” as an issue and opportunity:  
Many visitors travel to the North Shore to enjoy its beaches and unique natural areas. The impact is especially great in the Hanalei-Hā‘ena region which has a large share of visitor attractions. Heavy visitor use can displace residents or significantly change the quality of the experience, especially at beaches and parks. Residents need to work with business people and parks agencies to identify: (1) parks and natural areas where visitors will be welcomed and accommodated, with levels of use based on parking or other easily managed limits; and (2) parks and natural areas where it is important to more strictly limit access in order to preserve the resources and/or the quality of the recreation experience (Sec. 6.1.3).~~

~~GP policies related to Kaua‘i’s parks and natural areas (both County and State) include:~~

~~Encourage the development of public-private partnerships involving the County and the Department of Land and Natural Resources in order to manage and improve Kaua‘i’s valuable parks and open spaces (4.2.8.3(a)).~~

~~Manage beach parks, resource parks, rivers, beaches and other natural areas according to the following policies in order of priority: (1) Conserve resources. (2) Provide for use by the general public—i.e., individuals, families, ohana. (3) Allow for group use (including commercial tours and equipment rentals) within conservation limits (4.2.8.3(e)).~~

~~To enhance the visitor’s experience of Kaua‘i and to provide meaningful jobs and income to Kaua‘i residents, the County shall develop or support development of the following programs by Federal, State or private agencies: (1) Regional visitor centers. (2) First person interpretation of natural areas, historic and archaeological sites, traditional agricultural and cultural practices, towns and communities. (3) Study and~~

~~practice of Native Hawaiian and other ethnic cultural traditions and languages, including the development of cultural learning centers (4.2.8.3(d)).~~

~~Improve facilities, maintenance, and management of activities at State and County parks. Specific actions include: (1) Commit the necessary resources to ensure adequate levels of park maintenance, repair and hygiene and to improve signage and interpretation of natural and cultural features. (2) In resource parks that receive heavy visitation, such as... Hā'ena, ... plan and improve specific areas to support larger numbers of visitors; manage other areas for moderate or low use, based on conservation objectives. Prepare and update Master Plans for major parks. ... (4.2.8.3(e)).~~

Relevant sections of the GP involve discussions related to improving transportation to the park and support of the State's effort to implement the master plan for the park and provide adequate funding for maintenance and staffing.

Section 2.4.6 of the GP notes the following policy opportunity for the North Shore:

*Integrating Transit: The integration of consolidated parking and transit facilities was a common discussion thread throughout the North Shore communities. Participants considered ways that pools of public parking and transit stops could be integrated into town centers, establishing "park-once" facilities and providing convenient transfer points for tourists accessing Kīlauea Lighthouse and Hā'ena State Park, with the goal of mitigating the impact of tourist traffic on the Kūhiō Highway and parking facilities at existing visitor destinations. (SSFM 2018)*

Section 3.IV focuses on the economy and actions to support key industries. Under the "Tourism" Subsection, "1.3 Improving the Visitor Experience and Impacts on Communities," the GP states, "Managing visitor impacts also includes improving visitor facilities and parking at both County and State parks, and ocean safety at beaches. Given that impacts disproportionally affect certain areas of the island, particularly the North Shore and South Kāua'i districts, shuttle efforts, parking improvements, and other solutions should be focused there." (SSFM 2018)

Section 3.V.4 summarizes the actions for Kauai's State Parks and recognizes this master plan effort for Hā'ena State Park. It also notes:

*In addition to traffic and parking issues, Hā'ena State Park, Kōke'e State Park, and Waimea Canyon State Park are underfunded relative to the demands placed on them. For example, limited parking at Hā'ena State Park has led to illegal parking and frustration for visitors and residents seeking to visit the many attractions nearby. An unmanaged parking situation has contributed to high rates of theft and vandalism at the parking lot. (SSFM 2018)*

It also identifies the following relevant "Partnership Needs:"

1. *Implement the Waimea Canyon, Kōke'e, and Hā'ena State Park Master Plans.*

3. Support adequate funding and staffing for capital improvements, including maintenance and enforcement for public parks, trails, and recreation areas.
4. Improve and coordinate infrastructure and transportation to reduce visitor impacts.

The GP also identifies the North Shore Shuttle running from Kilauea Lighthouse to Kēʻē Beach as a "Priority Transit Capacity Project" in its Table 5-2 and Figure 5.37.

**Discussion:** The master planning of parks, such as Hāʻena State Park, and the appropriate management, maintenance, staffing, funding, and enforcement of the parks including ~~"limit[ing] access in order to preserve the resources and/or the quality of the recreation experience"~~ (Sec. 6.1.3) ~~is prioritizing parking and transportation improvements for the North Shore are~~ clearly supported by the County's GP. The GP recognizes the need for management measures to balance visitor demand and conservation needs. ~~It identifies the conservation of resources as the first priority in the management of beach parks (Sec. 4.2.8.3(e)).~~ Further, the Plan identifies the need for adequate funding to implement management, interpretation, and maintenance of park facilities.

The proposed Master Plan seeks to address the issues and opportunities relating to the visitor experience on Kauaʻi's North Shore. Community sentiment throughout the Master Planning process has been that the park's cultural and ecological resources are overwhelmed by visitor volume and use. The purpose of the Master Plan is to help temper the volume of visitors and encourage interaction with the resources without being a detriment to them. As such, the proposed Master Plan is consistent with the GP policies to improve park facilities, conserve natural and cultural resources, protect public safety and improve hygiene to find a balance with public use. It also supports the development of the North Shore Shuttle to help mitigate traffic to the park.

# NORTH SHORE DEVELOPMENT PLAN

## 5.4.2 NORTH SHORE DEVELOPMENT PLAN

The North Shore Development Plan (DP) designates Hā'ena State Park and surrounding lands as "Open" (Figure 34). The DP provides a framework for guidelines to direct the physical locations and relationships of major improvements, buildings and landscape within the North Shore Special Planning Area. Relevant North Shore Planning Area goals include:

- *Goal A: To preserve the unique natural beauty of the North Shore Planning Area.*
- *Goal E: To preserve the wildlife and flora of the North Shore, recognizing man's dependence upon this preservation for his own health and welfare.*
- *Goal F: To insure the preservation of the historic-archaeological sites in the North Shore Planning Area.*
- *Goal H: To provide for recreational opportunities that are compatible with the unique qualities and natural features of the North Shore.*

More specific DP recommendations that relate to natural resources and outdoor recreation and are applicable to the Master Plan are as follows:

*Only basic supportive facilities should be provided at outdoor recreation areas selected for widespread public use in order to enhance the experience.*

*Multiple activity recreation areas must be managed to avoid hazardous conflicts between recreators and allow maximum use of resources.*

*Although public access is obtained to recreational resource areas, publicity should be minimized unless the appropriate agency can assure adequate management and security measures. In this manner, local residents would be allowed to continue traditional patterns of resource use.*

**Discussion:** The Master Plan and supporting management actions address the recommendations of this County planning document. As one of the most popular visitor destinations on the island, Hā'ena State Park had become a victim of its success, becoming overcrowded and experiencing conflicts between the varied recreational and cultural uses of the park. The new facilities, educational and interpretive materials and programs, and changes in management and maintenance will improve the conditions at the park, better protecting and caring for the natural, cultural, historic, and scenic resources. The orientation session all visitors must attend will help educate visitors on the unique and sensitive resources at the park and appropriate behavior, protocols, and activities which will in turn engender a greater sense of respect and aloha visitors have while at the park. The proposed educational programs and interpretive materials will also enrich the visitor experience as they learn about the varied and multilayered resources of this storied place.

The proposed Master Plan also encourages the development of a shuttle system to serve visitor access to the park and reduce congestion and traffic on the existing highway. Due to the potential for rockfalls and to increase safety, general through traffic will be terminated at entry turnaround and a separate pedestrian ~~and bicycle~~ path has been designated makai of the highway ~~via the Interpretive Path~~.



# DRAFT EIS PUBLIC MEETING

## 8.3.3 DRAFT EIS PUBLIC MEETING

A public meeting to incorporate community concerns in the EIS ~~will be~~ was held on August 19, 2015 during the Draft EIS public comment period. Oral comments and questions were fielded during the meeting. Comment cards were distributed to the attendees who were given the option to fill them out and turn them in that evening or mail them to PBR Hawaii. Attendees were also encouraged to distribute the comment cards to those who were not able to attend the meeting and submit them to PBR Hawaii. Email addresses where attendees could submit comments were also shared at the end of the PowerPoint presentation. Substantive written and oral comments received during the meeting ~~will be incorporated into the EIS~~ are summarized below. Written comments that included a mailing address were sent written responses and both are included in Section 13.0 of the EIS. Written comments that did not include a mailing address were also responded to but not mailed and are included in Section 13.0.

The following summarizes the oral and written comments received and collected during the August 19, 2015 public meeting. They are organized by topic and are individually responded to in Section 13.0.

### **Facilities:**

- The large visitor center is not desired. Seems to cater to tourists and not for locals.
- Like the education center/build a community education "building" to inform people about the land
- No gates blocking the view down the highway.
- No commercial vendors or gift shops.
- No caretaker's cottage. No types of building at Kē'ē (no permanent structures, no pavement at all, no new bathrooms). No fences. No boardwalk. No gates. No bridges.
- Like the integration of natural hazard avoidance, reduced threats by locating boardwalk outside of rockfall area; cultural practices; preservation of important historic and cultural sites; encouraging revitalization of sites; outdoor recreation; education; local advisory committee; scaled-down outdoor recreation impacts and footprint
- Supports the cultural and rehabilitation/restoration of lo'i aspects
- Move the entrance further down the road, do not make the stream the entrance so that locals can still use Cold Pond and stream
- Hope it doesn't desecrate loved one's grave sites
- Limahuli Gardens has a visitor center that explains local history/culture

### **Park Access and Proposed Visitor Limits:**

- Concern regarding limiting access to only 900 people per day. What happens if the 900<sup>th</sup> guest is reached but splits a family or group of friends? Can the limit apply to tourists and not locals?/limit should be set at 500 tourists per day/no limit for locals
- Concern over the limited parking at the park and having the traffic and cars spill over into the County park, along the highway, and down to Makua

- Perhaps one day a week can be closed to non-residences, or provide privileges for Hawaiian organizations
- Concern over limited access during early morning or late afternoons
- Would like to see online ticketing, permit, entry access with set number for visitors and set number for residents
- Require limited permits for tourists/unlimited access for locals and guests
- Do not count walkers and bikers in the daily count (should be free)
- There is fishing at night/allow beach access to walk on at all hours of day for all the people
- Limiting local access is not helping the problem is the number of people visiting Kaua'i
- Keep the white people out
- Applaud the proposed exemption of fishermen and hunters from the visitor limit
- No priority to hunters and fisherman
- No access fees for locals/residents
- No gate guard
- State parks are to be enjoyed by the people, especially residents. Do not discriminate against taxpaying residents to the benefit of cultural practitioners, hunters, and fisherman
- Visitors should have to apply for a day pass to visit the park, but residents should be able to obtain passes valid for one year or longer
- Allow foot and bike access
- Put gates at the start of the actual park to regulate the 500 limit; but allow volunteers/locals with permits (sticker) to enter; second gate at Kumu road, limiting the traffic to all of the land past Hanalei to 1,500 per day, plus local residents
- Threatens access rights by closing areas
- The plan smacks of localism/ detests the twisting of the definition of volunteer to accommodate Hā'ena locals; park belongs to ALL, not just North Shore residents/shame on you for blaming tourists

### **Parking and Shuttle:**

- Is there way to discriminate against rental cars?
- Limit parking and force paid shuttle rides/parking by permit only (with a fee)/50 parking stalls with permits, 50 without
- Force tourists to use the shuttle and get permits, not kama'aina
- Much planning should go into the shuttle aspect of the plan- communication and networking with resorts is critical
- Provide pamphlets for those riding the shuttle explaining cultural significance and environmental sensitivities
- Subsidize shuttle
- Require hotels and time share hotels to provide shuttle service; shuttles paid for by businesses/tourists; require Hawai'i Visitors Bureau to contribute funds to finance shuttle and shuttle infrastructure
- Concerns about parking and whether people, and/or cars will be limited

- All permanent residents get a resident car sticker for access
- Bring back the shuttle
- All North Shore beaches roadside parking need to be policed and ticketed accordingly.
- Stop all traffic in Princeville and supply regular shuttles from before sunrise until after sunset is a better plan and only allow Hawaii residents to drive over Hanalei River Bridge
- Shuttles are a good idea but should incorporate Hanalei into the scheduled service so tourists can stop for food and shopping/shuttles should start at Princeville
- Limit truck/car traffic to 500 per day
- Have shuttles run every 15 minutes, from 8 am- 5 pm; charge parking fees of \$20-30 to park (Hawai'i residents exempt); would result in 90% of current traffic to opt to take shuttle, even residents would
- State or federal money should fund the shuttle system to get people past Hanalei. Tourists staying in Princeville should be shuttled to Kē'ē, Tunnels, Lumahai, and Hanalei; North Shore hotels and condos should provide transportation from airport to North Shore, then shuttles should move tourists around North Shore

#### **Park Management and Visitor Education:**

- Explore specifics of organizations to manage plan.
- Address how monies should be used.
- Information about issues of Kē'ē should be given to visitors in a non-aggressive way before they arrive/educate tourists before they reach Lumahai
- Proposes a day or half day of rest for the park
- Note: you have defined the limits of acceptable change (do not use the term carrying capacity)
- No halau own Kē'ē, all kumu must respect Hā'ena tradition
- Do not allow any plants to be touched
- Waiakapala'e is for women
- No new age practitioners should be considered as cultural religious practitioners
- Overly controlled by the State, removes the natural joy of the area
- Community should be informed before plan is implemented
- Continue community advisory committee permanently

#### **Natural Resources:**

- Above and beyond parking concerns are the conservation considerations (i.e. a struggling, environmentally compromised coral reef area)
- Threatens wildlife, burial sites, and deface mountain/goes against all conservation purposes
- Bad area for tsunami zone

#### **General Comments:**

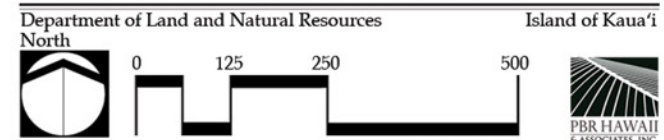
- Do not support/approve the plan.
- In support of the plan/For the most part like the plan/in total support of the plan.

- Master plan for the whole region is needed/EIS needed for whole region
- Anti-government sentiment/consult lawful Hawaiian government/no federal government involvement
- Interested in volunteering/think volunteer provision is really important
- Restore the damage that has already occurred
- Unsure if the plan will work
- Proposes more police activity/patrolling
- Get with all Hā'ena families and get responses and ideas in the plan
- There were both positives and negatives with this plan
- Maintain an area that is truly allowed to run wild (Aldo Leopold-style)
- Request more time to respond
- Stop rampant promoting and advertising of the area/capping the visitor count through HTA and Kaua'i Visitor Bureau should be considered, even at the risk of diminished tourism revenue
- Something has to be done-see the extreme number of cars and people and damage to the trail and ocean; plan can be fine-tuned later
- Likes that there are options and that the plan is adaptive
- Mahalo for helping protect this beautiful island/ appreciate the hard work that has gone into planning





**FIGURE 1**  
**Master Plan**  
**HA'ENA STATE PARK**



Source: Based on 2001 Community Preferred Master Plan Prepared by The Keith Companies

Disclaimer: This Graphic has been prepared for general Planning purposes only and should not be used for boundary Interpretations or other spatial analysis.



**TABLE 1: ANTICIPATED PHASING PLAN**

| <b>SHORT TERM (IMMEDIATE - 5 YEARS)</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
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| <b>Capital Improvements</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | <b>Cultural Environment</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | <b>Natural Environment</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <ol style="list-style-type: none"> <li>1. Rehabilitate Montgomery House.</li> <li><del>2. Mitigate immediate rockfall hazard above highway as mentioned in Section 2.5.3 and described in greater detail in Section 3.10.5.</del></li> <li>2. Work with County and other agencies as appropriate to establish shuttle/transit services <del>from the Princeville property.</del></li> <li>3. Improve main parking lot, sized appropriately based on shuttle/transit service. Include new turnaround <del>and Entry Kiosk.</del> Make provisions for subgrade leach field.</li> <li>4. Construct Welcome <del>Pavilion Hale</del> and new <u>restrooms</u>. <del>Ensure exit gate allows pedestrian and bicycle access even when locked for vehicles.</del></li> <li>5. Install <del>elevated Interpretive</del> <u>Pedestrian Path</u> from <del>ECC Welcome Hale</del> to Kē'ē Beach.</li> <li>6. Determine whether parking and/or entry fees should be collected. <del>If so, Install temporary facilities near the main parking lot to support fee-ticket collection and visitor orientation.</del></li> <li>7. Install safety signage (as appropriate).</li> <li>8. Plan for and make accommodations for future required infrastructure <u>as needed</u>.</li> <li>9. Coordinate with the DOT on closure of highway or <del>eliminate vehicle traffic altogether.</del> <u>If decided, formalize transfer of this portion of the highway to State Parks. Install main gate to control vehicle access.</u></li> </ol> | <ol style="list-style-type: none"> <li>1. Establish Cultural Advisory Group early, prior to any design and construction contract awards.</li> <li>2. Complete rehabilitation of the Allerton Caretaker's Cottage.</li> <li><del>3. Work with County on management agreement for Ka Ulu a Paoa and Ke Ahu a Laka site and initiate solicitations for third party management.</del></li> <li>3. Prior to any improvements within the main parking lot, survey the extent of the traditional house site (Feature 1600-8).</li> <li>4. Continue lo'i restoration, kalo cultivation.</li> <li>5. Update Interpretive Plan. Implement as appropriate.</li> <li>6. Coordinate with Hui on relocation of staging areas prior to construction of new entry facilities.</li> <li>7. <del>Initiate</del> <u>Develop</u> visitor orientation <u>sessions materials and institute proposed visitor limits during managed park hours</u> when new park entry facilities constructed, including appropriate behavioral conduct and protocols and cultural/historic/archaeological resource protection. <u>Initiate public education of new entry policies well-before any proposed visitor limits are instituted.</u></li> </ol> | <ol style="list-style-type: none"> <li>1. Relocate Life Guard Tower. Establish safe swim zones and set up markers.</li> <li>2. Restore and maintain Dune System, starting from Kē'ē.</li> <li>3. Plant dense native hala tree screen for rockfall mitigation along the highway and new parking lot.</li> <li>4. <del>Initiate visitor orientation sessions upon park entry including</del> <u>Include information on ocean and trail safety and natural resource protection information in visitor orientation materials.</u></li> <li>5. Start clearing invasive species in/around the loko. Review loko restoration requirements including <u>water resources</u>. Consider phasing restoration work starting with Loko Kē'ē. Consider whether native bird habitat is feasible to establish at loko in consultation with the U.S. Fish and Wildlife Service (USFWS) and provide ongoing maintenance. Restore with native plants and maintain.</li> <li>6. <u>Replace the plants at the Kē'ē constructed wetlands to high-nutrient removing plants to improve effluent water quality.</u></li> </ol> |

| MID RANGE (5 - 10 YEARS)                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                   |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Capital Improvements                                                                                                                                                                                                                                                                                                                                                                                                | Cultural Environment                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Natural Environment                                                                                                                                                                                                                                                               |
| <del>1. Build Caretaker's Cottage and Baseyard.</del><br>1. Improve pedestrian trails and install interpretive displays/wayside exhibits.<br>2. Improve drainage flows and install native plant bioswales to mitigate erosion/runoff problem areas.                                                                                                                                                                 | 1. Continue restoration and maintenance of Hula Complex.<br>2. Continue restoration and maintenance of lo'i. Design and implement restoration of 'auwai in conjunction with <del>main visitor complex</del> <u>drainage improvements</u> .<br>3. Establish the Cultural Gathering Area.<br>4. Build Hālau Wa'a.<br>5. Evaluate feasibility of/research potential restoration and development of Hale Interpretive Site (Feature 1600-8) located <del>within entry complex</del> <u>near the main parking lot</u> .<br>6. Restore and maintain other cultural sites such as Lohi'au's House Platform and the Historic Poi Mill. | 1. Continue work on the Dune System, continuing eastward.<br>2. Continue loko restoration.<br>3. Initiate stream restoration work along Limahuli Stream and maintain.<br>4. Maintain work <u>initiated in the short-term</u> above.                                               |
| LONG RANGE (10 – 20 YEARS)                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                                                                   |
| Capital Improvements                                                                                                                                                                                                                                                                                                                                                                                                | Cultural Environment                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Natural Environment                                                                                                                                                                                                                                                               |
| <del>1. Build ECC, Picnic Area, and surrounding grounds. Review visitor parking requirements and adjust parking lot as appropriate. Locate ECC eastward of Welcome Pavilion into graded area if smaller parking lot is needed. Reuse or relocate Welcome Pavilion structure for other park uses.</del><br>1. Refresh functionality of constructed wetland system at Kē'ē and install additional aeration component. | <del>1. Formalize visitor orientation sessions at ECC, including education on the cultural environment.</del><br>1. Continue restoration and maintenance of Hula Complex and other cultural sites.<br>2. Continue restoration and maintenance of lo'i and loko.<br>3. Continue expansion of cultural programs.                                                                                                                                                                                                                                                                                                                 | <del>1. Formalize visitor orientation sessions at ECC, including education on the natural environment.</del><br>1. Clear remaining invasive species. Restore and maintain with natives.<br>2. Continue and maintain work above.<br>3. Continue expansion of educational programs. |



# Appendix A



**PRINCIPALS**

THOMAS S. WITTEN, ASLA  
*President*

R. STAN DUNCAN, ASLA  
*Executive Vice-President*

RUSSELL Y. I. CHUNG, FASLA  
*Executive Vice-President*

VINCENT SHIGEKUNI  
*Vice-President*

GRANT T. MURAKAMI, AICP  
*Principal*

**CHAIRMAN EMERITUS**

W. FRANK BRANDT, FASLA  
*Chairman Emeritus*

**ASSOCIATES**

TOM SCHNELL, AICP  
*Senior Associate*

RAYMOND T. HIGA, ASLA  
*Senior Associate*

KEVIN K. KISHIKAWA, ASLA  
*Associate*

KIMI MIKAMI YUEN, LEED-AP  
*Associate*

SCOTT ALIKA ABRIGO  
*Associate*

SCOTT MURAKAMI, ASLA, LEED-AP  
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*Associate*

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**MEETING NOTES**

DATE: October 30, 2008

MEETING DATE: October 24 & 25, 2008

PRESENT: See Sign-in Sheets  
Ka'imipono (Maria) Orr, Ka'imipono Consulting  
Kimi Yuen, PBR HAWAII  
Kanai'a Nakamura, PBR HAWAII  
Catie Fernandez, PBR HAWAII

DISTRIBUTION: File

SUBJECT: Hā'ena State Park Master Plan Community Open House –  
October 24 & 25, 2008

The purpose of this open house was to re-engage with the Hā'ena community to begin the process of updating the Community Preferred Master Plan that was initiated in the 1990's.

A. Limahuli Garden: Friday, October 24, 4:00 PM – 7:00 PM & Saturday, October 25, 9:00 AM – 12:00 Noon

1. In general, attendees knew of the former Community Preferred Master Plan, but wanted to spend more time with it to refresh their memory and see if it is still relevant. A number of people's first question was whether or not a gate at the entrance was still part of the plan. People were also interested in knowing if there would be more meetings, so that they could participate in the decision-making process. Questions were also asked as to how State Parks intended to fund any improvements to the park.
2. Auntie Louise – Organizing an All Soul's Day (Nov. 1) walk from Naue to Kē'e to get a feeling from Hā'ena people what they want for their land.
3. Melinda Sandler – Suggested that a better way to inform Hā'ena and Hanalei people is to do a PO Box drop to announce future community meetings.
4. Alison Chaung – Requested a hard copy of the highlighted 1999 Community Preferred Master Plan.
5. Andrew Cabebe – Expressed concerns about the Wainiha Stream diversion. Wealthy land owners had promised to release water, but have not.

MEETING NOTES  
Community Open House  
October 24 & 25  
Page 2

6. Barbara Robeson
  - a. Indicated that the Kuhio Highway was on the National Register to the ten mile marker. She indicated that this should be documented on register nomination forms. Dawn Duesing worked with Barbara on the register forms and Barbara could get PBR HAWAII Dawn's contact information if we would like it, however, Dawn is out of the country for an extended period of time.
  - b. Indicated that the Lihue Library, Hawaiiiana section had a number of old maps that may be of use. Barbara would be willing to accompany PBR HAWAII staff or sub-consultants if we would like to view maps.
  - c. Kauai Historical Society contains a number of oral histories.
  - d. Taylor Camp archaeology article from a Mainland journal or newspaper was recently written, but she could not remember the publication.
7. Kawika Winter – requested an aerial and an electronic version of the Community Preferred Master Plan.
8. Sailor DeCamp –
  - a. Concerned about private homeowners diverting water from Limahuli Stream.
  - b. Did not feel that the 1990's Community Preferred Master Plan had complete community buy-in.
  - c. Felt that those tourists that want and deserve to have a natural experience at Hā'ena will be willing to walk and explore the park, which is preferred to constructing facilities to improve capacity.
  - d. Development at Princeville is fueling large visitor numbers at Hā'ena State Park. A shuttle at Princeville, operated privately, with appropriate fees should be provided.
- B. Lihue, Saturday, October 25, 2:00 PM – 5:00 PM. The Saturday afternoon open house was sparsely attended, and primarily consisted of a discussion between State Parks Staff, PBR HAWAII Staff and Randy Wichman, a member of the Kaua'i Historic Preservation Review Commission.
  1. Randy Wichman shared a number of thoughts and observations:
    - a. Multidisciplinary approach to planning and managing the park. He suggested that there are many facets to the park, and the various disciplines should have decision-making power over those facets. Examples include rules for fishery, Hui Maka'ainana o Makana with the curatorship of the taro lo'i. In addition, disciplines need to manage the hula platform, other cultural sites, land-based natural resources, etc. Suggested looking for public/private and educational partnerships.
    - b. Must have knowledge of key features before planning walking trails and the trail should parallel the dunes, closer to loko where the land is less environmentally sensitive than the dunes. The following sites must be considered in how the path will meander:
      - i. Archaeology
      - ii. Tree and rockfall hazards
      - iii. House sites/kuleana lots
      - iv. 'Auwai – mentioned flow charts that Alan Carpenter worked on
      - v. Poi mill site



MEETING NOTES  
Community Open House  
October 24 & 25  
Page 3

- vi. Loihau's House
- vii. Hula Platform
- viii. Heiau

- c. Cultural Viewplanes should be considered in park layout.
  - d. Buffer around cultural resources such as Lohi'au's house, poi mill, grave sites.
  - e. Regarding fees, Randy inquired if the Governor would be making a decision to charge fees at Hā'ena and Kōke'e State Parks.
  - f. Suggested that what is labeled as Allerton's caretaker's cottage could be a staging area for Halau, cautioned that there will be challenges with re-constructing historic structure.
  - g. Regarding water, Wayne Souza explained that State Parks built the water system and gave it to the County.
  - h. Megan Juran inquired as to a landscape plan for the comfort station because the plant that looks like false taro or "elephant ears" is colonizing the disturbed areas quickly.
2. The group discussed management models such as Hanauma Bay, which includes collection of a fee, limits the number of visitors at any one time and has a mandatory educational component. Another alternative model is that of the CCC camp being taken over by hui laka as a management entity, with visitors restricted to researchers with the occasional tour group visiting and paying a fee to generate revenue. The group also discussed the possibility of making park reservations on line, similar to that of a campground.

♦ ♦ ♦ ♦

*This is our understanding of the topics discussed and the conclusions reached. Please give PBR HAWAII written notification of any errors or omissions within seven calendar days. Otherwise, this report shall be deemed an accurate record of the meeting. Thank you.*

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## ***Hā'ena State Park Master Plan***

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Public Meeting  
July 10, 2010  
1:00 – 4:00 PM

## ***Welcome!***

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- Pule
- Welcome
- Project Team Introductions
  - State Parks
  - Master Plan Advisory Committee
  - Kennedy Jenks
  - PBR Hawai'i

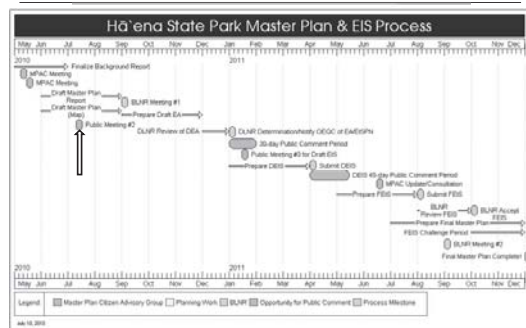
## Overview of Planning Process

- In the 1990's, a community-based plan was developed but not completed. The 1999 Community Preferred Master Plan is our starting point.
- Convened a Master Plan Advisory Committee (MPAC) for current effort to finish the master plan and EIS.
- Three MPAC meetings and a site visit held to evaluate, refine and ground-truth recommendations.
- Here today to present the proposed revisions to the Community Preferred Master Plan and proposed management strategies developed by the MPAC.

## Priorities and Vision

- ALL of the park is culturally significant.
- The park should be a living place... cleanse, restore, and make useful again.
- Involve the families who are originally from Hā'ena... reconnect the people to the place.
- Uphold State Parks' responsibilities... public safety and welfare, public access, and outdoor recreational opportunities.

## Process Overview



## Proposed Revisions to the 1999 Community Preferred Master Plan



***Proposed  
Management Strategies***

**OVERALL PARK MANAGEMENT**

- Advisory Committee preference: community-based hui manages the entire park.
- Other options discussed:
  - State/community partnership
  - State continues to manage park with available resources
- Advisory Committee preference is to have funds generated by entrance or parking fees support park management, facilities and programs.
- Cultural Advisory Group provides guidance to State Parks and community-based management hui.
  - Hula complex & sacred sites
  - Protocol
  - Any improvements, including safety & maintenance

***Proposed  
Management Strategies***

**PARK ACCESS AND PARKING GOALS**

- Ensure access for local community while managing volume of visitors.
- Access management should not discourage or diminish the experience for the local community.
- Keep it simple.
- Adjust over time as needed.

***Proposed  
Management Strategies***

**HULA COMPLEX**

- Management of the hula complex is a priority.
- Include education and enforcement of protocols.
- Management of complex must be included in management hui's responsibilities.
- Requires formal agreement between State Parks and County of Kaua'i (parcel's owner) to allow it to be managed as part of the larger park.
- Cultural Advisory Group should be consulted if interpretive displays are provided.

***Proposed  
Management Strategies***

**VEHICULAR ACCESS AND PARKING**

- Vehicular access along interpretive corridor for special access only - ADA, emergency vehicles, maintenance, lifeguards, cultural practices.
- Limit main visitor parking lot to 108 stalls.
- Consider having shuttles as an alternate means of access.
- Use parking fees and permits to control visitor numbers and turnover.
- Inform the public when parking lots are full.
- Provide options for kama'aina rates and annual passes.

***Proposed  
Management Strategies***

**PEDESTRIAN AND BICYCLE ACCESS**

- Interpretive Corridor primarily for pedestrians and non-motorized bikes.
- Delete public pedestrian and bicycle path that is shown on the 1999 Community Preferred Plan within agricultural complex and along sand dunes.
- Manage public access to ag complex, other sites through educational/interpretive programs such as educational tours, community work days.

***Proposed  
Management Strategies***

**PARK HOURS OF OPERATION**

- Vehicle gates open from dawn to dusk. Pedestrians and bicycles, cultural practitioners allowed.
- Close park to the general public at least one day a week.
  - Allow park to rest and resources to replenish themselves.
  - Closure day(s) could be used for park maintenance, community educational/work days.
- Hikers who park overnight must see Caretaker to unlock gate.

***Proposed  
Management Strategies***

**NĀPALI TRAILHEAD MANAGEMENT**

- Hiker check-in at orientation center.
- Consider dedicating a certain number of parking stalls for overnight hikers; charge a different rate for overnight parking permit.
- Guided tours could be organized by management hui, or if provided by a third party, reviewed by Cultural Advisory Group.

***Proposed  
Management Strategies***

**ORIENTATION/EDUCATION/INTERPRETATION**

- Provide orientation program for everyone entering. If sat through one time and sign in, don't need to go through it again for one year.
- Include interpretive displays to convey cultural importance, history, environmental information.
- Install interpretive displays at significant sites and throughout Interpretive Corridor, as appropriate.
- If shuttle service provided, there is an opportunity for orientation/education during transport.
- Locate signs with park rules/public safety information at the beginning of the Interpretive Corridor, Parking Lot and near Kē'e Beach.

***Proposed  
Management Strategies***

**NATURAL RESOURCES**

- Stabilize and restore dune system – mālama ‘iwi kupuna is first priority.
- Continue restoration of agricultural complex.
- Restore native forest – a healthy forest system supports all aspects of a natural ecosystem including water resources, soil stabilization, even ocean resources... deep connection to hula.
- Source construction materials, fill and compost locally to prevent import of invasive seed banks.
- Prevent spread of apple snails to Limahuli Stream.

***Proposed  
Management Strategies***

**FEDERAL LAND AND WATER CONSERVATION  
FUND (LWCF)**

- Outdoor recreation must be maintained within the park since land acquired by the State with federal LWCF funds.
- Develop and promote opportunities for public outdoor recreation that do not significantly impact natural and cultural resources.
- Proposed master plan will need to be reviewed by National Park Service to ensure compliance with LWCF requirements and original intent of park's acquisition.

***Proposed  
Management Strategies***

**RECREATION MANAGEMENT**

- MPAC recommended swimmers and snorkelers be located in areas visible to lifeguards.
- No suntan lotion on before entering water.
- Do not bother lawai'a.
- What you bring in, you carry out of the park.
- Picnic areas are needed within park but should not be located on dunes.
- Park master plan will defer fishing issues to Hā'ena Community-Based Subsistence Fishery Rules (nearing completion).

***Proposed  
Management Strategies***

**UTILITY MANAGEMENT**

- **Water System:**
  - Replace deteriorating pipes
  - Supplement with water catchment systems
  - Keep options open for restoring 'auwai, lo'i irrigation
  - Review and manage stream diversion for lo'i



## ***Proposed Management Strategies***

### **UTILITY MANAGEMENT**

- Wastewater System:
  - R-2 treatment system for new Orientation/Cultural Center and Caretaker's Cottage/Baseyard, use parking lot for leach field.
  - Evaluate different low-impact options for Cultural Gathering Area.
  - Reuse treated wastewater for landscape irrigation (non-edible plants).
  - Require regular maintenance at least once a year if not more.

## ***Proposed Management Strategies***

### **UTILITY MANAGEMENT**

- Electrical System:
  - Provide power to Orientation/Cultural Center and Caretaker's Cottage/Baseyard
  - Use photovoltaic to maximum use
  - Consider hydropower

## ***Proposed Management Strategies***

### **UTILITY MANAGEMENT**

- Drainage System:
  - Reinstate 'auwai, where applicable. This will help mitigate flooding.
  - Restore a more natural look to existing drainage facilities (drain outlets and inlets).
  - Use bioswales and other low impact designs to fullest extent possible.

## ***Proposed Revisions to the 1999 Community Preferred Master Plan***



### ***Discussion***

- Any questions or comments on the proposed...
  - Revisions to the 1999 Community Preferred Master Plan Map
  - Management Strategies

### ***Mahalo Nui Loa!***

- If you wish to submit comments or be added to our mailing list, please contact...
  - Lauren Tanaka, State Parks, 587-0293  
Lauren.A.Tanaka@hawaii.gov
  - Catie Fernandez, PBR Hawaii, 521-5631  
cfernandez@pbrhawaii.com
- Please submit comments by July 31, 2010.

***Mahalo!***

### ***Next Steps***

- Draft Master Plan Report
- Board of Land and Natural Resources (BLNR) Meeting
- Environmental Impact Statement (EIS) Process
- Finalize Master Plan Report & Map
- BLNR Approval
- Implementation...!

**MINUTES FOR THE  
MEETING OF THE  
BOARD OF LAND AND NATURAL RESOURCES**

DATE: THURSDAY, OCTOBER 14, 2010  
TIME: 9:00 A.M.  
PLACE: KALANIMOKU BUILDING  
LAND BOARD CONFERENCE ROOM 132  
1151 PUNCHBOWL STREET  
HONOLULU, HI 96813

Board Member Agor called the meeting of the Board of Land and Natural Resources to order at 9:05 a.m. The following were in attendance:

**MEMBERS**

Ron Agor  
Jerry Edlao  
Dr. Sam Gon

Rob Pacheco  
John Morgan  
David Goode

**STAFF**

Dan Quinn/PARKS  
Charlene Unoki/LAND

Michael Constantinides/DOFAW  
Randolph Lee/SHPD

**OTHERS**

Pam Matsukawa, Deputy Attorney General  
Cynthia Rezentes, E-2  
Bobby Titcomb, E-2  
Hans Sin, C-1  
Chipper Wichman, E-3  
Douglas Halbert, D-19  
Greg Kugle, D-16

William Aila, E-2  
Josh Horowitz, E-2  
Summer Nemeth, E-2  
John Morton, E-1  
Kimi Yuen, E-3  
Zachary Helm, D-19

{Note: language for deletion is [bracketed], new/added is underlined}

**Item A-1 September 9, 2010 Minutes – TO BE DISTRIBUTED.**

**Approved as submitted (Pacheco, Gon)**

Mr. Quinn pointed out to the Board that the recommendation as to the approval of the design is also to delegate to the Chair should there be required approval of components of the design.

This item was moved to approve by Member Morgan and seconded by Member Gon.

**Unanimously approved as submitted (Morgan, Gon)**

Member Goode noted this relates to the Chair having discretionary down the road here. That is fairly broad. They still have some permit processes to go through where there could be a fair number of changes. It's hard to say what is significant. He thought the Board and the Chair should have full authority to handle those. He is not sure how those issues are worded, but there will be changes and the Chair should be able to handle that. Member Gon said he would be happy to leave it to the discretion of the Chair and staff to decide whether it is significant and whether it should come back to the Board or not.

**Item E-3 Request the Board of Land and Natural Resources to Accept the Recommendations Proposed in the Draft Master Plan and Endorse the Preparation of an EIS for Haena State Park, Haena, Kauai**

Mr. Quinn reported that in the Board package there is some additional information for the Board members one of which was in a different format - easier to follow objectives and management strategies as well as a plan view of the park at Haena. He described where Haena is referring to the map. Over the past decades it has been subject to overuse where there are way more vehicles than the area can accommodate. The impacts are significant. Mr. Quinn orientated the Board members pointing out landmarks. There is a DOT highway that ends at the Ke'e Beach. There is a graded area used for parking that fills up completely where people will park along another area and along the highway. This area is rich in cultural and archaeological sites -- taro lo'i, house sites and heiau where there is a heiau deeded to the County of Kauai. Also, caves and rock fall hazards. He related some history where about a decade ago the State undertook a master planning process that was never effectively wrapped up. Unfortunately, the consultant left the State and they never got a plan everyone was happy with. Staff has moved to a new master planning process which will take us to the EIS, but the biggest problem is how to deal with the vehicles. This is one of the recommendations in the plan which calls for limiting vehicular penetration to a certain point other than allowing special access for ADA or cultural access to the hula heiau. The limit is calling for a 108 parking stalls which are about a third of the vehicles in there now. One concept was to have people park outside and have them shuttled in citing the example of Pirates of the Caribbean movie who had to park out in Hanalei and ran a shuttle system for the park visitors all day long that worked well and showed it can work. The issue is finding a parking lot which still needs to be addressed. There are a number of recommendations where one of the considerations is to have a gate to charge for parking or access to the area. The community would like to manage that themselves and retain the funding to help operate the park. That is not impossible, but it is on a scale staff has not done yet. They do have non-profit organizations managing parks. There certainly is some capacity building that needs to happen before that can occur. Also, there are proposals regarding limiting



access to the hula platform. From staff's perspective whether they can tell people if they can go into a place or not or have particular groups go to it is potentially problematic, but through an educational process and requesting people to have consideration for the site – this is something that could be done. Mr. Quinn related the concept of the plan pointing it out on the map where people will park in the colored area with an orientation center for visitors to be educated. Where the caretaker's facility is there will be an interpretive corridor with signage. Right now, there is a restroom and there is a project for constructive wetlands for disposal of the effluent and water that comes up from the ground. This area serves as the trail head for the Na Pali Coast where many of the cars parked there are going beyond the park itself. There are hundreds of people a day who park there to hike to Hanakapiai which is 2 miles in which is substantial. And being this is the end of the road people want to park and explore. There is almost nothing you can do physically on the site without impacting an archaeological or cultural resource which makes it a challenge to accommodate people on the site. Mr. Quinn said he would like the Board to review and approve the draft master plan and they will be moving through the EIS process noting some folks in the community would like this to move along. He thanked Chipper Wichman for taking the lead in community discussions.

Member Agor inquired about driving in and dropping people off. Mr. Quinn confirmed that pointing out the ADA parking area. Staff needs to maintain emergency access. There is a plan to move the lifeguard tower away from the road. There will be some discussion with DOT in managing the road since it ends right on the beach. Also, there will be some discussions with the County since they have no active management program at the heiau which staff considers a resource part of the park.

Member Gon acknowledged the importance and richness of this area with the highest density of important sites in any State park. It's a huge challenge since it's at the end of a road. He apologized that he will have to leave for another meeting at 11:00am and hope to come to a decision on this item. Mr. Quinn noted that they have an active community group out there restoring the taro lo'i making the park come alive and are passionate to do so.

It was asked by Member Agor who makes the decision on the funds and Mr. Quinn said it would be up to the Board.

Chipper Wichman testified and acknowledged that in this process he is serving as a community member. He is a 5<sup>th</sup> generation Haena resident and it's his family's kuleana (responsibility) to malama (care) that place. He is personally involved in efforts to bring forward a Master Plan which he has 30 years of records and he wants to see the process finish. Mr. Wichman related that this place is the piko of the most famous ahupua'a on Kauai made famous throughout the archipelago because of the relationship of Pele and Lohiau. The entire property is a wahi pana. There are iwi kupuna in the dune system there and archaeologists have noted the earliest dates recorded are from this area. This area was used intensively as a cultural site as any in the pai aina. As a cultural resource it doesn't get more intense and more responsible.

Mr. Wichman said there has been no management of the area by the State and so it has been over run. In recent years they were successful in getting the State to put up a gate to stop vehicles from driving on the dune system. The State has assisted their non-profit organization, Hui Maka'ainana O Makana who is the curators of the lo'i system. They took out an alien forest and now have kalo growing. The State Park's archaeologist assisted with mapping.

Mr. Wichman said there is a question with who gets the funding from the gate access. The community has been proposing a gate for 15 years because it's about managing people. There are too many people in the State. There are problems with rage parties at night where a gate would secure the park. It is a great idea to limit the vehicle penetration into the park – the area that is already disturbed. This planning process started with the community preferred master plan in the 1990s with many stakeholder meetings. What is before the Board is a good compromise. The community feels in the end the ability for the State to properly care for this area is best achieved through a formal partnership with the community through a non-profit lease or something where the community becomes the stewards of this park. The key to proper resource management is money and the community has said they want 100% of the gate revenue. They want enough to do the job properly because this park demands it. There was a proposal to completely close the park 1 day out of the week. The aina needs to rest since it is overtaxed. This park is an end of road destination, has a safe place to swim, but there is so much more than just that.

Member Agor commented that families bring almost everything with them and this area warrants this type of plan which he agrees with. Mr. Wichman said he learned a phrase "the 1 cooler rule" - separating the parking from the resource that the community thinks that is a reasonable place for the parking.

Member Agor asked whether the community asked to set a number of people there. Mr. Wichman said determining a proper carrying capacity is a dangerous road to go down citing Hanauma Bay as an example. At the end it was determined Hanauma Bay's carrying capacity a day is 3000 people which is a scary number for the Haena community. It was difficult to determine and the best way was through parking stalls. At anytime there could be 100 to 150 people – it's dense, but not overly dense. The community has struggled with the shuttle concept in Haena, but they are overrun because there is illegal parking. Having a shuttle could dump hundreds of people and the community would have to define the carrying capacity. People could still be dropped off at the perimeter and walk in. They need to look at the carrying capacity for the island and the north shore. The community is looking at this process to retake their park because most of them are not willing to take their ohana down there because it's so overrun with visitors. The community is concerned with all the illegal parking along the highway beyond the DLNR's control, but it will have to be dealt with. Member Agor noted that at Hanalei if there is no parking vehicles are turned away, but people walk in.

Member Pacheco said that on the Big Island at Manini State Park the community group had the same idea of a limited number of parking, but it doesn't work because people will



park all over the place and he encouraged Mr. Wichman to find another way. Mr. Wichman agreed it is the toughest issue and the community's feeling is no matter how big you build the parking lot it will never be big enough. They've had up to 2000 people down there. If people park further away they are less likely to stay longer or bring all their accoutrements. It won't end unless a carrying capacity is set.

Member Morgan asked how they came up with the number of parking stalls because he had a concern with planning for a parking problem. He has hiked there and to come far away and not be able to hike is a downer. Mr. Quinn explained that is the number of cars that can fit in the already disturbed area. That was the same number the earlier community preferred plan had dealt with which he pointed out on the map. He agreed that 10 or 20 more isn't going to solve the issue and closing the gates when 108 cars come in is going to have an impact that has to be addressed which is an issue.

Mr. Wichman said that in the 1990s with the Community Preferred Master Plan had 3 scenarios and it was the one with the smallest number of parking stalls. The other scenarios had greatly increased parking capacity. The issue the community is wrestling with is how many of those stalls are dedicated to people hiking to Na Pali or vice-a-versa people swimming at Ke'e? It was suggested dedicating a certain number of stalls for people wanting to use the trail. They were looking at increased fees for leaving your car overnight like \$150 rather than \$10 as an example. The overflow parking will have to be addressed in the EIS process. This is for the Board to endorse to move to the next step. The viability of a shuttle system and community entrepreneurship appeared this past summer. Part of it is education for visitors to use the shuttle at Hanalei.

Kimi Yuen representing PBR Hawaii testified the key is education agreeing the place is overrun suggested having a permit system on-line for parking. A designated parking stall reserved for you for a certain day and a lot of tourists plan it in advance. At the same time these tourists are educated about the place from the State Parks website. Set this up ahead of time and then you can have a 108 parking stalls work. Or an island wide shuttle system permit for all the hotels that State Parks could charge. Have a visitors center there where people go for orientation and control numbers there.

**Unanimously approved as submitted (Gon, Morgan)**

**Item D-18 Issuance of Right-of-Entry Permit to Monsanto Company on Lands Encumbered by Governor's Executive Order 3140 and Revocable Permit S-7582, Pulehunui, Kula, Maui, Tax Map Key: (2) 2-5-001:010.**

Charlene Unoki, Assistant Land Administrator at Land Division conveyed that Monsanto Company plans to do some testing during an 8 month period at the site. There is an existing well that has been capped. In the First Phase, they plan to install a submersible pump and pump testing. In the Second Phase, they are going in to measure the water level in the State well. Staff is asking this permit be gratis for a period of 8 months. Any information from Monsanto will be turned in to Engineering as well as the Water Commission.

**KAUA'I COUNTY HISTORIC PRESERVATION REVIEW COMMISSION**  
Lihu'e Civic Center, Mo'ikeha Building, Meeting Room 2A/2B

**MINUTES**

A regular meeting of the Kaua'i County Historic Preservation Commission (KHPRC) was held on August 6, 2015 in the Lihu'e Civic Center, Mo'ikeha Building, Meeting Room 2A/2B.

The following Commissioners were present: Chairperson Pat Griffin, Anne Schneider, Stephen Long, David Helder (*left at 4:58 p.m.*), Charlotte Hoomanawanui, Victoria Wichman, Larry Chaffin Jr., and Kuuleialoha Santos (*3:27 p.m.-5:15 p.m.*).

The following Commissioner was absent: Althea Arinaga

The following staff members were present: Planning Department – Kaaina Hull, Shanlee Jimenez; Deputy County Attorneys Jodi Higuchi-Sayegusa (*3:02 p.m.-4:33 p.m.*) and Andrea Suzuki (*entered at 4:33 p.m.*); Office of Boards and Commissions: Administrator Jay Furfaro (*left at 4:00 p.m.*), Support Clerk Darcie Agaran.

Prior to the start of the meeting, Council Administrative Assistant Eddie Topenio gave the Oath of Office to new Commission Member Larry Chaffin Jr.

**CALL TO ORDER**

The meeting was called to order at 3:01 p.m.

**SWEARING IN OF NEW COMMISSION MEMBER**

Ms. Griffin: We appreciate Larry joining us. Last month when Honey Girl was sworn in, she told us a little bit about herself and we introduced ourselves. If you all haven't done that, we'd love to hear that.

Mr. Chaffin Jr.: Thank you. I'm Larry Chaffin. I am a fellow of the American Institute of Architects; retired now. I've lived on Kaua'i for twenty-two (22) years. I came from Los Angeles, California where our firm worked in the seven (7) western states. And I enjoy life here. Thank you.

Ms. Griffin: Thank you. Victoria, do you want to introduce yourself as we go around?

Ms. Wichman: My name is Victoria Wichman. I work for State Parks.

Ms. Griffin: Thank you.

Mr. Long: I'm Stephen Long, Architect.



Ms. Schneider: Anne Schneider. I worked as a Planner here.

Ms. Griffin: Pat Griffin.

Deputy County Attorney Higuchi-Sayegusa entered the meeting at 3:02 p.m.

Deputy County Attorney Higuchi-Sayegusa: And Jodi Higuchi-Sayegusa.

Ms. Griffin: Our attorney.

Mr. Helder: David Helder, (inaudible).

Ms. Hoomanawanui: Thank you for coming and being here for this.

Ms. Griffin: Honey Girl Hoomanawanui.

Ms. Hoomanawanui: Honey Girl.

#### **APPROVAL OF THE AGENDA**

Ms. Griffin: With the approval of the agenda, if there are no objections, I'd like to switch items D and C, so that we take up New Business first and then Unfinished Business. With that, do I have a motion to approve the agenda?

Ms. Schneider: I make a motion.

Mr. Chaffin Jr.: I have a question on the agenda.

Ms. Griffin: Okay.

Mr. Chaffin Jr.: On Page 15, 6<sup>th</sup> paragraph, 7<sup>th</sup> word, what is the word?

Ms. Griffin: Let's see. Let's wait until the minutes on that because that's part of the minutes.

So you moved to approve the agenda.

Ms. Wichman: Second.

Ms. Griffin: Thank you. It's been moved and seconded to approve the agenda. All in favor? (Unanimous voice vote) Opposed? No, motion carries 7:0. Thank you.

#### **APPROVAL OF THE JULY 2, 2015 MEETING MINUTES**

Ms. Griffin: Now the meeting minutes. Page 15?

Mr. Chaffin Jr.: Yes. The 6<sup>th</sup> paragraph, the 7<sup>th</sup> word.

Ms. Griffin: Read it for us.

Ms. Wichman: Oh, that's my statement.

Mr. Chaffin Jr.: "But he was very..."

Ms. Wichman: No, I actually want to correct that because that's not exactly what I said. "It was very productive..." It was on Page 18 (sic), right? "But it was very productive to know the people from across the State", so that's how it should word on that page.

Mr. Chaffin Jr.: Thank you.

Ms. Wichman: And I also have a correction on Page 18 near the bottom. Where I'm speaking, near the bottom, it's the 8<sup>th</sup> paragraph. It says "we had Susan" and then it says "inaudible", its Susan Lebo, L-E-B-O.

Ms. Griffin: Thank you. Were there other changes?

Hearing none. May I have a motion to approve with changes?

Mr. Helder: So moved.

Mr. Chaffin Jr.: Second.

Ms. Griffin: Thank you. All in favor? (Unanimous voice vote) Opposed? Hearing none. Motion carries 7:0.

#### **ANNOUNCEMENTS AND GENERAL BUSINESS MATTERS (None)**

Ms. Griffin: Announcements and General Business Matters.

#### **COMMUNICATIONS**

Ms. Griffin: Communications. We got the one (1) that was at your place, and thank you for that as always, Staff. We appreciate that.

Other communications?

## NEW BUSINESS

**Re: Letter (6/26/15) from Ronald Sato, Senior Associate, HHF Planners regarding Environmental Reviews for Federally-Subsidized Public Hearing Projects Statewide, Section 106 Consultation – Preliminary No Adverse Effect Determination – ‘Ele‘ele Homes, TMK: 2-1-01:13 & 42; Hui o Hanamā‘ulu, TMK: 3-8-12:30; Kalāheo, TMK: 2-3-12:30; Kapa‘a, TMK: 4-5-15:07.**

Ms. Griffin: Then let's go on to Part D, New Business. D.1. is a letter from Ronald Sato, from HHF Planners, regarding the Environmental Reviews for Federally-Subsidized Public Housing Projects Statewide. This is part of the Section 106 Consultation. Their preliminary finding, you will have read, was that there is no adverse effect; not because these aren't quite fifty (50) years old because they will be in another five (5) months essentially. But on Page 3 of the letter, they state that Fung Associates has shown that there have been enough changes so that they don't have historical integrity at this point.

Are there any comments that you want to bring up for us to give a response to HHF? Has anybody been able to see any of these project sites?

Ms. Schneider: No.

Ms. Griffin: I'm wondering if we can ask HHF for Fung's response on where Fung Associates felt the loss of integrity had occurred and what has happened. I think that would help all of us to see what these character defining aspects of properties in general are of this era.

Ms. Schneider: Can we request a letter?

Ms. Griffin: Sure.

Ms. Schneider: Asking them to define what they think has loss integrity.

Ms. Griffin: Would you like to make a motion, Anne?

Ms. Schneider: I'd like to make a motion that we send a letter asking them to define what they mean by losing integrity and how many changes have been made.

Ms. Wichman: I second.

Ms. Griffin: Thank you. It's been moved and seconded that we send HHF a letter requesting more information on how they've defined the loss of integrity and what changes have been made.

Is there further discussion? Thank you. Hearing none. All in favor? (Unanimous voice vote) Opposed? (None) Motion carries 7:0. Thank you very much, and thanks to Staff.

Mr. Chaffin Jr.: Shouldn't it be attention to a certain person rather than just the firm?

Ms. Griffin: I'm sure that it would go back to Ronald Sato, the Senior Associate, who sent us the letter, too. Thank you.

**Re: Letter (7/17/15) from Kimi Yuen, Senior Associate, PBR Hawai'i & Associates, Inc. informing the KHPRC of the Draft Environmental Impact Statement (EIS) for the Hā'ena State Park Master Plan that has been prepared pursuant to Chapter 343 of the Hawai'i Revised Statutes and Administrative Rules, Title 11, Chapter 200.**

Ms. Griffin: Item D.2. The letter from Kimi Yuen, Senior Associate, of PBR Hawai'i and Associates informing KHPRC of the draft Environmental Impact Statement for Hā'ena State Park Master Plan.

I know Ms. Yuen is here.

Ms. Wichman: I need to say that I have to recuse from any statements on this because I work for State Parks.

Ms. Griffin: Thank you.

Please come up, and if you could introduce yourself for our hardworking transcriber.

Kimi Yuen: Aloha, Commission Chair Griffin and fellow Commissioners. Thank you for having us today. My name is Kimi Yuen from PBR Hawai'i and Associates. With me today is Alan Carpenter, State Parks Archaeologist. Actually I was going to ask, before we get started, we have a slideshow presentation to give you an overview of the project. I also have large prints of the maps that if maybe Kaaina can help us put up, I can use it in my presentation.

Thank you, again, for having us. I'll jump in while they get that up. I don't think the beginning slides are anything ground-breaking or earth-shattering.

Just an overview of our presentation, we will go over the meeting purpose, what we are presenting today, project background, the planning process and EIS process that we're going through right now, and then answer any questions that you may have for us.

So just briefly, again, we're here to provide an overview of the draft Hā'ena State Park Master Plan. We initially came before this body in 2008 when we kicked this project off. I would just like to say that it's been a long process, but I think it's been very meaningful and we've had very good conversations. I'll have a list up later about an advisory committee of community members, kupuna, local families that have been involved, including business and other community leaders. It's an extensive list of folks that have been involved, and participation has been great. I feel like the plan has come to a state where everybody is comfortable with it, and so we've moved forward with the EIS process. We are also going to follow-up on the pre-consultation comments this body had for us back in 2008, and then again, to answer any questions you may have on the process and the EIS moving forward.



Just some brief information. I'm sure all of you are familiar with Hā'ena State Park. It's the State Park that is located at Kē'ē, on the north shore. It is at the end of the State Highway and comprises of 65.7 acres. The majority of the site is State land, but the County does own a small outparcel of 0.68 acres where Ka Ulu A Paoa Heiau and Ke Ahu A Laka are located. The State primarily used Federal Land and Water Conservation Funds to acquire the property in 1977. What that means is that as the State moves forward and some of the management issues that have come up, they will still be required to abide by certain regulations and guidelines. It impacts things like entrance fees and that sort of thing, so there's a certain set of rules specific to the Federal Land and Water Conservation Funds that State Parks will have to abide by moving forward. Right now, the main reason we're here is that there's currently no adopted State Master Plan for the park or an accepted EIS, and State Parks basically needs that to move forward with any kind of major capital improvements at the park, which I think all of us know the park could definitely use some care and attention.

Just briefly highlighting some of the significant sites at the park. Of course, there's the heiau again and the hula platform. Lohi'au's house platform is also located at the State park, and an extensive agricultural complex containing lo'i and 'auwai, as well as a couple of loko that may have been, or thought to have been, agriculturally used, too. You have the two (2) wet caves; Wai a Kanaloa and Waikapala'e. Kē'ē Beach and Lagoon, which is a very popular visitor destination with roughly three hundred (300) people on the beach at any one time. Na Pali o Makana, which is a prominent peak that you can see from portions of the park, and then, of course, the trailhead to Kalalau Trail and the Nāpali Coast State Wilderness Park. Much of the park is included in the Hā'ena Archaeological Complex, which is a registered historic place on both the State and National Registers. It was placed there in 1984. The Nāpali Coast Archaeological District is primarily the area mauka of the highway, and that, too, was placed on both the State and National Registers in 1984. The highway itself, the north shore section of the Kaua'i Belt Road was put on the National Register in 2004.

Here's a picture of the existing site. You can see the extensive lo'i complex on the eastern portion of the State Park. The existing unpaved parking lot is here. The State highway runs along this edge at the base of the pali, and terminates at Kē'ē Beach. The heiau is located here and this is where the County property is located; the 0.68 acres. So you can see that it's actually landlocked within the State property. The two (2) loko are roughly in these areas. The site is heavily overgrown, but it used to be cleared, open, if you can imagine, expanse of coastal dunes along the shoreline. The two (2) loko were not covered over like they are currently, and of course the agricultural complex was actively farmed until the 1960's.

Alan, feel free to jump in if there's anything.

So the 'auwai are these little dotted lines that you see running throughout the lo'i. Back in 2008 when we were here, actually it was just me that was here before you seeking any input or thoughts that this body had as we kicked off the project. There were basically six (6) main issues that were brought up, and one was the National and State Registers, which I just went over earlier that much of the site is actually already on both registers. A comment came up about the relationship of proposed trails to the cultural resources and the cultural practices that occur at the park. Fishing

zones, an interpretive program, maintenance and management of the overlapping State and County jurisdictions, and then mapping of buffers of specific resource preserves within the overall complex.

I'll let Alan talk about this slide, but basically we asked Alan because State Parks has archaeologists on staff, they did the archaeological overview, survey, and mapping for us. This is one of the graphics in both the Master Plan and the EIS.

Alan Carpenter: Alright, thank you Kimi. Thank you, Commissioners, for having me here today. So this essentially is an outline of the park property. As Kimi mentioned, as most of you probably know, Hā'ena is an extremely important historical place; a very storied place associated with import persons and legends, and that manifests itself on the ground, in terms of physical remnants. When I was asked to put this map together to sort of outline where the significant resources are, you can see that each of the colors represent a different site type. Effectively, the entire park is covered by sensitive archaeological sites. Most notably in the dark green, in the white outlines are the actual mapped lo'i bank walls; that's a very large and extensive irrigated agricultural system of lo'i. As Kimi mentioned, it was farmed up until the 1960's and has more recently since the 1990's been revitalized by the Hui Maka'aina o Makana, a curated group we have out there, and they have, again, begun planting and restoring a section of the lo'i system. And that's a prominent part of the park landscape today.

The two (2) loko; Loko Naia, Loko Kē'ē. Loko Kē'ē still functions somewhat as a pond. It has standing water at most times, though it is infilled. Loko Naia is dry. It no longer has a pond element to it, but it was there historically; most likely a combination of a lo'i and a fishpond.

The yellow areas are the beach dune system. That area is noted of course as an area where people were buried. There have been a number of burials that have come up to natural reasons and one, due to park development in the last few decades. There are historic cemeteries as well. They are hard to see, but right here is one (1) with historic grave stones and right here is another one (1) that may or may not be. It appears to have grave markers, but we're not 100% sure. But the entire dune is considered sensitive as a potential area of burials. So we consider that as one (1) of the more sensitive places. It has conflicting uses because that's also the shoreline where most people want to go and visit. The yellow areas on the mauka side of the road are legendary sites. The wet caves, Wai a Kanaloa and Waikapala'e, are these two (2) areas here. This is Lohi'au's house site, which is a very large platform with unique architecture. A pretty stunning feature, but again, kind of hidden away in the bushes.

Ms. Santos entered the meeting at 3:20 p.m.

The area in blue, that's mostly the highway, but also at the end of the road, this is the historic Allerton house complex and gardens. It's actually quite modified. It had two (2) homes; previously owned by Francis 'I'i Brown, I believe, who may have built the homes. One (1) of them burnt down around 1990. We still have the Caretaker's Cottage, which is a 1920's structure. We hope to restore that as part of the park landscape and also adaptively reuse it for park purposes.



And the last area to discuss is...I'm sorry, this is other blue one. This is another historic homestead area where people lived in the early 1900's.

The area in red is effectively all the area that has modern disturbance, so that is essentially the only disturbed areas, and that really shows how constrained we are with being able to do any kind of park developments without disturbing historic features. So the main area where the current parking lot is, this is going to be the focus of all future development. This area here represents disturbance from the Taylor Camp days in the 1960's, but there are still remnants of the lo'i despite that disturbance. This is simply a road that accessed another historic house which is still there; the Montgomery House, again, built in the 1930's, and another one that we intend to hopefully restore and preserve. This is the area most recently developed by State Parks in the 1970's. That did impact some subsurface cultural features, mostly habitational features, but also one (1) burial. In a nutshell, this is a very challenging place to propose development and manage herds of people.

Ms. Yuen: Just to add to Alan's wonderful overview, this central area is right in the middle of where the Hui is actually...this is the area that they've restored and are currently farming. But this area, Alan if you can correct me, they would not restore this as lo'i because there were a lot of abandoned cars, and it just would not do well as restored lo'i. So that's why this small area of the lo'i is called out as "red" because they wouldn't ever restore it.

Mr. Carpenter: Yes exactly. Due to the nature of irrigated agriculture and pond fields, especially for kalo, if you fill those with water to cultivate, down below the surface there is a lot of glass and metal and other things it that are extremely difficult to remove, so that will probably remain as some kind of use area or perhaps dryland, but it's not going to be restored as far as a lo'i system.

Ms. Yuen: So this is a list of our Community Advisory Committee members.

Mr. Carpenter: Which you've seen four (4) to five (5) times already. (Laughter in background)

Ms. Yuen: Like I had mentioned earlier, it includes a wide variety of kupuna and Hā'ena 'Ohana members. We have cultural practitioners, such as Kumu Hula Kehaulani Kekua, on our advisory committee, as well as many of the local businesses and community leaders on the north shore involved in the process. We can leave a copy of this for you folks. This is also in our Master Plan Report as Appendix A. I think some of their titles might actually be outdated since it's been such a long process; we probably have to add like two (2) or three (3) for some of them.

So this is the view of the current draft Master Plan. Again, we brought larger prints that are up on the board. So I'll just kind of go over a lot of the highlights of the plan. Maybe it'll help if I can walk up to the printed one and point as I...

Again, to give you some orientation, of course, the shoreline is on the top side of the image. The pali is on the bottom of the image. The highway running at the base of the pali; the heiau. So the thought is that traffic and access will come from the highway primarily. At the main entrance...because this is technically the end of the highway, we included a turnaround so that cars that aren't actually going to the park, but actually want to drive to the end of the road can do

that without backing up traffic as it currently happens. We divert the traffic into a parking lot, and I'll explain in a little bit why its bent in this fashion, but the main reason is that as we had go along in the plan and it's probably a big reason why our finalization of the draft Master Plan got delayed a bit, was that State Parks and DLNR had undergone a Rockfall Hazard Study for this stretch and found that actually the highway lies in a pretty significant rockfall hazard zone. So what that ended up doing was we had to reconfigure this entry portion of the Master Plan because we were putting some of the main visitor facilities right within that zone. I have a map coming up and it's actually on this, but we'll show the different rockfall hazards. But on this plan, it's the little dotted line. What we did was locate all of the visitor facilities outside of that, and this is a modeled rockfall hazard, kind of, predictor of where the rocks are likely to fall. So this was the point of 0% chance of rockfalls, so we tried to locate everything outside of that and outside of that rockfall zone. The advisory committee actually came up with that concept. What that does is, the highway no longer becomes the main access for people to get to Kē'ē Beach. We are recommending an elevated boardwalk that actually goes over the lo'i and cuts up towards this hau thicket, and then out to Kē'ē Beach that way to get them out of the rockfall hazard zone. The highway, we've talked to State DOT and they are perfectly happy turning it over to State Parks to maintain, but the process for that has not quite been done. The reason for that is that we want to basically limit the amount of traffic that is falling in this area. So what this becomes then is a special access or very limited access roadway. We have a small thirteen (13) stall parking lot at the end of it that we'll maintain, including two (2) ADA stalls. So that would be the primary access for the ADA access to the beach, as well as for cultural practitioners and any kind of hālau groups that may be going to the heiau; that becomes their special access to get there. I think we're also talking about fishermen and fisherwomen; they will be able to still use that as a special access. For the most part, the main bulk of your visitor traffic will be diverted to the main parking lot here. We sized it in this plan to be one hundred (100) stalls, which is what was shown in a previous Master Plan that State Parks had developed with a different consultant, back in the 90's. That plan and draft EIS was never finalized, so we came in back in 2008 to try to finish out. Basically, the base of this plan was based off of what was termed a community preferred master plan, but there were issues that people were still uncomfortable with, such as...actually that plan had dispersed visitors all along the coast line, thinking that would minimize impacts, as opposed to being concentrated in one (1) place. But that concept you know, this is not exactly the safest place to swim, you don't have any lifeguards, so that idea got taken off the table. They had actually located picnic tables along the coastal dune, which we didn't think was appropriate, so that is all gone. Now we are proposing restoration of the coastal dune. The advisory committee had made a good point that not only would they be taking care of the environment, but they would also be taking care of the kupuna that are there.

The previous plan had bike paths where the 'auwai was throughout the complex; we took that out. Really what we're doing is trying to focus the visitor traffic to the main entry parking lot. We have a visitor, kind of, welcome center right at the entry point, so we are focusing the visitor traffic along the elevated and it would have rails along this boardwalk to the hau thicket, and then from there a path directing folks to the beach. What this does is it provides a view, actually, of the lo'i that currently people don't get to experience, and it also opens up views of makana, which is...I don't think it's up here, but it's the peak is on this side, so there's a little viewing platform here that they could actually see makana now, where they can't see it from the highway. It helps bring out opportunities to interpret the sites that currently may not exist.



We worked really closely with the Hui that is restoring the lo'i. The discussion points were that because this section of the lo'i is at the base of the pali, it actually is some of the least productive areas of the lo'i. The concept is to then, you know, maybe this becomes places where visitors can actually experience lo'i firsthand; maybe they get in there themselves and can have hands-on kind of experiences within the park. The Hui would actually start to work on the later phases. Phase I actually continues here. These phase numbers relate to a restoration plan that Alan had worked on, I'm not sure how long ago, but the idea is to basically, eventually restore all of the lo'i at the park. What that does is allow the Hui to continue their work on the later phases of the restoration, but then also open up opportunities where visitors to the park can experience it as well.

This entire portion that is dashed out around the heiau, we've designated as a hula complex. That in and of itself would require its own, kind of, planning, probably an advisory committee to decide what and how that is, but the idea is that this becomes a place for hula practitioners.

In this middle part, we have what we've called a cultural gathering place where we would be proposing an open hale style learning center; Hālau Wa'a, for canoes since it's right along one of the bigger 'auwai that goes out into the channel. If you can see these little dotted lines throughout the lo'i, those would be limited to pedestrians only, and then things like guided tours might be able to access and have a connection back to the main visitor center there.

We've left the historic cemeteries as is and kept this historic road; that's what you see here dashed out. We haven't done anything to the comfort station and constructed wetlands that are currently there and completed, but the thought was because this is such a sensitive site, at the entry point we would be providing a second set of comfort stations. Hopefully what that does is it minimizes the use that actually happens out there because people would be using this as well, so the amount of runoff occurring at Kē'e would be lessened.

This little structure here is a caretaker's cottage that was envisioned in the previous Master Plan and a 24-hour presence; somebody actually hired by State Parks to oversee the park twenty-four (24) hours a day was a recommendation from that plan that's carried over to the current plan. You'll see things like this little dashed box. The Montgomery House is another one, but those are archaeological or historic sites recommended for restoration.

At the turnaround, we've identified it as a potential shuttle stop as well, and I'll go over some of the transportation plans and alternatives that came up through the meetings as well. For the most part, the primary focus becomes restoration and protection of the natural cultural historic resources throughout the park. The parking lot, actually Alan, if you could advance the slide, we're showing another plan of the entry area. If you can see, the turnaround is very similar, the parking layout is the same. There's a much more modest welcome pavilion at the park entry, and then the boardwalk carried over. But the concept here is to start small because State funding can be quite tight, and so State Parks asked us to come up with a near-term plan that could be, maybe you know, take a smaller bite of the big nut of the full Master Plan and what could be done to implement some of the concepts, such as the visitor limit which I'll go into a little bit as well. Graphically, we tried to show that one (1) of the main concepts of getting people to the park talked about a remote entry at Princeville. Putting a lot of the parking outside of the park.

Ms. Schneider: Can I ask where that's going to take place in Princeville?

Ms. Yuen: Where? I mean there are a few sites we identified in a Transportation Plan that's in our Master Plan.

Ms. Schneider: Because there's no parking in Princeville now.

Ms. Yuen: Right, right, exactly. But there is a site, there is a landowner that has offered up a site, so there's a community group that is working on that. It's one of those things that we'll need a lot of funding. It might require County, State, and Federal entities to partner on that, but there is a site that's identified in Princeville. It's a potential site that would hold probably 200-300 parking stalls, I think is what they estimated at. In any case, what we're showing here at least, if there was parking to be on-site, there's a roughly one hundred (100) stall parking lot.

The major management recommendation that came out of the group was to limit the visitors in the first place. You've got over 2,000 people coming at the peak on days; just one (1) day alone; 2,000 people coming to this park and it's just too much. Back in '93, the estimate of visitors, I think when you first started that earlier round of master planning efforts, it was only 350 people a day. So you can see, over a very short period of time, the number of visitors that are coming to Hā'ena State Park is quite significant. The first issue would be to reduce the number of visitors that come to the park on a daily basis; that would include folks going on the Kalalau Trail. But the idea is that you would have a flexibly sized parking lot, depending on what kind of transportation alternatives could get worked out. The County has been working on a north shore shuttle that they've been trying to get off the ground as well.

Ms. Schneider: That's already failed.

Ms. Yuen: Well, yeah I mean, the entity is still there, but I don't think the energy and the interest has yet, so I don't want to give up on that either. I think it's still a potential and I know the County is planning to do a study on a north shore and south shore shuttle. We're kind of keeping those options loose at this point, but the idea is that we won't overbuild a parking lot if some of these other solutions can work. If it doesn't, at least State Parks has, in their Master Plan, a one hundred (100) stall parking lot identified. The preference was to pave it with a permeable surface, which is why it's colored the way it is. Initially, it could start off with Phase I that lighter tan area, and you could keep the part in green as kind of an open lawn or grand lawn that you could have events or hold educational events or even community events in this space.

You have a more modest welcome pavilion, but again, the boardwalk would be an integral part of implementing this near-term plan.

If you look near the highway, you'll see a red line and a green line. Again, those are the rockfall hazard zones. The red line was where a 5% chance of a rockfall event might happen, and the green line is the 0% chance. Everybody just decided that rather than try to come up with some engineering solutions along the cliff, the advisory committee's priority was to preserve the cliff



and not impact the cliff with any kind of engineered solution; let's just move everybody outside of that zone. Even members of the Hui felt that that was a better way to go.

Again, to go over some of the key management recommendations that came out of the plan as well, these four (4) were seen as critical to being implemented no matter what the park ends up doing. I think when they are looking at transportation, entry fees, all that kind of stuff, that's still up for debate, but these were the four (4) that everyone agreed needs to happen, regardless of what other management decisions are made. The first one is to create a cultural advisory group and a broader community advisory group. It would be something similar to the advisory group that we had for the Master Plan effort. I think we would open it up to them to participate as well, but that's not to say that they will be the ones on this community advisory group. The cultural advisory group would be much more specific and require people with actual expertise in the different cultural, you know, there's fishing, there's hula, there's agriculture, that sort of thing, so very specific cultural advisor for State Park. The second item, again, is the initial daily visitor limit of nine hundred (900) people per day; that would include everybody going to the park or day hikers on the Kalalau Trail. This does not include the sixty (60) camping permits for the overnight further down on the Kalalau Trail, it would not include the thirty (30) hunter permits that are allowed, it would not include cultural practitioners, it would not include any kind of special hālau or lo'i work groups, school or educational groups, fishermen, or the cemetery caretakers. The discussion was to see what the impact would be over time; let's set a number at this outset and see what the impacts are to the park. If it continues to be a problem, they could adjust it down, as well as if it seems like there might be an ability to increase it that is still on the table as well. The idea is to at least set an initial daily visitor limit, which is less than the current number, but again, it is still higher than what was happening in the early 90's. But the idea is to see what the impacts would be to the park.

Mr. Helder: Would local residents have to apply for a permit to go?

Ms. Yuen: No, you wouldn't apply for a permit, but you would have to, basically, plan your trips. There will be tickets, and whether they charge a fee for it or not, and whether residents get charged or not, I think that's still open.

Mr. Carpenter: Actually, we've already gone out to the community, so residents are not going to pay entry or parking fees under a previously vetted agreement between us when we went out for fees statewide a couple of years ago. We're actually in the process of codifying our existing and proposed fees in our administrative rules; that's going to happen, actually, in the next couple of weeks. So any fee will apply to out-of-state visitors, but not to locals. But if we set a limit, there has to be a way to have a control point or a system for adhering to that limit.

Mr. Helder: So if you lived in Wainiha, for instance, and you wanted to drive out there.

Mr. Carpenter: Yes, that's one of the challenges and there are other things that could come into play. For example, the peak times, you may limit the peak times, but guys who need to go out and fish early in the morning or people who want to go at night when there's really not a capacity issue, everyone is already gone, those may be totally open and available. At least that's one (1) of the

things that I think would be imperative to the local community because you can't plan the nice days or the days when the akule are there, that kind of thing right, so it will be a challenge. There was an overwhelming desire by the advisory committee to set a limit, essentially because visitor experience is being impacted and particularly, local visitor experience is being impacted by the absolute crush of people heading to the end of the road.

Mr. Helder: I understand that, but when you live out there that makes up a large portion of where you have to go. You're basically limiting accessibility for people that live there.

Ms. Hoomanawanui: That's true.

Mr. Helder: That's a problem.

Ms. Hoomanawanui: You're right.

Mr. Helder: That constitutes a taking, really, of what we have out there.

Mr. Carpenter: If you're fishing or you're practicing culture, you're not beholding to these limits. So that may be a challenge to prove or I mean, you figure, just considering how it would actually operate. It's probably going to be a bunch of people familiar with the area and locals or a community group, possibly even, running this under some kind of agreement. They are going to know the difference between someone from Minnesota and someone from Wainiha.

Ms. Schneider: I think that's part of the problem here now. The beaches, everywhere is so crowded that there's no place for the local people to go anymore.

Mr. Helder: Yeah, and it's what it sounds like, it's another...

Ms. Schneider: And we keep catering to the tourist experience, rather than to the local experience.

Mr. Helder: Yeah.

Administrator Jay Furfaro: Excuse me, Madam Chair. May I recommend that you finish the presentation and then go into a recognized Q&A afterwards?

Ms. Griffin: Thank you.

Mr. Carpenter: Okay, thanks.

Mr. Yuen: The third key management recommendation was to require a visitor orientation prior to park entry. That is simply to educate anyone who comes to the park about the sensitive natural and cultural resources there. Especially if you are a local resident, you would only have to do it once, and after that you would be cleared of having to do it again. So there's different types of ways to implement that, but the idea is that, you know, because of the conditions that can turn on a dime in this environment, it's imperative that anyone who goes there knows the potential range



of hazards that are out there and be aware of them. It could also include things like daily weather reports; whether there's potential flash flood warnings or that kind of thing. Basically the idea is to help educate anyone who goes out there because it's not only the tourist, but there may be Kaua'i folks that aren't familiar with the conditions out there, too, that may require some education. And then the fourth one is to require Staff and Volunteer education since they are at the front lines of any kind of visitor interaction; whether they are local or out-of-state.

To just quickly go back over the issues that were raised by this body back in 2008, we did go over the National and State Registers. Again, the relationship with the trails to cultural resources and practices, the idea is to focus visitor traffic on that boardwalk and get them safely to Kē'ē outside of that rockfall hazard zone and open up the views of the lo'i and makana. And again, it will not preclude cultural practitioners' access to the sites because we will have the highway remain as that limited access corridor. Even the hunters, we were talking about being able to park at the parking lot at Kē'ē. Fishing zones, the Master Plan basically defers to the Hā'ena Community-Based Subsistence Fishing Area rules that were just adopted by the Board of Land and Natural Resources in October of 2014 and recently signed by the Governor; I think that was just Tuesday. So rather than having an overlapping set of rules or concepts, the group just decided to defer to those area rules that are now signed into law. Interpretive program. The entire Chapter 5 of our Master Plan report goes over a proposed interpretive program. And with Victoria Wichman now on staff as an Interpretive Specialist here on Kaua'i, that would probably fall under her purview for implementation. Maintenance and management of the overlapping State and County jurisdictions. It had gone back and forth in a lot of different discussion and concepts, but currently, the County actually has a stewardship agreement with the Hui to manage that site. I don't know if Alan wants to elaborate on any of that.

Mr. Carpenter: Actually, they have two (2) agreements. The Hui has an agreement for the lo'i, and they more recently have an agreement, since we started this process and you ask actually, the County has started their own program with the great support of the Mayor and they have, how many? Three (3)? Or just two (2)?

Ms. Wichman: What? (Inaudible) agreements?

Mr. Carpenter: (Inaudible) agreements under the County.

Ms. Wichman: Right now, officially, one (1).

Mr. Carpenter: Just one (1)?

Ms. Wichman: Yes.

Mr. Carpenter: Plus this one?

Ms. Wichman: Yes, they are working on this one. Kaneiolouma is the first one.

Mr. Carpenter: Right.

Ms. Yuen: This one actually hasn't been signed.

Ms. Wichman: I really couldn't answer that. I don't know.

Administrator Furfaro: This one hasn't been executed yet.

Mr. Carpenter: It has not yet? Okay, so still in the works.

Mr. Yuen: But that's what the County...

Administrator Furfaro: That's No. 2.

Mr. Carpenter: That's No. 2, alright. The last one, the mapping and buffers of specific resource preserves in the overall complex, that is included in the plan, but I just want to add from my perspective. The issue of buffers around archaeological sites is a development driven rule within the Chapter 6E, Historic Preservation Law. I prefer to flip that back to the opposite where what we like to do within parks is preserve everything, and instead our buffers should constrain the amount of construction that goes on, so that in fact we put a buffer around where construction activities can occur, everything outside of it is actually preserved. But the buffers, in this case, will be barriers to roadways, trails, vegetation, and things like that. It's not the same concept as you see when someone develops a hotel complex and they put buffers around the burial sites and the heiau because that's all they are required to preserve. We try to preserve everything, so we're kind of doing the opposite.

Ms. Yuen: So if you remember the map that Alan had shown where we had those red areas of disturbed areas, we really tried to keep anything we are proposing to those disturbed areas that could never really be restored.

Quickly, the EIS process, and I think some of you may be familiar with this, but an Environmental Impact Statement is a significantly more intense document than a standard Environmental Assessment. Really, with this project, there are so many triggers that we just decided that an EIS is probably more appropriate for this project because besides the use of State and County lands, you have area within a shoreline, historic sites, it's a conservation district, and there's actually an existing helicopter facility within a conservation district, shoreline area, and registered historic site that we are actually relocating, just a tad, in the plan from its existing site. Again, the EIS is not the actual permit. State Parks will still have to come back for their actual development permits, should they move forward on any of the construction projects, and this is just a list of them. I won't go over them in any detail, but again, the EIS is the disclosure document and where potential impacts are vetted and mitigation is proposed as part of what is being proposed in the Master Plan. So when they actually implement it, a lot of the mitigation concepts that come out that are brought up by community members and the public are rolled into the EIS. With that document, State Parks now has a good basis to really make sure that when they do move forward with implementation, they are taking into consideration all of these mitigation measures.



This is just a quick overview of the EIS process. The EIS prep notice was completed back in February and March of this year. We are currently in the draft EIS stage with the public review and comment period open right now. It closes on September 8<sup>th</sup>. After that, we will move forward with revising the EIS and incorporating all of the comments that are received. Then, the final EIS is accepted by the Governor, unless he so decides to delegate that authority.

So if you had a chance to look at our document, this is just a kind of quick overview of the organization of the document itself. If you decide to delve deeply into it, or if you don't have the time to really delve deeply into it, the first two (2) sections, the project overview and Section 1 include the Master Plan summary, as well as the summary of all of the impacts that are discussed in the later chapters. Chapter 3 is a description and more detailed assessment of the potential impacts and mitigation measures to the natural environment. Chapter 4 is those impacts to the human environment. Section 5 is conformance with the regulatory laws and guidelines and policies. Section 6 describes the alternatives we looked at as we went through this process. (7) is the contextual issues, and much of this is the requirements of doing an EIS document, so it gets more technical as you get further into it. The 8<sup>th</sup> is just the list of agencies and individuals we consulted with. (9) is the list of preparers, references. And then the actual comment letters we received during the pre-consultation period and the EIS prep notice period are actually attached in the last two (2) chapters with our responses to those written comments.

So just a quick overview, we've distributed the draft EIS to quite a few public agencies, as well as individuals and community groups. Copies were also provided to the media and the public libraries, including Princeville Library, the Lihue Regional Library, and Kauai CC Library. Technical studies that were done for the EIS are also attached as appendixes, which is why the document gets really long and voluminous, but these are attached as appendixes to the draft EIS. And then the remaining project timeline. We're hoping to get through the draft EIS with the September 8<sup>th</sup> comment period deadline, revise it, and submit to the Governor and OEQC for review by October. Then, it actually goes to the Board of Land and Natural Resources for their review of the final EIS, and then again, it has to go back to the Governor for final acceptance, and then OEQC actually publishes it. After that, we will be finalizing the Master Plan itself, which would also require Board of Land and Natural Resources approval.

With that, do you have any questions for us?

Administrator Furfaro: Madam Chair, before you open the questions to the members, may I have a moment as I'm leaving to go to visit with the Mayor for another meeting?

Ms. Griffin: Of course you may.

Administrator Furfaro: Thank you. First of all, I'm delighted to see the presentation, but I wanted to just give some clarity here. On the Princeville shuttle bus, that issue is not dead. I do want you to know the Mayor launched a new committee of which George Costa and myself both got anointed to be on the committee, probably because of our visitor industry experience. So we've launched the original meeting with the resort operations at the Princeville site. And Lee from Planning and

Public Works is really our transportation guy, so just to answer that question, it is trying to be reestablished; just for general information.

I also want to say that our committee is also looking at options with landowners for the acquisition of property. We've been in touch with both the Federal and the State offices. That is in reference to your comments about the alternative parking location up on the north shore. That's being coordinated with the fact that we're still trying to get information as to what will happen with the Kilauea Lighthouse and those visitor centers, so there are things going on. What we're hoping to hear from the Planners also is there is a component of this land that's missing, and obviously they touched on it, on the financial aspect; fees and costs associated with general operation, stewardship, and so forth. So I just wanted to give you that piece of information, so that Chairwoman, you knew that (inaudible) going on along that way. And again, to remind you that your task is really to focus on the historical aspects of the plan and that stewardship. I'm sorry I have to leave, but thank you.

Ms. Griffin: That's alright, and thank you. And it's good to get an overview of the transportation, but I did want to remind this Committee (sic) that our kuleana is the historic preservation aspect. So transportation, who the Caretaker is going to be, where the engineering is, is outside our purview, unless it relates directly to historic preservation. What I'm going to do is ask you all to have questions, if you do, to Ms. Yuen or Mr. Carpenter. Then, I'm going to open it if there's public comment, and then we'll have further discussion, and make a decision on how to proceed. Thank you, again.

Mr. Furfaro: Again, I want to apologize for interrupting, but the discussion without a rules of following makes it very difficult for the Staff to record the meeting, so that's an apology from me for reminding. It's better to have speakers recognized when Q&A is proposed.

Ms. Griffin: Thank you.

Administrator Furfaro: Thank you, Madam Chair.

Administrator Furfaro left the meeting at 4:00 p.m.

Ms. Griffin: Are there questions of Kimi or Alan regarding the presentation?

Mr. Helder: I'm still having trouble with this, the restriction of use and...

Ms. Griffin: Excuse me, David, unless you can specifically say why that is affecting the historic preservation.

Mr. Helder: Cultural access. Cultural access has been historic for people here to be able to go out there and have whatever, whether they're a practitioner that is recognized by doing hula or standing out there and playing a 'ukulele. I don't care what it is, when you describe the accelerated use of the park that's causing an environmental impact that you're trying to mitigate, that accelerated use is not by the people who live here. It's by increased tourism that's promoted here. When you start



saying, if I'm standing out there and I want to go out and play my 'ukulele and I'm not allowed to because the limit has been reached of tourists, it means that my access to that park is restricted because you've promoted the use of tourists over the people that have been here and have traditionally been able to go out there, and practice whatever it is that they want to practice, in preference to tourism. So I understand; I live near there. It's a place that I go regularly and under the plan that you've just described, I would not be able to. There would be no spontaneity in what I would want to do as a resident here. And that representing from where I live, that represents probably 25% of what's available to me near where I live. So what I am really seeing here is it constitutes a preference by the State Parks system, under which you've designed here, for accepting tourism at the expense of the residents of Hawai'i and Kaua'i, right here in particular. I don't find that acceptable, to tell you the honest truth. I don't know what you want from this particular body, an acknowledgement so that you can go forward and check this off, but I don't agree with what I see.

Mr. Carpenter: Okay. I appreciate that. If I may, it's certainly not the intent to limit any local or cultural access of this. I'll back up and say that this plan represents a tremendous collaboration between the State and the community, particularly as expressed through the community advisory group, and both the limits on the number of people and the limits on parking were not anything proposed by our side. Those came 100% from the local community. In fact, we had many long discussions and debates, and I think we would have been very disingenuous inviting the community to give their input and then ignore it. This isn't completely vetted yet, nor is the solution as to how to implement it clear, but we gave the community their say and we accepted their recommendations, and that became embedded in this plan. The big public meeting where it goes out to everybody else is coming up, and that's going to be a time when I'm sure we are going to hear plenty, but I think the public is also going to hear from those in the community and their reasons behind the decisions they made to put that in.

Ms. Griffin: Hang on because if there are other questions, specifically on the presentation, we can take them, but then I want to open it to anybody in the public who wants to speak, and then we can come back and discuss. So are there other questions?

Ms. Schneider: Could I ask where it is in relation to the plans for Koke'e? Is this going to come first? Or is Koke'e going to come first? Because you have a master plan for Koke'e.

Mr. Carpenter: I don't know which is going to come first. Depends on where the funding comes from and the priorities of the Division. I can't say for sure which one is going to come first. They are both, kind of, proceeding concurrently. We don't have a whole lot of extra money for either.

Ms. Schneider: I would just like to say, as a business person in Hanalei for 25 years that I really object to this plan.

Ms. Griffin: Okay.

Ms. Yuen: I do want to add to Alan's comment about the visitor limit. I made the point that because the State acquired the lands with Federal monies, I mean, we wrestled with that like can

we let the local guys go unlimited and just limit visitors only to the park? But because it was acquired with Federal monies, we cannot discriminate somebody who lives in Hawai'i even, much less somebody from Kaua'i, from somebody who is from the mainland. So that is something we are wrestling with in figuring out how to implement this visitor limit, but the idea was that this would just be a first cut, we would let local practitioners continue to use the park, and see what happens then. I don't think we've defined it necessarily, and that may have been on purpose that we weren't overly specific about who can go, who cannot, but the idea was that we are trying to keep it loose enough to respect the local community that still wants to go, and like Alan said, maybe in the mornings and evenings there's no visitor limit; it's only from the peak hours that that number counter starts. But there are a lot of different ways that State Parks can actually implement this and that's why it's a management strategy. It's not something that's set in stone. It's something State Parks can adjust if it's not working. If the local community says like after a month, I still cannot get to the park, this is not working, and State Parks takes a look, well the environment, the experience at the park has changed with even that initial reduction, you know, hey maybe that gets adjusted. But the idea is to creatively come up with a way to, I mean, like I said we cannot discriminate between locals and non-locals, so how can we reduce that but still respect those who live in the community who still want to go to the park whenever they want without clearly saying the 900 only applies to out-of-state people or something to that effect. State Parks has to be very creative on how this gets implemented, but the idea is and like Alan said, the intent was never to reduce the number of local visitors. In fact, the whole point of why it was instituted, according to the advisory committee, was that local people don't even go now because it's not someplace they want to go; it's just overrun, they just don't want to be there. So the first thing that needs to happen is the period of ho'oma'a; let the park rest, let nobody in for a week. They're talking about just trying to get everything back under control, start at some point, you know 900 came up because it was less than half, it seemed like a reasonable number based on historic counts, and then adjust it from there. If we're finding out that local residents are being precluded from using the park, these guys are not going to keep taking those phone calls, they are going to make adjustments, and that was the idea. It's a management call, it's something that's adjustable over time, but the community just felt the park just needed a break; it is just way too overrun, it's been way too overrun for way too long, and everybody just...

Mr. Helder: I don't disagree with you, but it sounds like it's de facto become a Federal Park.

Ms. Griffin: Is there anybody from the public that wants to speak at all?

Okay.

Deputy Director Kaaina Hull: If I could...

Ms. Griffin: Yes, Kaaina.

Mr. Hull: Was there somebody that wanted to speak? Sorry.

Ms. Griffin: No.



Mr. Hull: If I could interject here, too. Kimi folks have had a bit of a yeoman's effort. I actually attended a few of the meetings in the beginning, and they are extremely contentious meetings that they've held out in Hā'ena. Essentially, the big issue was moving the visitors away from the rockfall because they didn't want to have to, essentially, strip away that rock area.

I think this Commission is focusing on what is one (1) of the primary issues of the park and that's access, which is not going to fall on deaf ears because that's the big controversy right now going on with them. And that's where they will be focusing on for the next several years as they push through the EIS and they actually push through the permit process. What I would urge this Commission to realize is that don't let that issue, necessarily, be your sole focus in the sense that there is some cultural practitioner access issues, as Commissioner Helder is getting into, but there may be other historical issues at hand that will get lost if you solely focus on this big controversial side, be it the recognition of the Caretaker's site or the restoration of that cottage in particular or the historical district that's in that vicinity. You may want to take this time to address these historical issues because it's not only the purview of this Commission, that's really where a lot of the authority and a lot of the potential changes or where the State, through this EIS process, will be really listening to what needs to be said about the historical, be it cultural practitioner, be it structures, be it archaeological sites. If this Commission misses that opportunity because it's going to focus on the real controversial issue, which is going to get a lot of focus and that will probably be the bulk of the focus that they have to handle with, but don't let the other historical elements fall by the wayside in exchange for that. So I kind of urge this Commission to kind of focus on some of those other issues that might not be as controversial or sexy as access, but it really deserves as much weight, if not more sometimes.

Ms. Griffin: Thank you. And I do have a question. In the maps in your presentation, you showed the elevated boardwalk over the lo'i and I know that some of those walls have been carbon dated to 1,000 years. I was wondering if the Hui Maka'aina o Makana agrees with that route.

Ms. Yuen: That was actually recommended by them.

Ms. Griffin: Okay.

Ms. Yuen: So, and Alan you should jump in, where we've located it, Alan right, there's actually no stone walls.

Mr. Carpenter: Right.

Ms. Yuen: It's earth berm.

Mr. Carpenter: There are earth berms in between, probably what are older stone walls, and these are later additions that subdivided the lo'i. We thought about it, specifically in a way to impact as little as possible and from an Archaeologist standpoint, which is my background, we have plenty of places if we need to do more research, but we did a full inventory survey of this prior and actually our dates were actually 700 years old for this particular site, with a later phase about 300 years ago. But we did consider banking that research potential, or whatever, as well for the future,

and this is a route that was as close to the rockfall zone as we could get and still be safe. The boardwalk breaks the continuity of that system a little bit, so you want to have it as close to the highway or as close to the edge of the lo'i system as you possibly could so that you have an unbroken system from there all the way to the ocean. It was definitely considered.

The secondary thing, of course, is that we hear that people aren't learning or appreciating enough about things, other than the beach and the trail, and this is an opportunity to send people to let them really appreciate it from above without standing in it and impacting it, and give them interpretive stories along the way, safely. It enriches the experience for everybody.

Ms. Schneider: Were you going to rebuild the Allerton Cottage?

Mr. Carpenter: The Allerton Cottage is still in fair condition.

Ms. Schneider: No, the one that burnt down.

Mr. Carpenter: We have no intent to rebuild the Allerton House, the main house, no. The potential is there for perhaps a staging area, maybe even a roof pavilion, or something like that that can be associated with prep for hula practitioners as they head to the actual traditional site. But no, we are not going to try to replicate the old house.

Ms. Yuen: I think part of the discussion we had, and we on purpose kind of left very little recommended for that area because we feel the hula community should really be the ones to say what happens in that space, so that's why we just kind of designated the area as a hula complex. In initial discussions with Kumu Hula Kehaulani Kekua, she actually thought well, you know, maybe it's not too bad to have it as an open staging area, or whatever it is, for them. I think those ideas will come up later and what they want to actually do in that space, but that's why that area we don't really have too much recommended. It's for a future planning phase that should involve the hula community.

Ms. Griffin: I was impressed with the plan. I know it was a result of a lot of hard work and a lot of years and some fault starts. One of the things that I, and we got this document of 1,018 pages fairly recently, it's been less than 24 hours, so while I've seen parts of it, I haven't seen the whole thing, but the idea of having a cultural advisory committee sounds really good. But you know and I know that places like the 1977 Līhu'e Development Plan recommended a community advisory committee, and I was wondering with our kahu relationship with Kaneiōlōuma and the other private-public partnerships that are starting, is that the way you see it? Or are you recommending to reserve a certain amount of funds to have that happen? How is the Master Plan going to assist making the advisory committees actually happen?

Ms. Yuen: If you want to read another voluminous document, the Master Plan report itself is attached as a CD because it was just way too much paper to print, but in the appendix of that, the advisory committee probably vetted every possible thing on this, so there was a whole meeting set aside even to discuss that and what that would be like. NTBG has a similar committee, so they kind of framed out some existing rules that would be on it, how often they would meet, and that



kind of thing, so that was attached as an appendix as kind of a groundwork for State Parks to look at and use possibly in doing this. I think the great thing about this project and our current advisory committee is that there is still a lot of energy. Like they want to see this through and they were the ones that said hey, what about a broader community advisory group, so I mean the fact that they would still want to keep on it, and the concept there was that they just meet maybe once a year with State Parks to see where they're at, implementation. If there's any kind of projects to come to, I mean State Parks, this is a wonderful resource for State Parks to have, too, because now they have a body that they can vet things off before they have to go in front of the larger public, so I think both ways I mean, it's in State Parks interest to keep that going. I don't think this community will let them not have one, so this is a pretty vocal, active community group. I think State Parks will be hearing from them whether they like it or not, honestly.

Mr. Carpenter: We like it actually.

Ms. Yuen: Yeah, no I think it's been great, the relationship. And even over the, it's been 7 years, I've seen it change and evolve, and I think it's a good thing, so hopefully it can continue.

Ms. Griffin: As to the houses and even the orientation center and all, we would expect as a body, the Historic Preservation Review Commission, to be involved as you all look to rehabilitate those.

Any other questions?

Mr. Long: Yes, I have a question.

Ms. Griffin: Yes.

Mr. Long: Is the area mauka of the old highway then off limits to the public; the caves?

Ms. Yuen: That's a good question.

Mr. Carpenter: Well most of the area mauka of the highway is cliff, but there are the two (2) caves; one (1) immediately adjacent to the road and one (1) with a walkway, old asphalt roadway, up to it. There's a third site, there's a rock shelter, and then there is Lohi'au's house site right at the end. They aren't going to be developed to attract people, and of course this plays very heavily into the fact that they are all within the rockfall zone. So traffic will be diverted away from the caves, and in fact what was originally envisioned as the pedestrian pathway was the highway corridor. That all got changed due to the rockfall assessment, and the desire by the community, and us, to not deface makana, the cliff. So everything got pushed into a safety zone. There will be viewing opportunities of the cave, presumably from the same pathway, the elevated pathway. Whether we will allow people at their own risk and with adequate warning to go and approach the caves, I mean I think, personally, it's kind of an eye sore right now with the number of signs and warning signs we have, probably. I think we don't physically have the ability to keep people out, but they will not be invited there or it won't be developed.

Ms. Yuen: The primary reason for that is that according to the rockwall engineers, those are actual the most hazardous areas because of the shear face of it. If a rock fell off of it, it would fall on you. It's not going to bounce, it's not going to go anywhere else; it is going straight down where people would be. So that is what we were wrestling with.

Mr. Long: Has anyone ever been hurt by a falling rock?

Ms. Yuen: There's been stories. I mean, even a member of our advisory committee had said there was one (1) instance when they have gone out, drove the length of Kē'ē. In that short time that they turned around to come back, there was maybe a 7 or 8 foot boulder that had fallen on the highway. And this was many years ago, but it's happened not in too distant history. Even when we heard the initial findings from the rockwall engineers, they had identified, was it four (4)? That you guys actually ended up removing that could have imminently fallen within that time, so State parks went ahead and dealt with those rocks that were about to fall down. It's not something that State Parks wants to just kind of say, well you know, people still want to go there; it's a huge liability for them.

Mr. Long: It has to find balance.

Ms. Yuen: That's exactly it.

Mr. Long: From protecting the public and...

Ms. Yuen: If nobody sued State Parks, right, if nobody sued State Parks, took everything under their own, or followed the signs, or whatever, but anyway...

Mr. Carpenter: It's a liability issue, but nobody wants anybody to get hurt or killed either, right, so.

Mr. Long: It would be nice if, in your plan, those cultural areas, the caves, you know, some people like to go to, and particularly the one up above local people like to go to, not encourage, but maybe at your own risk. I'd like that.

Ms. Yuen: Yes, exactly. And I think...

Mr. Carpenter: It would have to be.

Ms. Yuen: Yes, it would have to be. And the other way we could address those key sites that we know people still want to go to, maybe it becomes a guided tour, maybe something that's a little more controlled where it's not just a free for all, but people are informed of the risks and you do this knowingly. But those things kind of need to fall into place now that State Parks knows the potential hazards that are there.

Ms. Griffin: Anne.

Ms. Schneider: How does this impact the road that's on the register?

Ms. Yuen: So actually, the impact is going to be less because you won't have so many people or cars on it.

Ms. Schneider: Right, but will you change anything about the road?

Ms. Yuen: No. No. If anything, what had come up was if there was a potential way to make that surface more pervious, meaning water can actually filter through it a little bit better, that was kind of discussed, but there was some debate about actually changing the paving material and whether that would jeopardize its integrity. So that kind of discussion, I think, was on the table for now because I don't think it would maintain the integrity that got it on the register, but otherwise there's nothing else.

Ms. Griffin: Okay.

Mr. Long: You know, if lot coverage is an issue, there are new materials out for paving that are semi-permeable; just in the last few years.

Ms. Yuen: That's definitely what we're proposing; even for the pathways. Of course the boardwalk would have an open structure, I would think, so that wouldn't be an issue, but you know, even the pathways around the parking lot, all of that is discussed as having permeable material.

Mr. Long: Is the boardwalk ADA?

Ms. Yuen: It would be. It would be recommended to be ADA.

Mr. Long: How wide?

Ms. Yuen: We've estimated between 8 and 10 feet. It depends whether State Parks is going to allow bikes or not on it. I think if we're going to do bikes, then 10 feet would likely be the minimum width. But we also don't want to impact the lo'i either so it's that delicate balance of something that's too intrusive to the lo'i versus appropriate access, but yes, at the minimum it's ADA accessible.

Ms. Griffin: Commissioners, we have some choices here. We can accept as presented, we can make comments today, or we can take the documentation back, study it more, and there's time for us to make comments at our September meeting. So what is your pleasure?

Ms. Schneider: I think it would be better if we all had a chance to read the document before we make any comments. Has everybody had a chance to read it? (Laughter in background)

Ms. Griffin: And the 137 page CIA, Cultural Impact Assessment.

That will put some pressure on our Staff to be able to take comments at our September 3<sup>rd</sup> meeting and get it to the Master Plan folks by the 8<sup>th</sup> before the comments close.

Mr. Hull: Kimi, the comments period closes September 8<sup>th</sup>?

Ms. Yuen: Yes.

Mr. Hull: Well, that depends because I know we talked with the Chair earlier about possible change because of staffing for the September meeting. In order for the comments to go to OEQC for the comment process from this body, it has to be acted upon by this body; it has to be officially voted upon by this body.

Ms. Griffin: So if there's other important business, perhaps we can have two (2) meetings next month.

Mr. Hull: Yeah, it's just that the meeting will have to be held prior to September 8<sup>th</sup>, right?

Mr. Helder left the meeting at 4:27 p.m.

Ms. Griffin: Right, that would be what's on the agenda now; as the 3<sup>rd</sup>.

Mr. Hull: Oh, I see where you're going Pat.

Ms. Schneider: We have a meeting scheduled for the 3<sup>rd</sup>.

Mr. Hull: That's correct, yes.

Ms. Schneider: So would you have time if we?

Mr. Hull: I think what would be, probably, best in order to facilitate somewhat of an efficient meeting, would be if Commissioners had particular comments that they wanted to float during the Commission hearing that you forward it to Staff and we can craft it in a manner that would be most appropriate for a motion and discussion.

Ms. Griffin: That's an excellent suggestion. Thank you.

Is everyone willing to do that? Take a stronger look at, or a longer look I guess, at this document. Come back next month, and in the meantime, before the one (1) week sunshine rule, get comments to Staff, so that the discussion at the September 3<sup>rd</sup> meeting can be directed and easier to translate into a memorandum.

Mr. Hull: You can email those directly to me. If we have any questions or discussion the comments that are emailed, then I can discuss with you how exactly you want that. And just to be clear, as I watch Jodi possibly hesitate, as long as the comments aren't shared with other Commission members, right? (Laughter in background)



Ms. Schneider: Just with you.

Mr. Hull: Just directly with Staff to help with the crafting.

Ms. Griffin: Of course. We wouldn't dream of doing anything.

May I have a motion to defer?

Ms. Schneider: I make a motion that we defer all comments until the next meeting on September 3<sup>rd</sup>.

Mr. Helder returned to the meeting at 4:29 p.m.

Ms. Griffin: Is there a second?

With no second, the motion dies. So may I have another motion on how to respond to the Hā'ena State Master Plan?

Ms. Higuchi-Sayegusa: Did you folks have any comments now? There are a couple of options here; you can defer it to the next meeting, make comments at that point, make comments today, receive it at this point.

Ms. Schneider: I think it was such a long document that it was too much to absorb in a couple of hours to make comments.

Ms. Griffin: This body is charged with the responsibility to protect, preserve, and maintain the historic resources of the County. It is incumbent on us to respond to documents of this level of importance, so I'd like to get some comment or the deferral to next month.

Yes, Stephen.

Mr. Long: I'd like to make a motion that we defer our comments on this plan until our next meeting, but in preparation for the next meeting that all of our comments, after we have read the text, be forwarded to Myles or Kaaina before the meeting, so they are concise and to the point.

Ms. Schneider: I second the motion.

Ms. Griffin: It's been moved and seconded that we defer any official comments until our September 3<sup>rd</sup> meeting, and that the comments that each of us individually have about the plan, having reviewed it more thoroughly, be forwarded...what's the Friday before September 3<sup>rd</sup>?

Mr. Hull: August 28<sup>th</sup>.

Ms. Griffin: Before August 28<sup>th</sup>, so that there will be the opportunity to have a concise report that the Commission then can respond to.

Any discussion? (None) All in favor? (6 ayes) Opposed?

Ms. Santos: Me.

Ms. Griffin: So it's six (6) in favor, one (1) opposed. Motion carries 6:1. Thank you so much. We appreciate the time that you've spent with us today.

Ms. Yuen: Thank you for having us.

Mr. Carpenter: Thank you.

Ms. Higuchi-Sayegusa left the meeting at 4:33 p.m.

Deputy County Attorney Andrea Suzuki entered the meeting at 4:33 p.m.

**Re: Letter (7/27/15) from Donald L. Smith, P.E., Acting District Engineer, State of Hawai'i, Department of Transportation, Highways Division requesting to discuss the bridges that are currently planned for rehabilitation or replacement.**

Ms. Griffin: So Item D.3., under New Business, is the letter from Donald L. Smith, P.E., Acting District Engineer from the Department of Transportation to discuss the bridges that are currently planned for rehabilitation or replacement.

Mr. Smith, it's always a pleasure.

Donald Smith: Hello. Donald Smith, Hawai'i Department of Transportation, Kaua'i District.

Ms. Griffin: We got your letter, so let us know what you're thinking. It looks like today you're going to talk about Kapaia.

Mr. Smith: Actually, at the last meeting for Ōma'o Bridge Park Project, the Commission requested that the Hawai'i Department of Transportation produce a list of bridges that we might or would be working on in the future. So I would like to address that.

Ms. Griffin: Okay.

Mr. Smith: I did bring...did everybody get the handout? If you look at the handout, the bridges that are highlighted are bridges that we are currently working on either a design contract or working on a design for. There are two (2) lists; one (1) list is the functionally obsolete State bridges list. Functionally obsolete is, essentially, means that when it was designed, it will no longer meet the purposes of the current roadway system; whether it be for types of vehicles or size of vehicles, weights of vehicles that type of thing. Then the structurally deficient list, which is the smaller list, is actually a list that's generated from our Federally Mandated Bridge Inspection Program. Once a bridge receives a rating of a certain number, it becomes or is on the structurally deficient list, I will say this carefully because it doesn't necessarily mean it's going to fall down, but it does mean that it needs attention. It helps us to generate a list of what to work on next, so you can see on that

# Hā'ena State Park Master Plan Draft Environmental Impact Statement (EIS)

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COMMUNITY MEETING | August 19, 2015

## Tonight's Meeting

- Present an overview of the draft master plan and key management recommendations.
- Share public feedback received to-date.
- Collect additional comments for the Draft EIS.
- Share important dates and contact information for the Draft EIS.
- This is *NOT* a meeting on the Hā'ena Community-Based Subsistence Fishery Area Rules.

# Project Overview

## Hā'ena State Park- Existing Site





## Hā'ena State Park

- 65.7 Acres
  - Majority of the Park is State land.
  - County owns 0.68 acres, which contains Ka Ulu A Paoa Heiau and Ke Ahu A Laka.
- State used Federal Land and Water Conservation Funds to acquire the land in 1977.
- There is no adopted master plan or accepted EIS for the Park. State Parks needs them to make capital improvements at the Park.

## Hā'ena State Park

- Significant Sites:
  - Storied Kē'ē known for the Pele, Lohiau, and Hi'iaka legend
  - Ka Ulu A Paoa Heiau and Ke Ahu A Laka
  - Lohi'au's house platform
  - Lo'i and 'auwai complex
  - Wai a Kanaloa and Waikapala'e (wet caves)
  - Kē'ē Beach and Lagoon
  - Na Pali o Makana
  - Trailhead to Kalalau Trail and Nāpali Coast State Wilderness Park
- Registered Historic Places:
  - Hā'ena Archaeological Complex (State & National, 1984)
  - Nāpali Coast Archaeological District (State & National, 1984)
  - Kaua'i Belt Road (National, 2004)

## Hā'ena State Park – Issues

- Extreme increase in visitors
    - Visitor counts in August 1993: 350 per day
    - By 1997: 1,700 per day
    - Today: over 2,000 per day
  - Rockfall Hazard
    - Recent study found areas along the highway are within a potentially high hazard rockfall zone
- Need to protect the natural, cultural, and historic resources at the park while balancing recreational use and public safety.

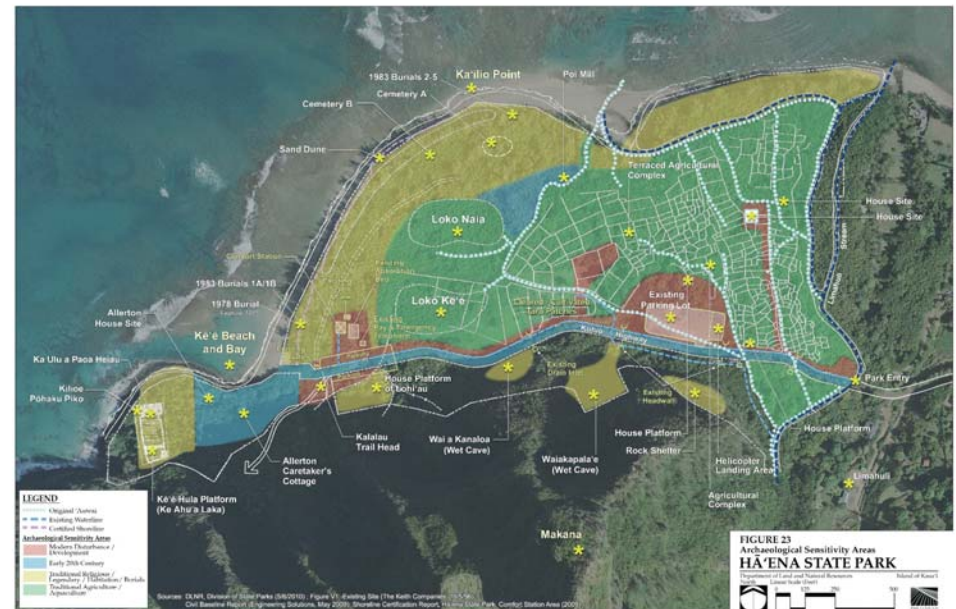
## Master Plan Advisory Committee (MPAC)

|                                                                 |                                                                                 |
|-----------------------------------------------------------------|---------------------------------------------------------------------------------|
| Thomas & Annie Hashimoto, Kupuna & Hā'ena 'Ohana                | Cathy Kalehua Ham Young Pfeffer, Kupuna & Hā'ena 'Ohana                         |
| Henrietta Phillips, Kupuna & Hā'ena 'Ohana                      | Presley Wann, Hui Maka'āinana o Makana, Hā'ena 'Ohana                           |
| Lono Brede, Hā'ena 'Ohana                                       | Jeff Chandler, Hui Maka'āinana o Makana, Hā'ena 'Ohana                          |
| Keli'i Alapa'i, Hui Maka'āinana o Makana, 'Ohana Council Chair  | Kaimi Hermosura, Hui Maka'āinana o Makana, Hā'ena 'Ohana                        |
| Kehaulani Kekua, Kumu for Halau Palaihiwa O Kaipuwai            | 'Aikane Alapa'i, Cultural Practitioner, Halau Palaihiwa O Kaipuwai              |
| Naomi Yokotake, Hanalei Hawaiian Civic Club                     | Atta Forrest, Makai Watch Coordinator                                           |
| Chipper and Hau'oli Wichman, National Tropical Botanical Garden | Carlos Andrade, UH Center for Hawaiian Studies                                  |
| Kawika Winter, Limahuli Garden and Preserve, Director           | Maka'ala Ka'aumoana, Hanalei Watershed Hui                                      |
| Caren Diamond, Protect Our Neighborhoods 'Ohana                 | Barbara Robeson, Hanalei Roads Committee                                        |
| Carl Berg, Surfrider Foundation                                 | Carl Imperato, Hanalei - Hā'ena Community Association                           |
| Sue Kanoho, Kaua'i Visitors Bureau                              | Julie Schuller, Princeville Community Association                               |
| Joel Guy, Kaua'i North Shore Business Council                   | Mehana Vaughn, Former Doctorate Student/UH Professor                            |
| Chino and Micco Godinez, Kayaks Kaua'i                          | Kathryn Keala, Office of Hawaiian Affairs, O'ahu Office                         |
| D. Kaliko Santos, Office of Hawaiian Affairs, Kaua'i Office     | Sabra Kauka, Garden Island RC&D, Inc.<br>Victoria Wichman, Nā Pali Coast 'Ohana |
| Michael Dahilig, Kaua'i Planning Director                       |                                                                                 |

## Hā'ena State Park – Goals and Vision

- Recognize that the entire park is culturally significant.
- Restore Hā'ena State Park as a living place—cleanse, restore and revive cultural practices again.
- Involve the original families and reconnect the local community to the place.
- Uphold State Park's responsibility for the public's safety, access, and welfare.
- Balance the provision of recreational opportunities with the preservation of the significant natural and cultural resources.

## Hā'ena State Park- Archeological Sensitivity Areas



## Hā'ena State Park-Draft Master Plan



## Features of the Draft Master Plan:

- New Welcome Pavilion/Education and Cultural Center
- Interpretive Path with boardwalk access to Kē'ē, makai of the highway and outside of potential rockfall hazard
- Caretaker's Cottage and Baseyards
- Hula Complex
- Cultural Gathering Place
- Restoration of the Dune Complex, Agricultural Complex, loko, and varied historic, cultural, and natural resources throughout the park.

- New Welcome Pavilion/Education and Cultural Center
- Interpretive Path with boardwalk access to Kē'ē, makai of the highway and outside of potential rockfall hazard
- Caretaker's Cottage and Baseyards
- Hula Complex
- Cultural Gathering Place
- Restoration of the Dune Complex, Agricultural Complex, loko, and varied historic, cultural, and natural resources throughout the park.



## Features of the Draft Master Plan:

- Transportation/Park Access:
  - Highway closed to through traffic
  - Small special access only parking lot at Kē'ē for cultural practitioners, lawai'a, hunters, and ADA access at Kē'ē
  - Shuttle Alternatives
  - Pedestrian/Bicycle Access
  - MPAC preferred scenario: remote park entry and parking in Princeville, with a shuttle to the park
- Main Parking Lot:
  - Onsite visitor parking lot that can be sized appropriately with permeable surface

## Features of the Draft Master Plan:

- Green Design and Green Infrastructure:
  - Energy efficient design
  - Integrated water/wastewater/drainage plan
    - Rainwater catchment
    - Treatment of wastewater and reuse where appropriate
    - Restore 'auwai wherever possible and the natural drainage flows
    - Landscaped bioswales and raingardens
  - Renewable energy
  - Permeable surfaces



## Hā'ena State Park- Near-Term Plan



FIGURE 28  
Near-Term Plan for the Entry Complex  
HĀ'ENA STATE PARK  
Conservation of Land and Natural Resources  
Based on Known

Disclaimer: This graphic has been prepared for general planning purposes only and should not be used for boundary interpretations or other spatial analysis.

## Key Management Recommendations:

- Create a Cultural Advisory Group and a broader Community Advisory Group.
- Set an initial daily visitor limit at 900 visitors per day.
  - Includes park visitors and day hikers.
  - Does not include cultural practitioners, hikers and hunters with valid permits, volunteers and special hālau or lo'i workgroups, school/educational groups, lawai'a, cemetery caretakers.
  - Will be adjusted over time depending on the impacts.
- Require visitor orientation prior to park entry.
- Require staff and volunteer education.

## Comments Received To-Date:

- Concern over 900-person daily visitor limit
  - How will it be enforced?
  - Can you limit non-residents but allow residents access?
  - Can it be changed over time?
- Concern over the boardwalk
- Concern over putting “buildings” within the park
- Concern about parking within the park
  - Too little, too much
  - Don’t pave over the park
- Can we get the visitor industry to help since they caused the problem?
  - Example: Hotels shuttle their guests to the park, such as the Hanalei Colony

## *Kuleana...*

- *Defined as both a “right” and “responsibility”*
- One idea is to join a volunteer group who helps take care of the park.
  - Then you will not be subject to the daily visitor limits, and
  - You can help mālama the park!

# Environmental Impact Statement (EIS)

## Process      Key Dates

### Why is the Draft EIS so long?

- An EIS has been prepared rather than a less extensive EA due to the many triggers that require environmental review for this project:
  - Use of State lands or funds
  - Use of County lands
  - Use within a shoreline area
  - Use within a Historic site as designated on the Hawai'i and National Registers of Historic Places
  - Land uses within the Conservation District
  - Modification of existing helicopter facility within the State that may affect lands within a Conservation District, shoreline area, and registered historic site

## Draft EIS Organization

- Project Overview
- Section 1.0: Draft EIS Summary
- Section 2.0: Project Description
- Section 3.0: Description and Assessment of the Natural Environment
- Section 4.0: Description and Assessment of the Human Environment
- Section 5.0: Conformance with Federal, State, and County Regulations
- Section 6.0: Alternatives
- Section 7.0: Contextual Issues
- Section 8.0: Consultation
- Section 9.0: List of Preparers
- Section 10.0: References
- Section 11.0: Pre-Consultation Comments and Responses
- Section 12.0: EISPN Comments and Responses

## Technical Studies (Appendices)

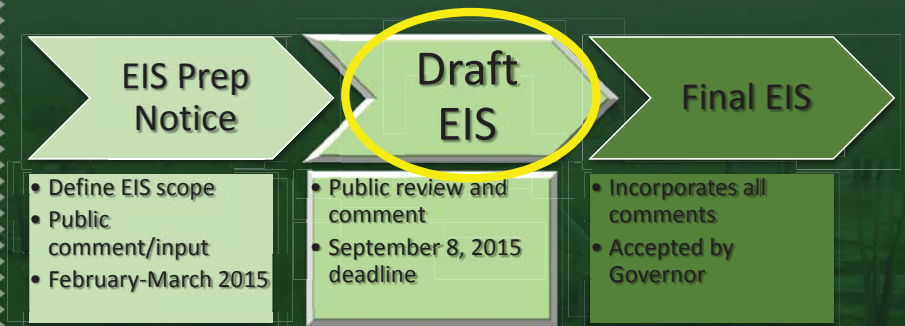
- Rockfall Hazard Assessment
- Biological Survey
- Marine Natural Resources and Recreation Assessment
- Cultural Impact Assessment
- Traffic Impact Assessment Report
- Civil Engineering Baseline Report
- Wastewater Preliminary Engineering Report



## Anticipated Permits Required for Implementation

- An EIS is not a permit – after the EIS separate actions will be required, as noted below:
  - Final Master Plan Approval by the BLNR
  - Compliance with Chapter 6E, HRS (Historic Preservation)
  - SMA Permit
  - Shoreline Setback Determination
  - Wetland Delineation Study and Determination
  - National Pollution Discharge Elimination System (NPDES) Permit
  - Development permits for specific uses, and
  - Depending on the instream activities pursued, Stream Channel Alteration Permit; Stream Diversion Works; and/or Petition to Amend Instream Flow Standard

## EIS Process





## Draft EIS Distribution:

- Federal Agencies (12)
- State Agencies (31)
- County Agencies (10)
- Elected Officials (13)
- Community Groups & Individuals (33)
- Hard copy available at Princeville Library
- Digital copies at Līhu'e Regional Library and Kaua'i CC Library
- Download from OEQC Website:  
[http://oeqc.doh.hawaii.gov/Shared%20Documents/EA\\_and\\_EIS\\_Online\\_Library/Kauai/2010s/2015-07-23-KA-5B-DEIS-Haena-State-Park\\_Master-Plan.pdf](http://oeqc.doh.hawaii.gov/Shared%20Documents/EA_and_EIS_Online_Library/Kauai/2010s/2015-07-23-KA-5B-DEIS-Haena-State-Park_Master-Plan.pdf)

## Mahalo Nui Loa!

- If you wish to submit comments:
  - Take a comment card and send it back to us, or
  - Please send them to:
    - Lauren Tanaka, State Parks  
[Lauren.A.Tanaka@hawaii.gov](mailto:Lauren.A.Tanaka@hawaii.gov)
    - Kimi Yuen, PBR Hawaii  
[kyuen@pbrhawaii.com](mailto:kyuen@pbrhawaii.com)
- Please submit comments by:  
***September 8, 2015***



**Break Out Groups**



**MAHALO**

The map shows the Kalamazoo River watershed, with the river flowing from the north towards the south. Key locations labeled include Kalamazoo, Holland, Spring Lake, and Holland. The map also shows the Kalamazoo River, Kalamazoo Lake, and Kalamazoo Bay. A legend in the bottom left corner identifies symbols for the river, lakes, and towns. A scale bar in the bottom right corner indicates distances in miles. The map is titled 'Kalamazoo River Watershed' and is part of a larger project titled 'Kalamazoo River Watershed'.

[illegible]

## July 2016

1. The education center and caretaker's cottage have been deleted. A smaller welcome hale is all that will be located at the entrance and is envisioned as a thatched open traditional Hawaiian hale.
2. New restrooms for men and women (located to the right of the welcome hale, but separate).
3. The interpretive path is now a pedestrian-only path and its alignment is shifted mauka near Kēle to better direct people towards the beach areas overseen by the lifeguards. The loop path through the lō'i back to the entrance has also been deleted.
4. The main parking area is separated into a fee-paying lot and a non-fee paying lot that can be adjusted in size as needed.

- Entry turnaround with shuttle stop
- Formalized parking lot with kiosk
- Welcome hale
- Pedestrian path
- Parking area bathrooms
- Cultural gathering area with hālau wa'a and traditional hale

For more information, please check the Hawai'i State Parks website:  
<http://dlnr.hawaii.gov/dsp/>



**Summary of Community Advisory Committee's Draft of  
Proposed Revisions to Hā'ena State Park (HSP) Master Plan  
July 2016**

**Access Summary**

1. HSP will establish **Controlled Access Hours** (CAH) as a way to manage overuse of the park by the public and to help restore a balance to this culturally significant area.
2. **Controlled Access Hours** (CAH) are proposed to be 7:30 am - 5:30 pm, but are subject to change if park use before 7:30 am or after 5:30 pm is excessive.
3. HSP will be adaptively managed by the community and the Division of State Parks to achieve the goal of reducing use to approximately **900 persons per day during CAH**. This will be averaged over a month so adjustments can be made for park closure days and is therefore a "soft" limit.
4. DLNR rules allow state parks to manage impacts by establishing two types of park users. These are: 1) Fee-Paying Park Users (FPPU) and 2) Fee-Exempt Park Users (FEPU). All residents of Hawaii qualify to be Fee-Exempt Park Users.
5. Entry fees are established by Hawai'i Administrative Rules (HAR) 13-146-6 at the rate of \$5/car or \$1/person. HAR 13-146-6 also states that Hawaii residents are exempt from paying park entry fees if they can show a valid Hawai'i ID. Other categories of FEPU may be established such as registered volunteers.
6. Access to HSP will be limited to a single entry point, at Kūhiō Highway near the present parking lot/helipad site. This single entry point will be used to control access during CAH.
7. Vehicles will be allowed into one of two designated parking areas – one for Fee-Paying Park Users (FPPU) and one for Fee-Exempt Park Users (FEPU).
8. Outside of CAH: anyone may enter the park, by vehicle, on foot, or by bicycle; but they must leave the park before the start of CAH unless they meet the requirements for park access during CAH. (See two items immediately below.)
9. During CAH: FPPU (non-residents) will be allowed to enter the Park only if they possess a pre-paid entry receipt. This applies to all FPPU, regardless of whether they arrive by car, by shuttle, by bicycle, or on foot.
10. During CAH: adaptive management of the size of the FEPU parking area and adaptive management of the number of park entry slots held back for daily use will be used to meet the typical access needs of FEPUs, enabling them to enter the park by car (using the FEPU parking area), by shuttle, by bicycle or on foot.
11. Native Hawaiian cultural practitioners visiting the park to undertake their traditional and customary cultural practices will be exempt from park visitor limits.

**Parking Summary**

1. The approximately 100 space parking area shown in the Master Plan will be adaptively managed to accommodate both FPPUs and FEPUs.

2. The area shown in the Master Plan as a "Staging Area" (just north of the primary parking area) can be used for volunteer and cultural groups that access the park via a special use permit.
3. A small, approximately 15 stall parking area near the existing restroom at the end of the road will be strictly managed only for handicapped park visitors and for cultural practitioners who have an authentic need to use that parking area.
4. Overnight campers at NPCSWP will not be allowed to use the parking areas. (This will also be a specific condition of their NPCSWP camping permits.)
5. Unauthorized parking anywhere in the park will be subject to tow-away. It is intended that parking restrictions and tow-away zones will be strictly enforced.
6. State Parks and the CAC will advocate for DOT to establish tow-away zones between Limahuli Stream and the eastern boundary of Hā'ena ahupua'a (close to the Hā'ena Place cul de sac). We propose that parking will be allowed only for residents who obtain residential parking stickers for their vehicles.
7. The HSP CAC will work with the HI DOT and the County to implement and enforce this plan so that parking along Kūhiō Highway does not negatively impact the larger community.

---

**Shuttle Transportation Summary**

1. The HSP CAC is working with county, federal and state agencies to promote the creation of a north shore shuttle system that will enable HSP and NPCSWP visitors to park in Princeville and/or other locations and take shuttle buses to and from HSP. The shuttle bus would be capable of accommodating day-use gear by Kē'ē Beach users and camping gear by NPCSWP overnight campers.
2. Until such a shuttle exists, the HSP fee-based parking area will be managed to maximize the capability of the parking area to accommodate park visitors and minimize traffic impacts.

---

**Facilities Summary**

1. For safety reasons (rockfall hazard), the existing road (Route 560) will be closed from the park entry point (near the present parking lot/helipad site) to the parking area at Kē'ē, and replaced with an ADA-compliant pedestrian path, makai of the projected rockfall zone.
2. Limited use of the existing road will be allowed for authorized personnel (staff, lifeguards, and emergency vehicles) and qualified park visitors (ADA access, cultural practitioners who require access to Kē'ē, authorized retrievals of distressed kayakers, etc.).
3. The existing visitor parking area at Kē'ē will be closed. Visitor parking will take place at the ~100 space parking area near the park entry point. A small, ~15 space parking area will remain near Kē'ē for use for ADA access and cultural practitioners with special needs.
4. The park entry area will include a turnaround, shuttle bus stop, small 20'x30' welcome pavilion/hale (much smaller than that proposed in the Draft EIS/Master Plan) and comfort stations.





Examples of FRP path installation at McBryde Garden, Līhōʻi



Existing



Example Material: Fiber Reinforced Polymer  
*(Photo courtesy of C. Wetman)*



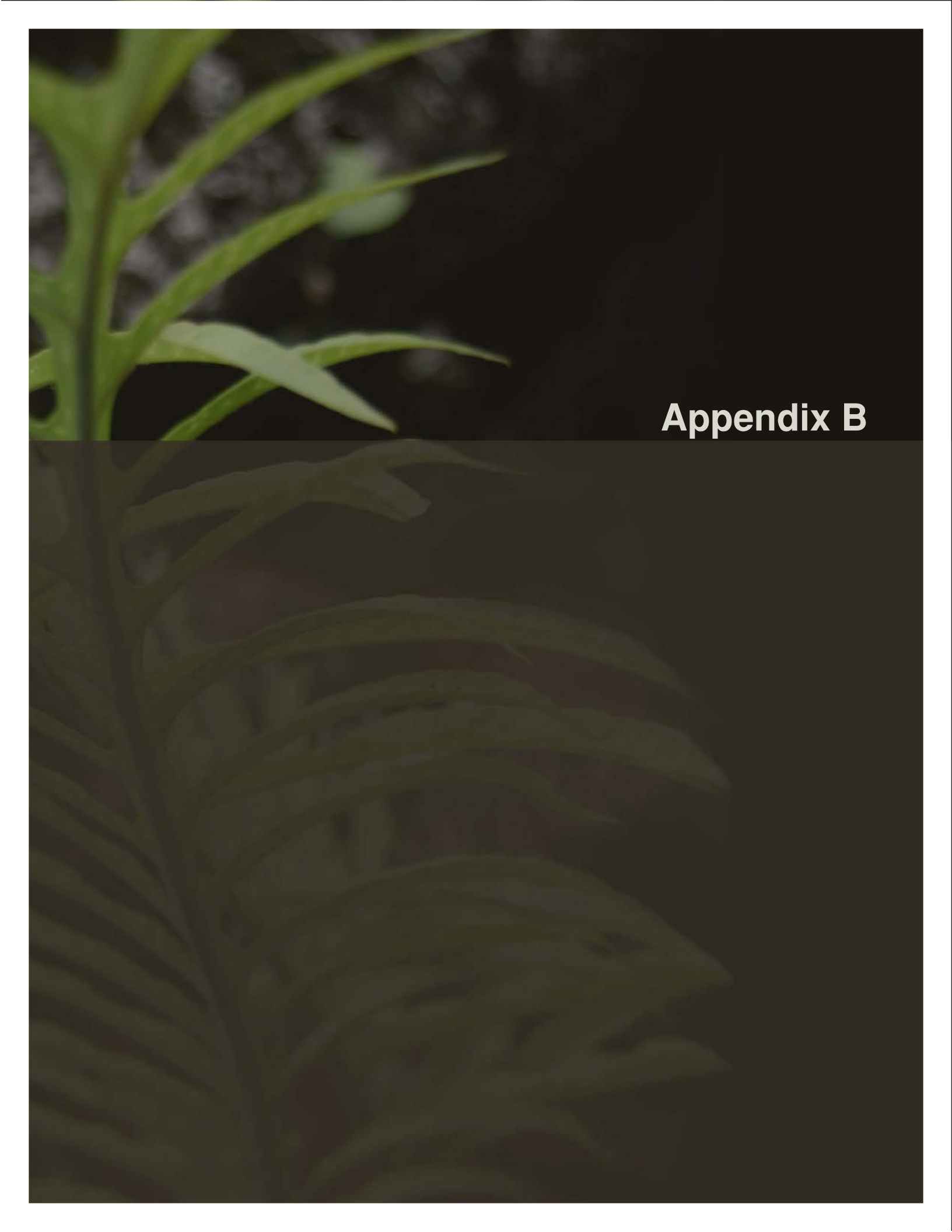
Example Path and Material: Wood

LOʻI PATH OPTIONS  
**Hāʻena State Park**  
DECEMBER 2018

Disclaimer: This graphic has been prepared for general planning purposes only and should not be used for boundary interpretations or other spatial analysis.







## Appendix B



# Rockfall Hazard Assessment Haena State Park Kauai, Hawaii

Prepared for

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Department of Land and Natural Resources  
Division of State Parks  
1151 Punchbowl Street, Room 310  
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June 2013

## OVERVIEW

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AECOM Technical Services, Inc. (AECOM) has prepared this rockfall assessment for the State property within Haena State Park along the mauka side of Kuhio Highway in accordance with Federal Highway Administration (FHWA) publications and construction industry standards. The purpose of the assessment is to evaluate rockfall potentials and hazards and to recommend rockfall mitigation methods best suited for this site. It is AECOM's opinion that it is impossible to speculate with great certainty as to when any of the rockfall areas referenced in this report could result in an actual rockfall event; however, it is possible to identify the areas that show a potential for rockfall hazard.

This rockfall study was performed in two consecutive phases: a) geological survey of the site and rockfall hazard identification, and b) engineering planning study of the rockfall condition and development of preliminary rockfall protection design alternatives and cost estimates. During the geological survey phase, areas with potential for rockfall or landslide were identified and sitespecific descriptions were obtained. The geological conditions of the site and the key rockfall features are presented in a report format including color photographs. The engineering planning phase identifies engineering solutions in terms of alternative designs for reducing potentials of rockfall hazards. A preliminary construction cost estimate is provided for each alternative design. All work is based on the research data and the recommended procedures by FHWA, United States Department of Transportation, and the engineering and construction standards accepted by the industry.

Many rockfall features and many recent rockfall activities were found during field investigation. Some of the recent rockfalls occurred right next to and ended on the Kuhio Highway close to the Wet Cave (Wai a Kanaloa). The area around the Wet Cave (Wai a Kanaloa) is the most hazardous rockfall area because: 1) many rockfall features exist there; 2) very high probability for rockfalls to reach the roadway or Wet Cave (Wai a Kanaloa); and 3) almost constant presence of visitors in this area. The Wet Cave (Wai a Kanaloa) area is rated rockfall hazard Class A entailing a high hazard rating. Rockfalls are less likely to reach the roadway or beach at other places.

The annual probability of loss of life from rockfall along Kuhio Highway and the beach within Haena Park is estimated at  $6.4 \times 10^{-4}$ , higher than the recommended tolerable level of  $10^{-5}$  for general public. Therefore rockfall mitigation is recommended for Haena Park to reduce rockfall risk to park users.

The recommended permanent engineering mitigation design alternative for Haena Park is a combination of rockfall impact fence and anchored wire mesh system due to its effectiveness, and least disturbance to environment, with a cost of 9.8 million dollars and a construction period of eight months.

For temporary rockfall mitigation design, scaling is recommended due to its ease of construction, least disturbance to environment, and cost-effectiveness in rockfall hazard reduction, with a cost of \$750,000 and a construction period of four months to scale the high hazard area around the two Wet Caves and all the identified boulder sites in this report. An additional 1.5 million dollars and a construction period of six months are needed to scale other areas. Only rocks that are likely to reach the roadway or other protected structures need to be scaled.

However, it has been noted that the North Shore and Haena communities would not support any disturbance and potential devastation to the sacred mountains at Haena caused by rockfall mitigation and construction. Consequently, there are two other plans at work addressing the long term and short term concerns. The long term plan is to divert the public traffic away from the high rockfall zones. This would be accomplished by closing the highway to both vehicular and on-foot public travelers while redirecting them through walkways that are built in the safe rockfall zones. This is part of a master planning process that the State is currently working on with the public. For the short term mitigation solution and in the interim, AECOM has proposed demolition and stabilization of some of the larger rocks (a total of 4 to 6 rocks) along the base of the mountain near the areas of the Wet caves. This work will be implemented using basic tools such as rock scaling bars and

airbags. Once these rocks are dislodged, they would be brought to rest in a stable location along the foothills. All dislodged rocks are planned to be left at the site. The cost of this effort has been estimated at about \$400,000 and a construction period of about three weeks.

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## ACRONYMS AND ABBREVIATIONS

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|       |                                            |
|-------|--------------------------------------------|
| AGS   | Australian Geomechanics Society            |
| CRSP  | Colorado Rockfall Simulation Program       |
| FHWA  | Federal Highway Administration             |
| ft.   | feet/foot                                  |
| GPS   | global positioning system                  |
| lf    | linear feet                                |
| mph   | miles per hour                             |
| RHRS  | Rockfall Hazard Rating System              |
| USDOT | United States Department of Transportation |

## Section 1.0

## Introduction

## 1.0 INTRODUCTION

Faced with potential for rockfalls on the mauka side of Kuhio Highway at Haena State Park, the Department of Land and Natural Resources, State of Hawaii, tasked AECOM Technical Services, Inc. (AECOM) to perform a study of the present rockfall condition for the site (Figure 1-1). AECOM geotechnical engineers and geologists performed the field investigation using visual means and methods. Rockfall locations identified in this report are based on coordinates shown on a hand-held global positioning system (GPS) unit with +/- 30 ft accuracy under normal condition. These identified sites are representative samples of potentially hazardous rocks. Similar types of rocks may exist along the project site which were not identified and documented in this report. Topographic surveying and sub-surface investigation were not a part of the scope of this study. The specific conditions described in this report pertain to those present at the time of field investigation.

### 1.1 SCOPE OF SERVICES

The scope of services included the following tasks: (1) conduct field reconnaissance; (2) assess and delineate the falling rock hazards; (3) identify and articulate options to mitigate the potential hazard; (4) identify and articulate the risks associated with each option; (5) identify products required for each option; (6) identify locations (in Hawaii if applicable) where the options have been implemented; (7) provide budgetary cost estimates for work required under each option; and (8) identify experienced contractors qualified to perform the work.

### 1.2 IMPLEMENTATION PLAN

The project was implemented in two phases, as follows:

#### 1. Geological survey of the site and rockfall hazard identification:

AECOM performed a visual assessment of the geological formation and rock outcroppings along accessible areas of the mountain slope.

A geological report was prepared to identify the key features of the site geology and to locate rock outcroppings including GPS readings and color photography. The study methodology is based on applying suitable methods recognized by the Federal Highway Administration (FHWA), United States Department of Transportation (USDOT), and the prevailing construction standards used in the industry.

#### 2. Engineering planning study of the rockfall condition and development of preliminary rockfall protection design and cost estimates:

The AECOM team performed an engineering study for identifying alternative mitigation procedures which ultimately led to prescribing of a recommended methodology based on accepted engineering practice and sound economics to reduce rockfall hazards.

A budgetary cost estimate was provided for each design option.



Figure 1-1: Site plan of Haena State Park rockfall assessment project.

## Section 2.0

# Geological Survey of the Site and Rockfall Hazard Identification

## 2.0 GEOLOGICAL SURVEY OF THE SITE AND ROCKFALL HAZARD IDENTIFICATION

### 2.1 ROCK FORMATIONS—FOUNDATION OF ROCKFALL

Knowing local geology knowledge is essential to understanding the potential hazards of rockfall events and the associated mitigation methods.

The island of Kauai consists of a single shield volcano, which is deeply eroded and partly veneered with much later volcanics. The rock formation exposed at Haena State Park belongs to the Napali Formation (or Napali Member), the oldest exposed shield volcano formation above ocean water (Stearns 1985; MacDonald et al. 1983). Talus, formed by fallen rocks piled against the high cliffs, is another major rock formation exposed at the project site.

The Napali Formation consists of mainly basaltic lava flows with two morphology types: 'a'a and pahoehoe. 'A'a flows are formed by dense (low volatile content) and viscous lava. As the viscous lava flows, it constantly shears apart its top crust formed by cooling to produce the top rough and jagged clinkers. At the front of a'a flows, the top clinkers—carried along by the flowing lava like on a conveyor belt—tumble down and are buried by the advancing lava over them, forming the bottom clinkers. A typical 'a'a flow unit, therefore, consists of three layers: the top and bottom clinker layers and the middle interior. Vesicles in the middle interior are commonly stretched or of irregular shapes. Due to differential erosions—the fast erosion of the weak, very vesicular, and poorly cemented clinkers and the slow erosion of the dense interior, a'a interiors are of ten overhang and prone to rockfall.

Pahoehoe flows are formed by fluidal lava (low viscosity) with high volatile content. Consequently, pahoehoe flows commonly are thin characterized by smooth, billowy, hummocky, orropy surfaces and contain large amount of spherical vesicles. Pahoehoe flows are essentially tunnel or tube lava flows: once crusted over on the surface due to cooling, the fluidal lava is less likely to shear apart its crust and thenceforth flows within a tunnel or tube of its own making. A main feeding channel or lava tube, usually thick, is typically associated with a pahoehoe flow unit.

### 2.2 WEATHERING AND EROSION PROCESSES—CAUSE OF ROCKFALL

Weathering and erosion are chiefly responsible in creating rockfall.

Several natural mechanisms contribute to the alteration and breakdown of rocks. Mechanical weathering represents breaking up of rocks by physical disintegration without changing their chemical composition. Chemical weathering involves an alteration in chemical composition and the formation of new minerals. Examples of mechanical or physical weathering are stream and wave erosion, the wedging action of growing plant roots and stems, or the fragmentation of rock faces caused by enlargement of fractures due mainly to gravity. Clay minerals and hydrated iron oxides are typical products of chemical weathering. Due to high temperature and rainfall and abundant vegetation, conditions for chemical weathering are nearly optimum at the Haena State Park site.

Breaking up of the rock by mechanical weathering greatly aids chemical weathering because it increases the area of rock surface exposed to chemical action. Chemical weathering, in return, reinforces mechanical weathering. For example, chemical weathering normally increases the volume of weathered rocks as compared to the original volume of the unweathered rock, setting up stress between the outer more weathered and inner less weathered portions and causing the rock to break apart. The mutual reinforcement of chemical and physical weathering effects is an ongoing process, the degree and rate of which will largely determine the stability of rock in the area.

'A'a flows are especially prone to boulder rockfall due to their differential erosion. The thick and dense interiors of 'a'a flows are relatively resistant to weathering due to their large thickness and low permeability (low porosity). The clinkers, on the other hand, are rapidly eroded away by both

chemical and mechanical weathering. Consequently, overhangs of thick 'a'a interiors are seen almost at every 'a'a flow outcrop. These overhangs are unstable because: (1) the top and bottom supporting layers of the overhangs are poorly cemented and often deeply weathered clinkers; (2) the dense interiors have columnar joints formed naturally by the thermal contraction of lava during cooling; (3) overhangs exert extra stresses on vertical joints and fractures that may increase over time, enlarging the fracture and/or joint spaces. Because it is unlikely for the interior and the clinkers to have similar weathering rates, the only natural way to eliminate a'a interior overhangs is through rock falls or slides. Once dislodged, boulders of the dense interior could roll far due to their large potential energy (large size) and the focus of the energy (without breaking up into small pieces of rocks).

Massive pahoehoe flows (main feeding channels) embedded in thin pahoehoe flows behave similarly as 'a'a interiors. Massive pahoehoe flows are relatively resistant to weathering due to the lack of internal bedding, low permeability, and large thickness. Thin pahoehoe flows, on the other hand, are prone to weathering due to their thin bedding and large amount of vesicles. The piling style of thin pahoehoe in which small oval toes stacked together with little welding-in-between creates adverse geologic structure. Although thin pahoehoe layers themselves are much less prone to boulder rockfall as they easily splinter into small and often flat pieces, their fast differential erosion, however, leads to the overhang of their main feeding channel that could create spectacular rockfall events.

Both a'a and pahoehoe flows are subject to jointing and fracturing where focused weathering occurs. Fracturing and jointing in basalt flows are most commonly initiated as contraction cracks during cooling of lavas. Joints and fractures are enlarged by weathering and gravitational stresses.

Spheroidal weathering is a common form of weathering in which concentric shells of progressively weathered material form around a core of less weathered basalt. Because edges and corners of fractured basalt are exposed to weathering through two or more surfaces, the increased weathering there results in rounding of blocks. Spheroidal weathering produces spherical rocks that could roll easily on a slope.

Over-steepened talus slopes consisting of soil and boulders are prone to rockfall. Rainfalls induce the erosion of soil materials, leaving behind loose and overhanging boulders. During exceptionally heavy rains when the quantity and speed of surface runoff reach certain limits under which the cohesion and gravity of the soil material can be overcome, great quantities of material can be eroded away in relatively a short period of time.

### 2.3 PRECIPITATION—TIMING OF ROCKFALL

Water does not only promote weathering but also a determinant factor in the timing of rockfall events. Due to hydraulic pressure and erosion, rockfall events tend to occur more frequently during or after heavy rains in Hawaii.

The average yearly rainfall for Haena State Park is quite high at about 122 inches per year according to data at rainfall station PH Wainiha 1115 about 1.7 miles away with similar elevation. The precipitation data were taken from the Hawaii State Climate Office at website: <http://umahai.soest.hawaii.edu/Hsco/ppt.htm> The weather station information was taken from the National Climatic Data Center at website: <http://www.ncdc.noaa.gov/ba/climate/surfaceinventories.html#A>

### 2.4 ROCKFALL HAZARD RATING SYSTEM

A rockfall mitigation procedure begins with an understanding of the structural geology and relative orientation of the discontinuities of a slope, the water runoff condition, and the site geometry. To assess potential rockfall hazards, the FHWA and the DOT have sponsored extensive research to develop a series of rockfall mitigation methods and a systematic procedure for rating rockfall

conditions. The results of this research were presented in a series of publications and guidelines *Rockfall Hazard Mitigation Methods* (Publication No. FHWA SA-93-085, March 1994) and *Rockfall Hazard Rating System* (Publication No. FHWA SA-93-057, November 1993). These manuals introduce a multitude of up-to-date techniques and materials to mitigate each condition, hence providing a sense of uniformity during assessment, design, and maintenance. The basic concept behind the DOT/FHWA Rockfall Hazard Rating System is summarized below.

Rockfall rating groups the hazard conditions into three classes, as described below:

- Class A — High estimated potential for rockfall on adjacent property(ies) with high historical rockfall activity. A Class A rating means that the chances of rock falling in a site is moderate to high, and that when the rockfall occurs, it will certainly reach adjacent property(ies). An example of a Class A condition is where rocks on the cut slope overhang the adjacent property(ies) and in areas, between the rockfall property and adjacent property(ies) where little or no rock catchment ditch is present.
- Class B — Moderate estimated potential for a rock to fall on adjacent property(ies) with moderate historical rockfall activity. As the rockfall risk is reduced, a Class B rating indicates that although a rockfall is probable, the chances of it reaching the adjacent properties are low to moderate. A possible scenario for Class B is a condition where a rockfall from the slope is clearly possible, and the catchment ditch is large enough to prevent most of the rocks from reaching the adjacent property(ies).
- Class C — Low estimated potential for rockfall on adjacent property(ies) with low historical rockfall activity. Class C rating pertains to a condition in which there is a low chance for a rockfall event, but should one occur, there is low to no chance for the rocks to reach other properties.

To evaluate a rockfall condition for a given property, certain criteria must be evaluated. These criteria are identified below:

- Slope height
- Ditch or catchment effectiveness
- Structural condition, Case One slopes (movement along discontinuities)
- Rock friction
- Structural condition, Case Two slopes (differential erosion or oversteepening leads to rockfall)
- Difference in erosion rates
- Volume of rockfall event
- Climate and the presence of water on slope
- Rockfall history
- Slope topography

**Slope Height** evaluates the risk associated with the vertical height of a slope. Slope height represents the highest elevation from which a rock could roll down the slope. This value is reasonably estimated from existing topographic maps, through use of a GPS unit, or from trigonometric relationships. High slopes are associated with high rockfall hazard because they have more materials available for rockfall and higher potential energy for rock acceleration. A larger rockfall potential energy is associated with an increased hazard.

The slopes at Haena State Park are high, at places over 1000 ft.



**Ditch Effectiveness** estimates the effectiveness of a catchment ditch or zone in restricting falling rocks from reaching adjacent property(ies). The risk related to a rockfall situation varies based on how effectively a catchment ditch or zone can avert the rocks from reaching the adjacent property(ies). The risk of rocks reaching other property(ies) is lower where a good catchment is in place, regardless of the volume of rock that has fallen. Conversely, the risk heightens where there is limited or no catchment available to stop the falling rocks.

Rockfall catchment varies along the project site. Portions of the mauka side of the Kuhio Highway at Haena State Park have relatively wide flat area with dense trees, providing almost adequate rockfall catchment. Other portions, however, have narrow or no flat area, providing little rockfall catchment.

**Structural Condition.** For the purpose of the rockfall assessment, the geologic conditions of slopes are evaluated based on two distinct cases. Where both rockfall cases are present, the condition that is more severe should be considered.

Case 1. Structural Condition represents slopes for which discontinuities, bedding planes, and joints are the dominant features. Movement within the discontinuities of the slope is the major cause of rockfall for the Case 1 category. "Movement occurs along these joints where the resistance to movement is significantly less than the intact strength of the rock itself. When the joints are oriented adversely to the slope, the potential for rockfall is greater. Adverse joints are those that singularly or in combination with other joints make planar, circular, block, wedge or topping failures kinematically possible" (Pierson and van Vickie 1993, p. 49).

Rockfall movement along structural joints is controlled by the roughness of the joint planes. The degree of roughness ranges from rough and irregular to slickensided. "Friction along a joint, bedding plane, or other discontinuity is governed by the macro and micro roughness of surfaces. Macro roughness is the degree of undulation of the joint relative to the direction of possible movement. Micro roughness is the texture of the surface. On slopes where the joints contain hydrothermally altered or weathered material, movement has occurred causing slickensides or fault gouge to form, or the joints are open or filled with water, the rockfall potential is greater" (Pierson and van Vickie 1993, p. 52).

Case 2. This case represents slope conditions in which differentially eroded rock units and over-steepened slopes are dominant features. Over-steepening of slopes and unsupported rock overhangs increase the risk of rockfall. As described in the RHRS manual, "Rockfall is commonly caused by erosion that leads to a loss of support either locally or throughout a slope. The types of slopes that may be susceptible to this condition are layered units containing more easily erodible units that undermine more durable rock; talus slopes; highly variable units, such as conglomerates, and mudflows, that weather differentially, allowing resistant rocks and blocks to fall; and rock/soil slopes that weather allowing rocks to fall as the soil matrix material is eroded" (Pierson and van Vickie 1993, p. 55).

Where the slope is composed of different rock/soil materials, which exhibit significant differences in composition and characteristics, the rate of erosion may vary within different layers and zones. Progress of soil erosion under these conditions could result in loss of support of portions of the slope, increasing the risk for rockfall.

**Block Size or Volume of Rockfall Event** is evaluated based on individual blocks of rock or a volume of rocks of various sizes. "Larger blocks or volumes of falling rock produce more total kinetic energy and greater impact force than smaller events... the larger the blocks or volume the greater the hazard created..." (Pierson and van Vickie 1993, p.62).

During field investigations, both large and small boulders were identified within this property posing potential hazard.

**Climate and Presence of Water on Slope.** This category evaluates the effects of climate including precipitation, and the presence of water on the slope surface. "Water ... contributes to the weathering and movement of rock materials and a reduction in overall slope stability. This category evaluates the amounts of precipitation ..." (Pierson and van Vickie 1993, p. 65).

Generally a rainfall of 122 inches per year at the site is considered high.

**Rockfall History** at a site is an important indicator of future rockfall activities. Sites with a history of frequent rockfall are more likely to experience future rockfall events. The magnitude of historical rockfalls is also an indicator of future rockfall behavior at a site.

During site investigation, recent rockfall activities were apparent, some of them occurred right adjacent to Kuhio Highway.

Based on the above rating criteria, the rockfall section at the mauka side of Kuhio Highway at Haena State Park consists of both Class A and Class B rockfall ratings.

## 2.5 ROCKFALL COMPUTER SIMULATION

Rockfall is initiated by unbalanced forces as a result of gravity, weathering, erosion, excavation, fracture development, hydraulic pressure, plant or ice wedging, seismic or blasting vibration, or impact by moving objects. After initiation, the fate of rockfall depends on initial momentum, elevation, steepness and roughness of slope, slope material, and the shape and size of the falling rocks. The elevation and size determine potential energy and the shape, slope, and slope material determine the potential acceleration of rockfall.

The Colorado Rockfall Simulation Program (CRSP) version 4.0 (Jones et al. 2000), jointly developed by Colorado School of Mines, Colorado Department of Transportation, and Colorado Geological Survey, simulates rocks tumbling down a slope. The program is based on mathematical models, probability factors, and many rockfall experiments. CRSP can predict the statistical distribution of speed and bouncing height and is a guide and reference for recommending and designing rockfall mitigation. The model takes into account slope profile, rebound and friction characteristics of the slope, and rotational energy of the rocks. The program, together with its values for normal coefficient of restitution ( $R_n$ ) and the tangential coefficient of frictional resistance ( $R_t$ ), has been calibrated by many rockfall events here in Kauai. The model is one of the most widely used and is the recommended tool for the geologist and engineer in analyzing and mitigating rockfall hazards.

CRSP simulations are used to approximate the bouncing height, velocity, kinetic energy, and traveling distance of possible rockfalls. The simulation profiles (cross sections) are based on field measurements taken during investigation. The shape of each boulder is assumed spherical with a 4-foot (ft.) diameter, similar to the large boulders found on the slope. Because CRSP does not include the effect of trees, slope roughness was increased to simulate the effect of tree trunks in stopping falling rocks as dense trees exist at the project site. For each assumed slope profile and boulder, the program mathematically rolls the same boulder down the same slope profile one thousand times and each time it mathematically produces a new slope roughness resulting in a new traveled path by that boulder. It would then issue a percentage for the number of times the hypothetical boulder reaches the end of the run and the jumping height and speed of the boulder at each location of the profile.

Rockfall simulations were performed for five slope profiles on the mauka side of Kuhio Highways at Haena State Park (Figure 1-1). Due to the high elevation and difficulty in access, the top slope profiles were obtained from Google Earth Pro. The bottom of the slope profiles were measured using a measuring tape and a clinometer.

Figure 2-1 shows the simulation results for profile P1 from the gate of the secondary parking lot to the mountain peak (Figure 1-1). A high rock cliff is about 140 feet away from the paved road of Kuhio

Highway, and a relatively flat catchment area exists between the cliff and the road (Figure 1-1 and Figure 2-1). Based on results of this mathematical simulation, about 3% rockfalls reach the road, with a maximum bouncing height of 0.4 foot at the road position (See Appendix A for detailed simulation information). This rockfall section represented by profile P1 would entail Class B rockfall rating.

Figure 2-2 shows the simulation results for profile P2. Unlike profile P1, profile P2 has a long and steep talus slope leading to a high rock cliff (Figure 1-1 and Figure 2-1). About 63% of simulated rockfalls originated from the top of the mountain are anticipated to reach the road, with a maximum bouncing height of 9 feet at the road position (See Appendix A for detailed simulation information). This rockfall section represented by profile P2 would entail Class A rockfall rating.

Figure 2-3 shows the simulation results for profile P3 at the start of the beaching parking lot (Figure 1-1). Profile P3 has a relatively flat catchment area and a steep talus slope before a high rock cliff (Figure 1-1 and Figure 2-3). About 4% of simulated rockfalls originated from the top of the mountain are anticipated to reach the road, with a maximum bouncing height of 1.6 feet at the road position (See Appendix A for detailed simulation information). This rockfall section represented by profile P3 would entail Class B rockfall rating.

The Wet Cave (Wai a Kanaloa) exists between profiles P2 and P3, in between locations of boulders B21 and B20 shown in Figure 1-1. Here high rock cliff is right next to the paved road. Most, if not all, rockfalls would reach the road. This rockfall section including the Wet Cave (Wai a Kanaloa) is considered Class A rockfall rating.

Figure 2-4 shows the simulation results for profile P4 at the start of the Kalalau trail (Figure 1-1). Profile P4 has a relatively flat catchment area and then a short steep talus slope before a ridge (Figure 1-1 and Figure 2-4). About 0.5% of simulated rockfalls originated from the top of the mountain reach the road, with little or no bouncing at the road position (See Appendix A for detailed simulation information). This rockfall section represented by profile P4 would entail Class B rockfall rating.

Figure 2-5 shows the simulation results for profile P5 starting from the most populated beach area (Figure 1-1). Profile P5 has some relatively flat catchment areas and a long talus slope before a high ridge (Figure 1-1 and Figure 2-5). Profile P5 crosses the Kalalau trail which helps to stop falling rocks due to its depression formed by erosion along the trail. No simulated rockfalls originated from the top of the mountain would reach the beach area (See Appendix A for detailed simulation information). Rockfalls started from the steep slope right next to the beach, however, could reach the beach area. This rockfall section represented by profile P5 would entail Class B rockfall rating.

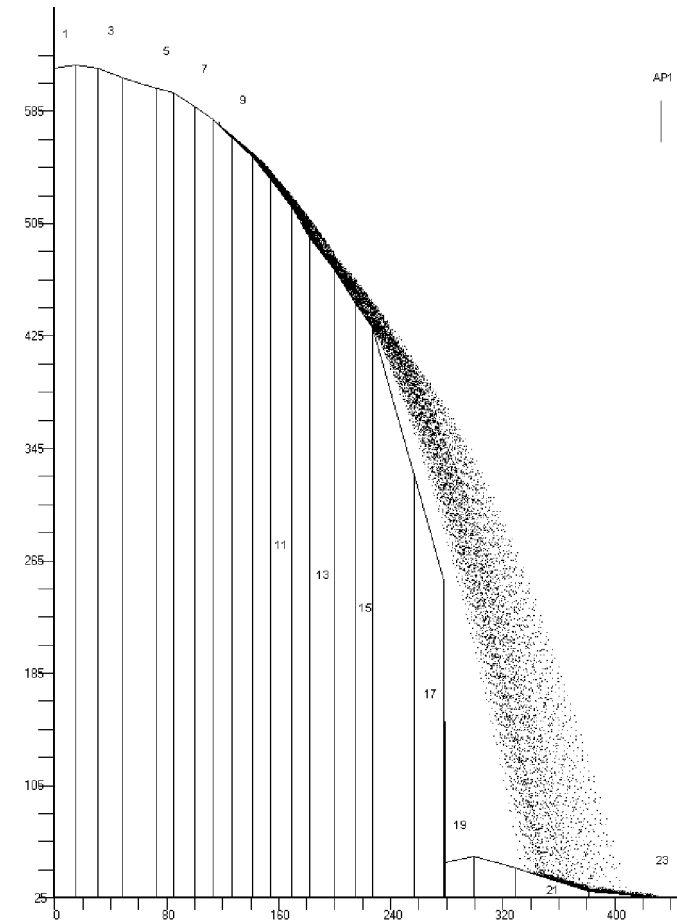


Figure 2-1: Rockfall simulation results for profile P1.

Vertical axis is elevation (foot) and horizontal axis is distance from rockfall source (foot). Each small dot represents the position of a boulder during rockfall. AP1 is analysis points at road position. The numbers (1, 3, 5, ..., 23) are slope section references. Upper slope profile was obtained from Google Earth Pro and lower slope profile was measured. About 3% rockfalls reach the road, with a maximum bouncing height of 0.4 foot. See Appendix A for detailed simulation information.

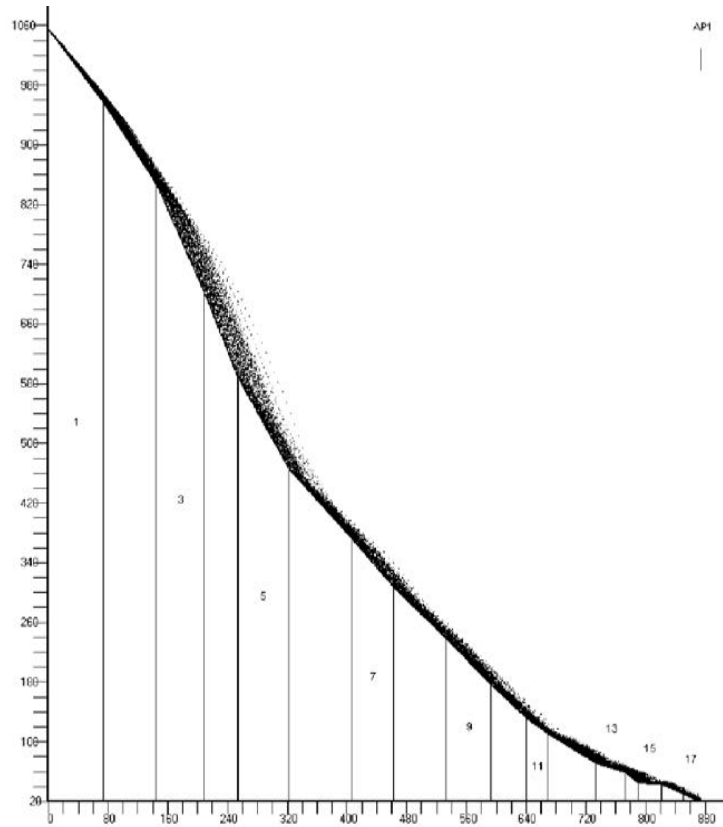


Figure 2-2: Rockfall simulation results for profile P2.

Vertical axis is elevation (foot) and horizontal axis is distance from rockfall source (foot). Each small dot represents the position of a boulder during rockfall. AP1 is analysis points at road position. The numbers (1, 3, 5, ..., 17) are slope section references. Upper slope profile was obtained from Google Earth Pro and lower slope profile was measured. About 63% rockfalls reach the road, with maximum bouncing height of 9 feet. See Appendix A for detailed simulation information.

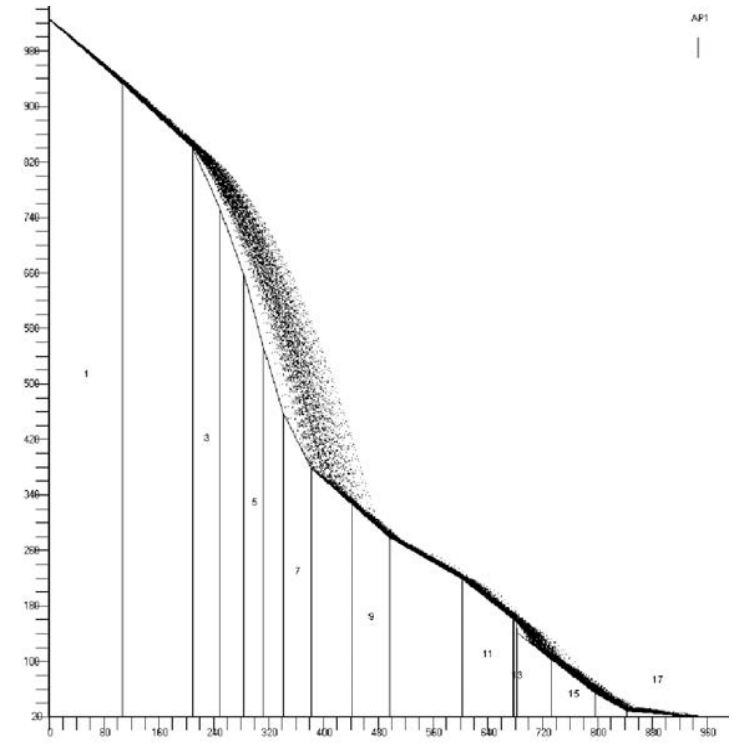
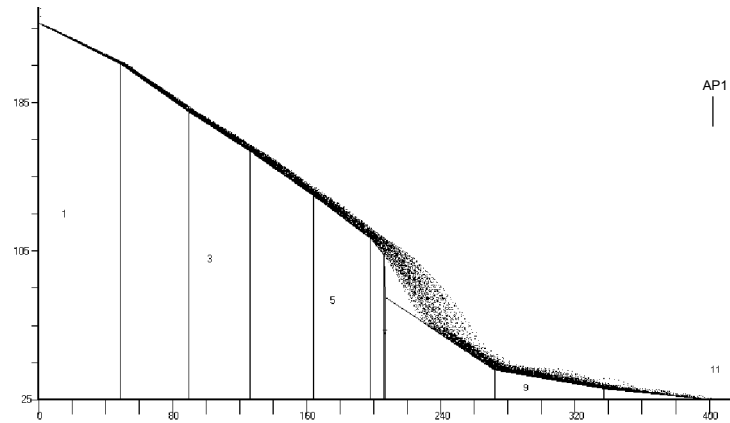


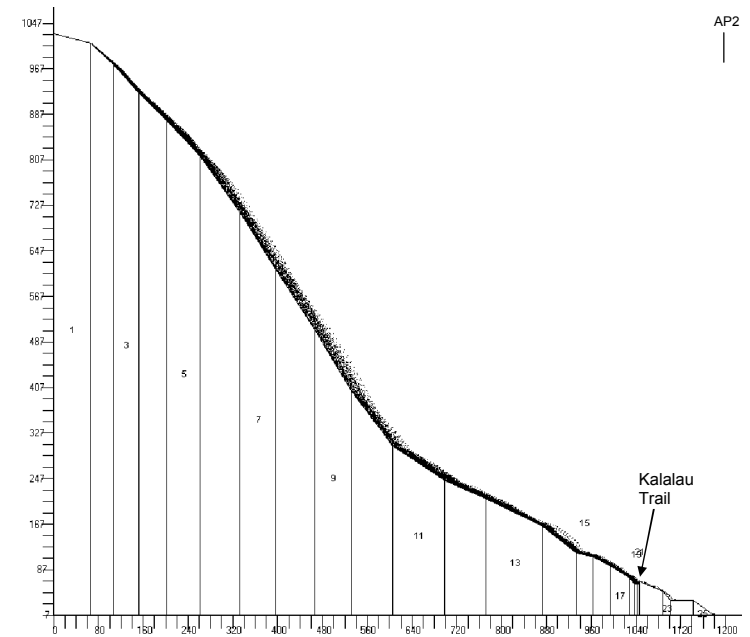
Figure 2-3: Rockfall simulation results for profile P3.

Vertical axis is elevation (foot) and horizontal axis is distance from rockfall source (foot). Each small dot represents the position of a boulder during rockfall. AP1 is analysis points at road position. The numbers (1, 3, 5, ..., 17) are slope section references. Upper slope profile was obtained from Google Earth Pro and lower slope profile was measured. About 4% rockfalls reach the road, with maximum bouncing height of 1.6 feet. See Appendix A for detailed simulation information.



**Figure 2-4: Rockfall simulation results for profile P4.**

Vertical axis is elevation (foot) and horizontal axis is distance from rockfall source (foot). Each small dot represents the position of a boulder during rockfall. AP1 is analysis points at road position. The numbers (1, 3, 5, ..., 11) are slope section references. Upper slope profile was obtained from Google Earth Pro and lower slope profile was measured. About 0.5% rockfalls reach the road, with maximum bouncing height of 0.0 foot. See Appendix A for detailed simulation information.



**Figure 2-5: Rockfall simulation results for profile P5.**

Vertical axis is elevation (foot) and horizontal axis is distance from rockfall source (foot). Each small dot represents the position of a boulder during rockfall. AP2 is analysis point at beach positions. The numbers (1, 3, 5, ..., 25) are slope section references. Upper slope profile was obtained from Google Earth Pro and lower slope profile was measured. No simulated rockfalls reach the beach position. See Appendix A for detailed simulation information.

## 2.6 ROCKFALL SITES AND POTENTIAL ROCKFALL HAZARDS AT HAENA STATE PARK

Due to the time-consuming nature of rappelling and safety issues regarding high mountains and the requirement of this planning study, the high cliffs and high ridge tops were only observed from a distance where they could be viewed from nearby vantage points.

Three factors determine the hazard level of potential rockfall outcrops: how likely they are going to fall (chance of rockfall); once they fall, how likely they are going to hit the target to be protected (chance of hitting target); and how large their size or volume (rockfall size or volume) would be.

For chance of rockfall, the following four categories are considered

- Category 1: Imminent potential for rockfall (could fall anytime). There are no visible signs of competent support and the rocks could fall any time. Observed rock characteristics include but not limited to: 1) loose boulders or completely

separated rocks lacking toe and interlocking support and sitting on planes dipping out of slope with dipping angles significantly greater than friction angles; 2) rounded loose boulders sitting on steep soil slope with little embedment and weakened soil support that is subjected to great potential for further erosion; 3) overhang with opened release joints without observed competent interlocking; 4) loose boulders or fractured rocks sitting in a position that is at or very close to toppling or losing balance; 5) failing key supporting stones.

**Category 2:** Short term potential for rockfall. There are visible signs of support that will diminish relatively quickly with time (within several to a dozen years. Time scale is used symbolically and should not be understood or interpreted as actual time length) but nonetheless most likely prevents immediate rockfall at present. Loose boulders or fractured rocks have short term rockfall potential when having one or more of the following characters: 1) supported by soil or mixture with soil that is being subjected to rapid erosion; 2) supported by old, dying, or dead vegetation; 3) supported by interlocking that is unlocking due to continuously opening fractures; 4) weakening key supporting stones that show signs of stress like sliding and fracturing; 5) in the process of making small scale adjustments through local rotating or sliding towards a position of eventual rockfall.

**Category 3:** Medium term potential for rockfall. There are visible signs of stable support that prevent rockfall at present and diminish within medium length of time period (within dozens of years). The boulders or rock outcrops are currently in a stable position but are working their way to eventual rockfall due to stress, erosion, weathering, root wedging, hydraulic pressure, and other destabilizing forces.

**Category 4:** Long term potential for rockfall. There are visible signs of solid support that will diminish within a long period of time (up to or more than a hundred years). Destabilizing forces will take many years to develop new rockfall features.

Categories in between the above four categories are also used. For example, Category 1.5 simply indicates the chance of rockfall is between Category 1 and Category 2.

Representative rock outcrops, their sizes, locations, and categories are listed in Table 2-1 and their relative locations are plotted in Figure 1-1.

Photo 2-1 shows round boulder on steep slope at B1. Photo 2-2 shows highly fractured and weathered steep slope with many loose rocks at B3, with a recent rockfall source. Photo 2-3 shows an overhanging and standing boulder with large opened back fracture at B4. Photo 2-4 shows a completely overhanging boulder with steep back fracture dipping out of slope at B5. Photo 2-5 shows loose boulders on talus slope at B7. Photo 2-6 shows root wedging that enlarged fractures at B12. Photo 2-7 shows a recent fallen boulder at B14. Photo 2-8 shows recent fallen boulders with fresh impact marks on the trees. Photo 2-9 shows old impact marks on a tree and stopped boulders. Photo 2-10 shows a rock perched on tree branches at B17. Photo 2-11 shows a recent rockfall boulder, with fresh impact marks and tree barks on it, on steep slope with potential for further fall at B18. Photo 2-12 shows an overhanging boulder partly supported by rotten tree roots at B19. Photo 2-13 shows an overhang loose boulder on steep slope at B19. Photo 2-14 shows a loose boulder on steep slope at B20 above Kuhio Highway. Photo 2-15 shows rocks stopped by a tree just above Kuhio Highway at B21. Photo 2-16 shows recent rockfall boulders and fresh impact marks on trees at B21. Photo 2-17 shows recent rockfall boulders perched on tree roots and fresh impact marks on trees at B21. Photo 2-18 shows the source of the recent rockfall at B21. Photo 2-19 shows an overhanging fractured rock with potential for wedge failure at B21. Photo 2-20 shows fractured and overhanging rocks at B21. Photo 2-21 shows an opened columnar joint of a dike at B21. Photo 2-22 shows a major fracture separating a small ridge from the main rock slope at B21. Photo 2-23 shows overhanging and fractured rocks at B23. Photo 2-24 shows a protruding rock sitting on a steep fracture dipping out of slope at B25. Photo 2-25 shows an overhanging loose rock sitting on top of a ledge at B26. Photo 2-26 shows overhanging loose boulders on a steep talus slope just above a very popular beach area at B30. Photo 2-27. Overhanging loose boulders on a steep talus slope at B30.

Photo 2-28 shows an overhanging fractured rock on a high cliff face (photo taken from vantage point V1). Photo 2-29 shows an overhanging and fractured block on top of a high cliff face (photo taken from vantage point V2). Photo 2-30 shows a major fracture separating a large block on a high rock cliff (photo taken from vantage point V2). The block dropped a little distance as indicated by the shifts of major layers across the fracture. Photo 2-31 shows a recent rockfall source and a large overhanging rock with back fractures (photo taken from vantage point V2). Photo 2-32 shows an overhanging portion of a high cliff (photo taken from vantage point V3). Photo 2-33 shows loose boulders perched on a steep ridge (photo taken from vantage point V1). Photo 2-34 shows an overhanging large boulder on the very top of a high slope (photo taken from vantage point V5). Photo 2-35 shows the thick lava flow layer on the very top of the high slopes (photo taken from vantage point V5).

Table 2-1: Representative Identified Potential Rockfall Outcrops at Haena State Park, Kauai.

| Location | Category | Size            | Number of rocks | Latitude (°) | Longitude (°) |
|----------|----------|-----------------|-----------------|--------------|---------------|
| B1       | 1.5      | 4 x 3 x 2.6     | 1               | 22.21842     | -159.58562    |
| B2       | 2.5      | 25 x 22 x 15    | 1               | 22.21852     | -159.58552    |
| B3       | 2.5      | 3 x 2 x 1.7     | 1               | 22.21840     | -159.58553    |
| B4       | 1.5      | 8 x 8 x 6       | 1               | 22.21845     | -159.58558    |
| B5       | 1        | 7 x 7 x 3.7     | 1               | 22.21943     | -159.58398    |
| B6       | 3        | 2 x 1 x 0.5     | 1               | 22.21970     | -159.58347    |
| B7       | 2.5      | 4.2 x 3 x 3     | 1               | 22.22028     | -159.57973    |
| B8       | 3        | 4 x 4 x 3.5     | 2               | 22.22015     | -159.58233    |
| B9       | 3        | 3.5 x 2.2 x 1.8 | 1               | 22.21998     | -159.58228    |
| B10      | 2.5      | 3 x 1.2 x 4     | 2               | 22.21955     | -159.58238    |
| B11      | 3        | 2.5 x 1.8 x 3.8 | 1               | 22.21963     | -159.58252    |
| B12      | 2        | 1.5 x 1.2 x 2   | 1               | 22.21980     | -159.58258    |
|          | 2.5      | 3.5 x 3 x 3     | 1               |              |               |
| B13      | 2.5      | 3 x 3.8 x 3     | 2               | 22.21918     | -159.58270    |
| B14      | 2        | 6 x 7 x 3.5     | 1               | 22.21923     | -159.58258    |
| B15      | 3        | 3 x 1.8 x 4     | 1               | 22.21925     | -159.58195    |
| B16      | 3        | 3.3 x 1.8 x 1.7 | 1               | 22.21942     | -159.58287    |
| B17      | 2        | 2 x 1.2 x 1.2   | 1               | 22.22030     | -159.58118    |
|          | 2        | 2.5 x 1.9 x 1.2 | 1               |              |               |
| B18      | 2        | 2 x 3 x 1.8     | 2               | 22.22032     | -159.58107    |
|          | 3        | 8 x 11 x 8      | 1               |              |               |
| B19      | 2.5      | 3 x 5 x 7       | 1               | 22.22040     | -159.58118    |
| B20      | 2        | 2 x 2 x 2       | 2               | 22.22047     | -159.58090    |
|          | 2        | 6 x 8 x 3       | 1               |              |               |
| B21      | 2.5      | 2 x 1.7 x 2     | 2               | 22.22047     | -159.58058    |
|          | 3        | 30 x 60 x 20    | 1               |              |               |
| B23      | 1.5      | 5 x 5 x 2       | 1               | 22.22067     | -159.57982    |
| B24      | 2        | 4 x 3.8 x 3.7   | 1               | 22.22060     | -159.57977    |
| B25      | 2        | 3 x 12 x 10     | 1               | 22.22050     | -159.57975    |
| B26      | 2        | 1.7 x 0.8 x 2   | 1               | 22.22002     | -159.57975    |
| B27      | 2.5      | 2.5 x 1.4 x 1.4 | 1               | 22.21942     | -159.57990    |
| B28      | 3        | 3 x 1.5 x 1     | 1               | 22.22035     | -159.57825    |
| B29      | 1.5      | 2 x 3 x 1       | 2               | 22.22027     | -159.57790    |
| B30      | 1        | 2 x 1.8 x 2     | 3               | 22.22028     | -159.58343    |

Note: Size is length x height x depth; Latitude and Longitude are in NAD 83



## 2.7 ROCKFALL RISK ESTIMATION FOR THE HAENA STATE PARK SITE

The risk estimation of rockfalls and landslides involves the integration of their frequency and consequences. Because the United States has yet to develop a guideline for rockfall and landslide risk management, the guideline developed by the Australian Geomechanics Society (AGS) that has been used by many countries is used as a reference (AGS 2000).

For loss of life, the risk can be calculated from:

$$R_{(DI)} = P_{(H)} \times P_{(S,H)} \times P_{(T,S)} \times V_{(D,T)}$$

Where  $R_{(DI)}$  is the risk (annual probability of loss of life (death));  $P_{(H)}$  is the annual probability of the hazardous events (the landslides or rockfalls);  $P_{(S,H)}$  is the probability of spatial impact by the hazard (e.g. probability of landslides impacting structures (locations) taking into account travel distance);  $P_{(T,S)}$  is the temporal probability (e.g. probability of the structure being occupied);  $V_{(D,T)}$  is the vulnerability (probability of loss of life of individuals given the impacts).

For existing slopes, the suggested tolerable risk for loss of life is  $10^{-4}$  for persons most at risk and  $10^{-5}$  for average persons; for new slopes, the suggested tolerable risk for loss of life is  $10^{-5}$  for persons most at risk and  $10^{-6}$  for average persons (AGS 2000).

For property, the risk can be calculated from:

$$R_{(Prop)} = P_{(H)} \times P_{(S,H)} \times V_{(Prop,S)} \times E$$

Where  $R_{(Prop)}$  is the risk (annual loss of property value);  $P_{(H)}$  is the annual probability of the hazardous event;  $P_{(S,H)}$  is the probability of spatial impact by the hazard (i.e. of the landslide impacting the property, taking into account the travel distance) and for vehicles, for example, the temporal probability;  $V_{(Prop,S)}$  is the vulnerability of the property to the spatial impact (proportion of property value lost);  $E$  is the element at risk (e.g. the value or net present value of the property).

A full risk analysis involves consideration of all landslide and rockfall hazards for the site and all the elements at risk. Unless extensive geotechnical testing and observations over a very long period are available, this risk calculation depends heavily on the estimator's experience and availability of data and is meant only as a first order approximation.

To estimate the rockfall risk or annual loss of life, we use  $P_{(H)} = 0.5$  (one major rockfall every two years along the 3050 ft long rockfall section);  $P_{(S,H)} = 14\% \times 15 \text{ ft} / 3050 = 0.00069$ , namely 14% rockfalls reach or pass the road (average of the five rockfall simulation profiles) and each rockfall impacts 15 ft width (car length) of the 3050 ft width;  $P_{(T,S)} = 3050 \text{ ft} / 5280 \text{ ft per mile} / 15 \text{ mph} / 24 \text{ hour} \times 1550 \text{ vehicle per day} \times 2.5 \text{ persons each vehicle} = 6.22$ , and  $V_{(D,T)} = 0.3$  as vehicles are likely not to be buried by a rockfall (AGS 2000). Therefore the annual probability of loss of life at this site of the road is  $0.5 \times 0.00069 \times 6.22 \times 0.3 = 6.4 \times 10^{-4}$ , higher than the recommended tolerable level of  $10^{-5}$  for general public. Rockfall mitigation is recommended for Haena State Park to reduce rockfall risk to park users. If the park is limited to 900 visitors per day with the visitors walking on the highway along the rockfall section (from the main parking to the beach), we have  $P_{(T,S)} = 3050 \text{ ft} / 5280 \text{ ft per mile} / 2.5 \text{ mph} / 24 \text{ hour} \times 900 = 8.66$  (assuming walking speed at 2.5 mph) and  $V_{(D,T)} = 0.35$  (increased fatality without the protection from vehicles), and the annual probability of loss of life at this site is  $0.5 \times 0.00069 \times 8.66 \times 0.35 = 1.0 \times 10^{-3}$ . Calculated rockfall risk would increase significantly if visitors spend time at the two wet caves.



Photo 2-1. Round boulder on steep slope. At B1.





Photo 2-2. Highly fractured and weathered steep slope with many loose rocks. At B3. The foreground is a recent rockfall source.



Photo 2-3. An overhanging and standing boulder with large opened back fracture At B4.



Photo 2-4. A completely overhanging boulder with steep back fracture dipping out of slope. At B5.



Photo 2-5. Loose boulders on talus slope At B7.





Photo 2-6. Root wedging enlarged fractures At B12.



Photo 2-7. A recent fallen boulder. At B14.



Photo 2-8. Recent fallen boulders. Notice the fresh impact marks on the trees.





Photo 2-9. Old impact marks on the tree and stopped boulders.



Photo 2-10. A rock perched on tree branches At B17.



Photo 2-11. A recent rockfall boulder on steep slope with potential for further fall. Notice the fresh impact marks and tree barks on the boulder. At B18.





Photo 2-12. An overhanging boulder partly supported by rotten tree roots At B19.



Photo 2-13. An overhang loose boulder on steep slope. At B19.



Photo 2-14. A loose boulder on steep slope. Notice Kuhio Highway down below At B20.

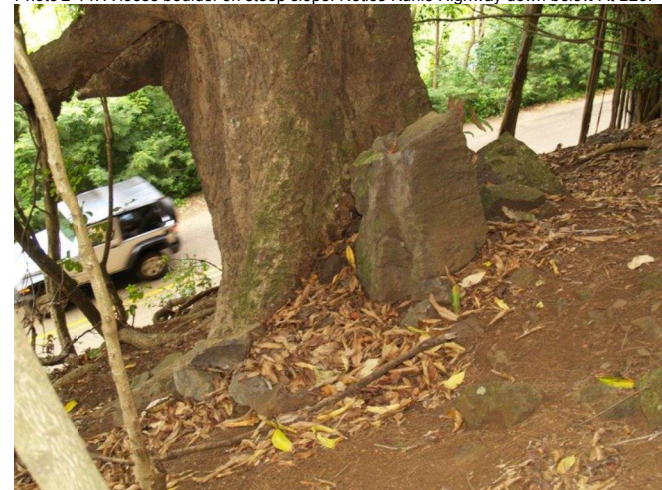


Photo 2-15. Rocks stopped by a tree. Notice the traffic on Kuhio Highway below. At B21.





Photo 2-16. Recent rockfall boulders and fresh impact marks on trees (pointed by the arrows). Notice Kuhio Highway below At B21.



Photo 2-17. Recent rockfall boulders perched on tree roots and fresh impact marks on trees (pointed by the arrows). Notice Kuhio Highway below At B21.



Photo 2-18. The source (pointed by the arrow) of the recent rockfall At B21.



Photo 2-19. An overhanging fractured rock (pointed by the arrow) with potential for wedge failure. Notice fractured rocks on the cliff face at left of the photo. At B21.





Photo 2-20. Fractured and overhanging rocks At B21.

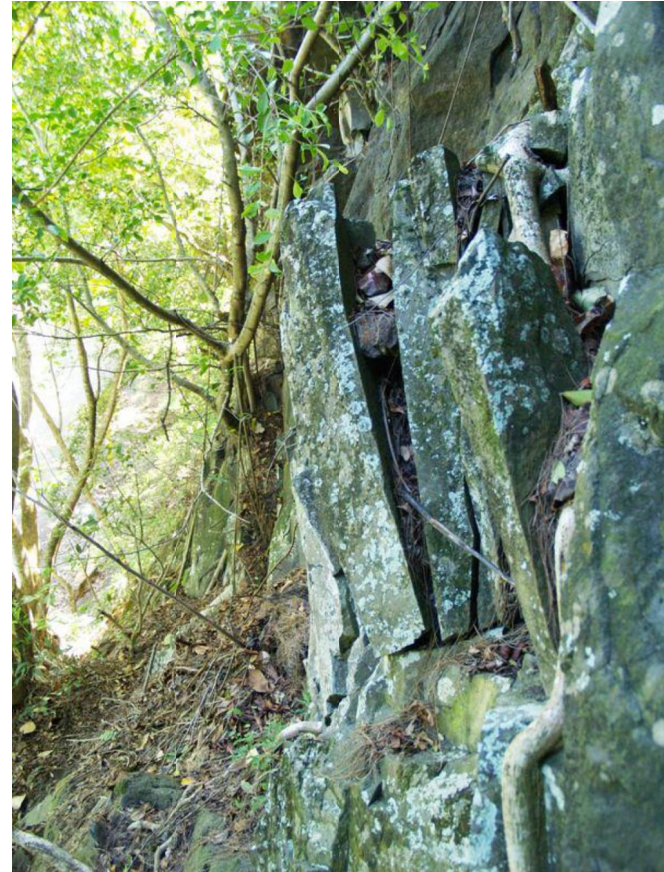


Photo 2-21. Opened columnar joint of a dike. Kuhio Highway is at the left of the photo. At B21.





Photo 2-22. A major fracture (pointed by the arrows) separates a small ridge (left of photo) from the main rock slope. At B21.



Photo 2-23. Overhanging and fractured rocks. At B23.



Photo 2-24. Overhanging rocks with wildly opened back fracture . At B24.





Photo 2-25. A protruding rock (pointed by the arrow) sitting on a steep fracture dipping out of slope. At B25.



Photo 2-26. An overhanging loose rock (pointed by the arrow) sitting on top of a ledge At B26.



Photo 2-27. Overhanging loose boulders on a steep talus slope. The upper left corner of the photo is a very popular beach area At B30.





Photo 2-28. Overhanging loose boulders on a steep talus slope. At B30.



Photo 2-29. An overhanging fractured rock (pointed by the arrows) on a high cliff face (photo taken from vantage point V1).



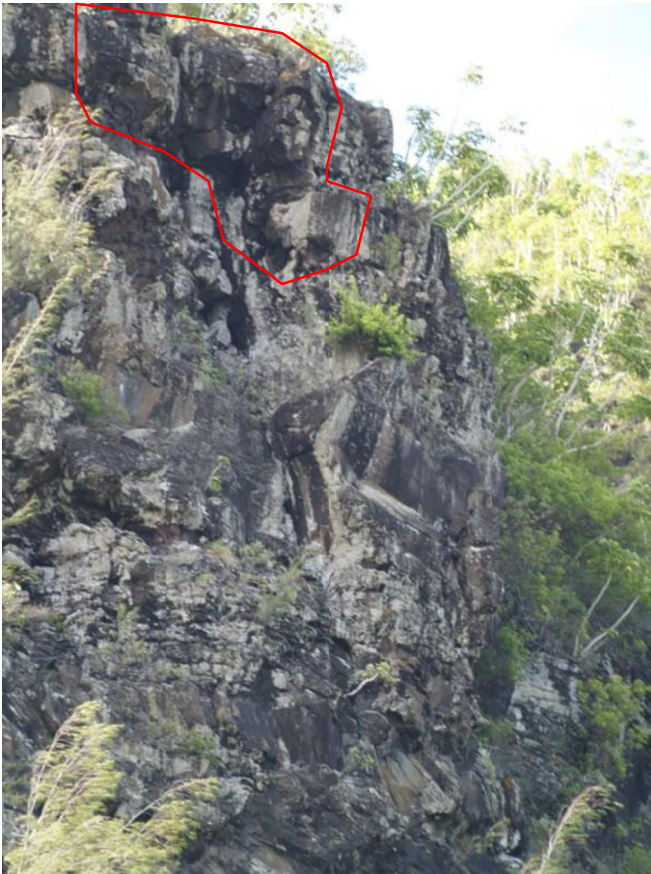


Photo 2-30. An overhanging and fractured block (indicated by the dashed lines) on top of a high cliff face (photo taken from vantage point V2).

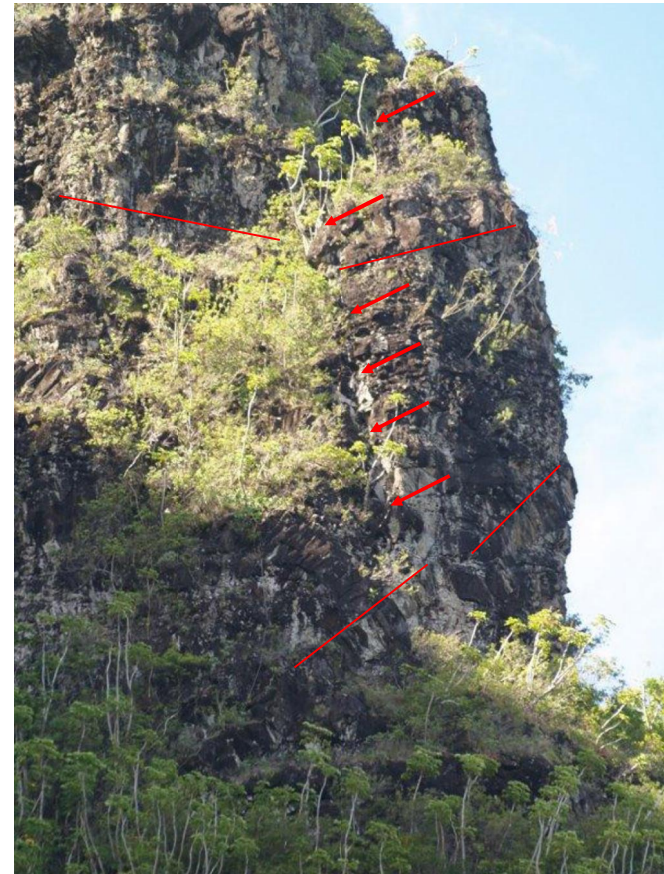


Photo 2-31. A major fracture (pointed by the arrows) separates a large block on a high rock cliff. The block dropped a little distance as indicated by the shifts of major layers across the fracture (the top dashed lines indicate a thick lava flow layer and the bottom dashed lines indicate a dike) (photo taken from vantage point V2).





Photo 2-32. A recent rockfall source (pointed by the arrows) and a large overhanging rock with back fractures (indicated by the dashed lines) (photo taken from vantage point V2).



Photo 2-33. An overhanging portion of a high cliff (photo taken from vantage point V3).



Photo 2-34. Loose boulders perched on a steep ridge (photo taken from vantage point V1).



Photo 2-35. An overhanging large boulder (pointed by the arrow) on the very top of a high slope (photo taken from vantage point V5).



Photo 2-36. The thick lava flow layer on the very top of the high slopes (photo taken from vantage point V5).

## 2.8 SUPPLEMENTAL ROCKFALL COMPUTER SIMULATION

To meet the design requirement of the master planning of Haena State Park, rockfall computer simulations were performed for six additional slope profiles (N0, N1, N2, N3, N4, and N5, see Figure 2-6) on both sides of simulation profile P2.

Contour maps with limited control points, like Google Earth Pro and regular survey maps, invariably smooth slope profiles and adversely impact rockfall simulation. For example, there are many very high and near vertical cliff faces at Haena State Park but none could be found in Google Earth Pro. Small rockfall launching benches and pads are also missing in Google Earth Pro due to its smoothing. Rockfall simulation based on contour maps with limited control points should be regarded only as a first order approximation. Site measurement has to be made for more accurate rockfall simulations. For very long slope profiles with emphasis at slope bottoms, however, it does not make much difference whether the top slopes are measured on site or obtained from contour maps.

To overcome the smoothing of contour maps for this supplemental rockfall simulation, the high and steep top slope profiles were estimated using a laser range finder and a clinometer to catch major cliff faces and launching benches and pads. Only those major cliff faces that were visible at advantageous view points at slope bottom were measured using the laser range finder. Both the direct and horizontal distances to both cliff top and bottom were measured for each major cliff face. Gentler slopes between major cliff faces were constrained by their slope angle estimated using the clinometer and the height and distances of two adjacent major cliff faces. Bottom slope profiles were directly measured using a tape and a clinometer.

Figure 2-7 shows the simulation results for profile N0 (Figure 2-6). A small launching pad existed on top of the bottom major cliff (Figure 2-7). Based on results of this mathematical simulation, about 81%, 38%, and 0.0% simulated rockfalls reach mauka edge, makai edge, and 60 ft down the makai edge of the paved road, respectively, with a maximum bouncing height of 18 ft, 1.5 ft, and 0.0 ft, respectively. 8.7% and 3.4% simulated rockfalls passed the points at 20 ft and 30 ft down the makai edge of the paved road, respectively. See Appendix A for detailed simulation information. If without the small launching pad, the maximum jumping height at the mauka edge of the paved road would be only 2.1 ft (compared to the 18.3 ft), with other results very similar to the above.

Figure 2-8 shows the simulation results for profile N1. A small launching pad existed on top of the bottom major cliff (Figure 2-8). Based on results of this mathematical simulation, about 100%, 65%, and 5.6% simulated rockfalls reach mauka edge, makai edge, and 60 ft down the makai edge of the paved road, respectively, with a maximum bouncing height of 150 ft, 116 ft, and 4.7 ft, respectively. 4.0% and 0.5% simulated rockfalls passed the points at 64 ft and 94 ft down the makai edge of the paved road, respectively. See Appendix A for detailed simulation information. If without the small launching pad, about 98%, 60%, and 4.8% simulated rockfalls reach mauka edge, makai edge, and 60 ft down the makai edge of the paved road, respectively, with a maximum bouncing height of 102 ft, 61 ft, and 1.0 ft, respectively. 1.6% simulated rockfalls passed the point at 74 ft down the makai edge of the paved road. See Appendix A for detailed simulation information.

Figure 2-9 shows the simulation results for profile N2. Profile N2 passes the upper wet cave (Waiakapalae). Based on results of this mathematical simulation, about 100%, 17%, and 0.3% simulated rockfalls reach the upper Wet Cave (Waiakapalae), the mauka edge, and the point 60 ft down the makai edge of the paved road, respectively, with a maximum bouncing height of 166 ft, 2.3 ft, and 0.3 ft, respectively. 3.4% simulated rockfalls passed the point 5 ft down the makai edge of the paved road. See Appendix A for detailed simulation information.

Figure 2-10 shows the simulation results for profile N3. Based on results of this mathematical simulation, about 100%, 100%, and 40% simulated rockfalls reach mauka edge, makai edge, and 60 ft down the makai edge of the paved road, respectively, with a maximum bouncing height of 96 ft, 77 ft, and 20 ft, respectively. 5.7% and 2.3% simulated rockfalls passed the points at 89 ft and 99 ft

2-39

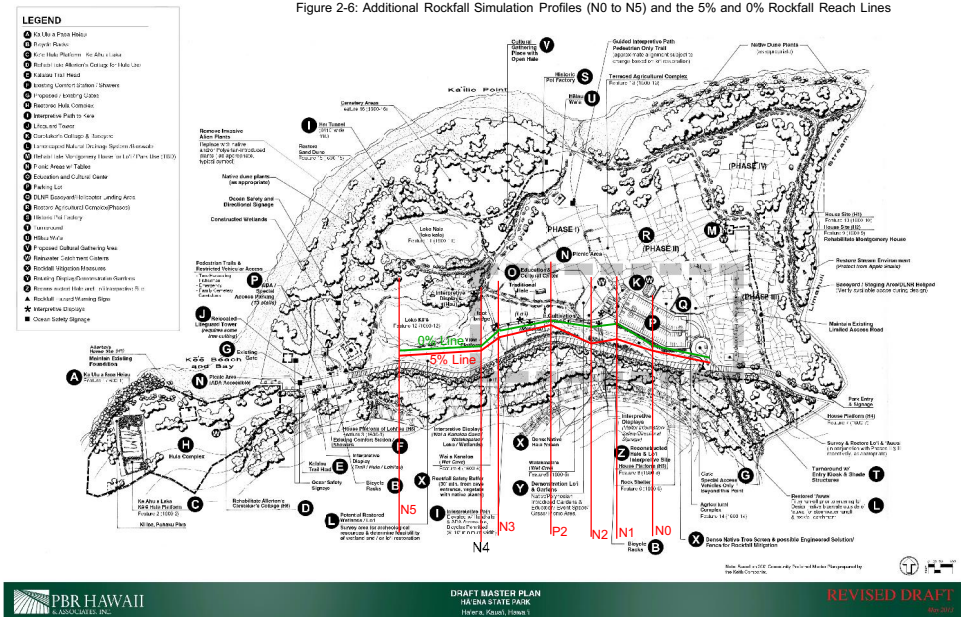


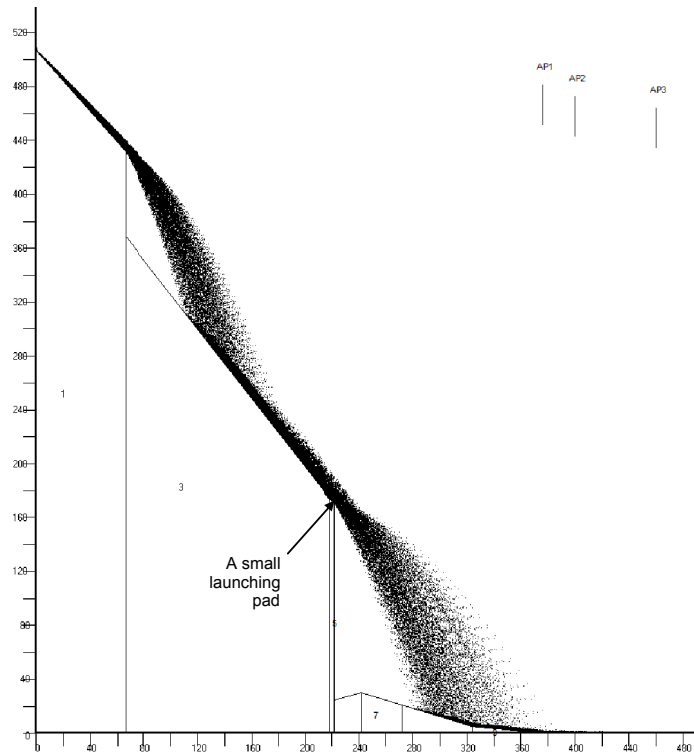
down the makai edge of the paved road, respectively. See Appendix A for detailed simulation information.

Figure 2-11 shows the simulation results for profile N4. Based on results of this mathematical simulation, about 100%, 94%, and 14% simulated rockfalls reach the lower Wet Cave (Wai a Kanaloa), mauka edge, and the point 60 ft down the makai edge of the paved road, respectively, with a maximum bouncing height of 159 ft, 106 ft, and 0.7 ft, respectively. 2.7% and 0.0% simulated rockfalls passed the points at 74 ft and 94 ft down the makai edge of the paved road, respectively. See Appendix A for detailed simulation information.

Figure 2-12 shows the simulation results for profile N5. Based on results of this mathematical simulation, about 84%, 9%, and 0% simulated rockfalls reach mauka edge, makai edge, and 60 ft down the makai edge of the paved road, respectively, with a maximum bouncing height of 5.7 ft, 0.7 ft, and 0.0 ft, respectively. 1.4% simulated rockfalls passed the point at 36 ft down the makai edge of the paved road. See Appendix A for detailed simulation information.

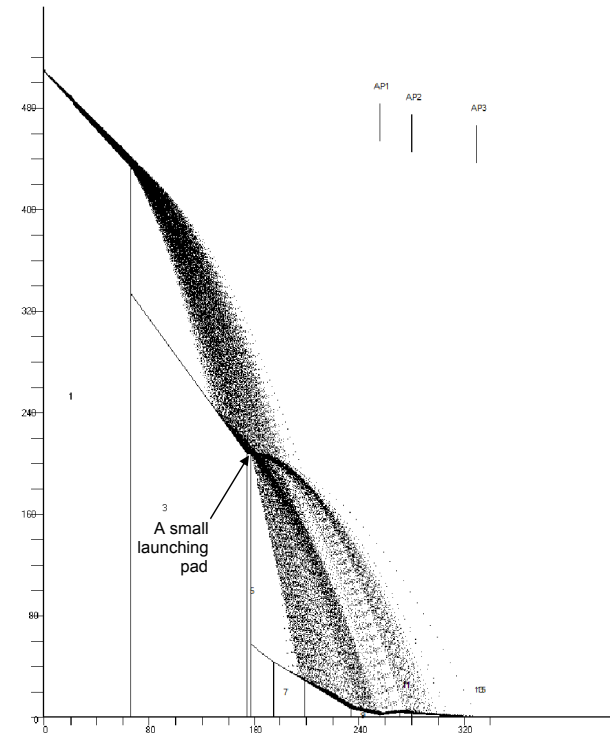
The results of these additional rockfall computer simulations were summarized in Figure 2-6, with the 0% line indicating no simulated rockfalls pass the location indicated by the lines, and the 5% line indicating five percent of simulated rockfalls pass the location indicated by the lines. Figure 2-13 shows rockfall simulation results with minimum mitigation measures in place. Notice the change of the 0% line and 5% line in Figure 2-13 compared to in Figure 2-6. A drainage/catchment ditch or a low wall can be designed along or down slope of the 0% line in Figure 2-13 to stop rockfalls from going any further. Figure 2-14 shows the drainage/catchment ditch mitigation option where a drainage ditch is installed along the 0% line in Figure 2-13. Figure 2-15 shows the drainage ditch and elevated path mitigation option where a drainage ditch is installed right along the roadway to stop most falling rocks and the elevated height of the path to stop the remaining falling rocks.





**Figure 2-7: Rockfall simulation results for profile N0.**

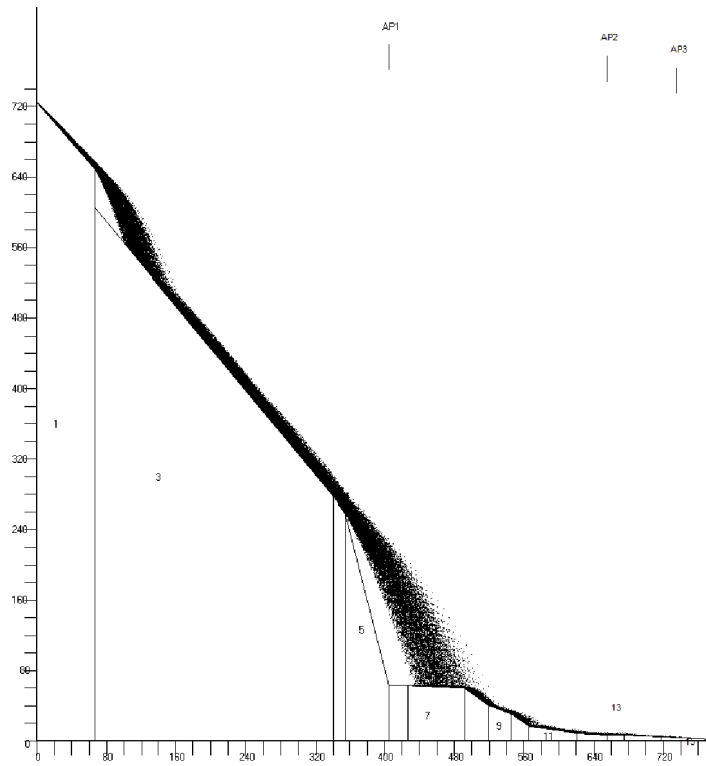
Vertical axis is elevation (foot) and horizontal axis is distance from rockfall source (foot). Each small dot represents the position of a boulder during rockfall. AP1, AP2, and AP3 are analysis points at the mauka edge, makai edge, and 60 ft down the makai edge of the paved road. The numbers (1, 3, 5, 7...) are slope section references. Upper slope profile was estimated using a laser range finder and a clinometer and lower slope profile was measured. About 81%, 38%, and 0% rockfalls reach analysis points AP1, AP2, and AP3, respectively, with a maximum bouncing height of 18.3 ft, 1.5 ft, and 0 ft, respectively. See Appendix A for detailed simulation information. If without the small launching pad indicated in the above figure, the maximum jumping height at AP1 would be 2.1 ft, with other results very similar to the above.



**Figure 2-8: Rockfall simulation results for profile N1.**

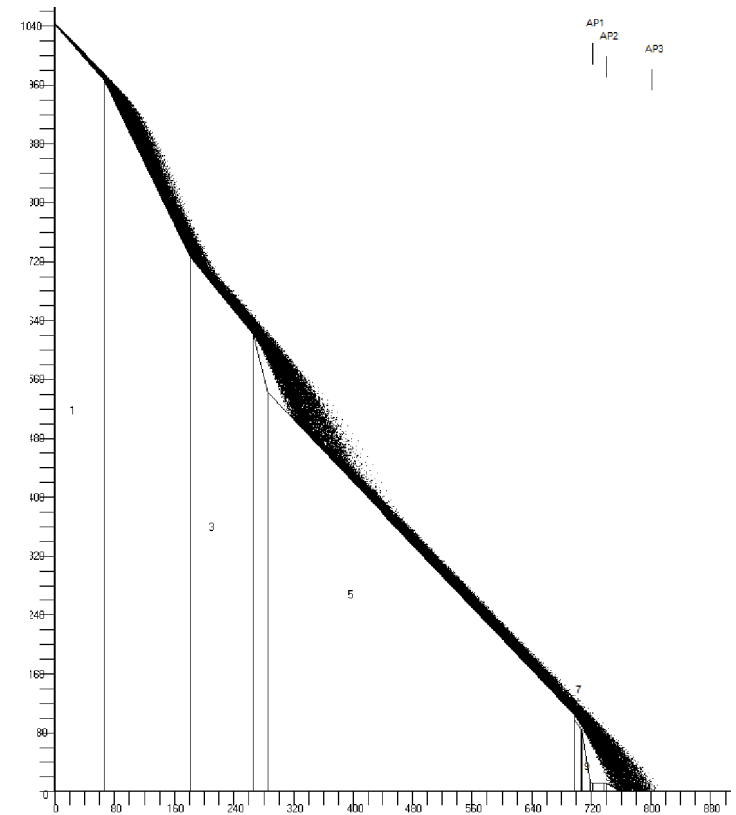
Vertical axis is elevation (foot) and horizontal axis is distance from rockfall source (foot). Each small dot represents the position of a boulder during rockfall. AP1, AP2, and AP3 are analysis points at the mauka edge, makai edge, and 60 ft down the makai edge of the paved road. The numbers (1, 3, 5, 7...) are slope section references. Upper slope profile was estimated using a laser range finder and a clinometer and lower slope profile was measured. About 100%, 65%, and 5.6% simulated rockfalls reach analysis points AP1, AP2, and AP3, respectively, with a maximum bouncing height of 150 ft, 116 ft, and 4.7 ft, respectively. If without the small launching pad, about 98%, 60%, and 4.8% simulated rockfalls reach AP1, AP2, and AP3, respectively, with a maximum bouncing height of 102 ft, 61 ft, and 1.0 ft, respectively. See Appendix A for detailed simulation information.





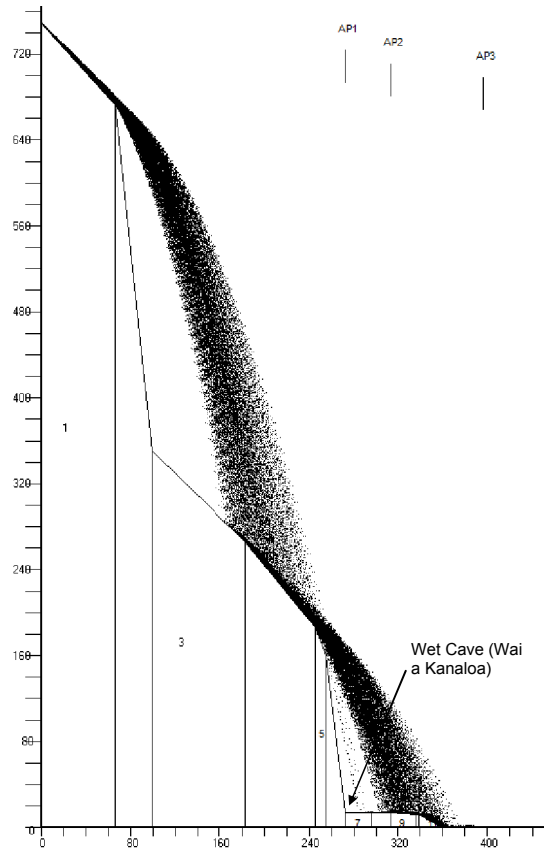
**Figure 2-9: Rockfall simulation results for profile N2.**

Vertical axis is elevation (foot) and horizontal axis is distance from rockfall source (foot). Each small dot represents the position of a boulder during rockfall. AP1, AP2, and AP3 are analysis points at the upper wet Cave (Waiakapalae), the mauka edge, and the point 60 ft down the makai edge of the paved road. The numbers (1, 3, 5, 7, 9, 11, 13...) are slope section references. Upper slope profile was estimated using a laser range finder and a clinometer and lower slope profile was measured. About 100%, 17%, and 0.3% simulated rockfalls reach analysis points AP1, AP2, and AP3, respectively, with a maximum bouncing height of 166 ft, 2.3 ft, and 0.3 ft, respectively. See Appendix A for detailed simulation information.



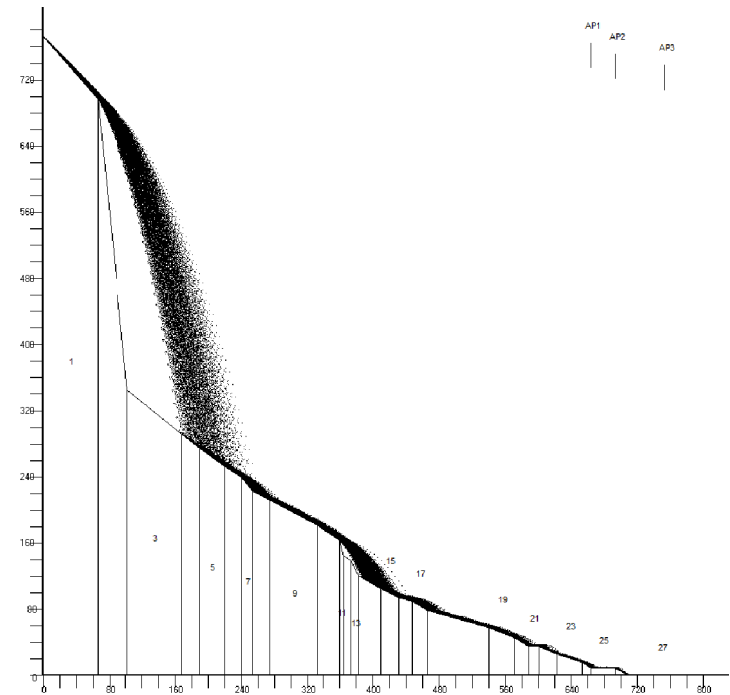
**Figure 2-10: Rockfall simulation results for profile N3.**

Vertical axis is elevation (foot) and horizontal axis is distance from rockfall source (foot). Each small dot represents the position of a boulder during rockfall. AP1, AP2, and AP3 are analysis points at the mauka edge, makai edge, and 60 ft down the makai edge of the paved road. The numbers (1, 3, 5, 7...) are slope section references. Upper slope profile was estimated using a laser range finder and a clinometer and lower slope profile was measured. About 100%, 100%, and 40% simulated rockfalls reach analysis points AP1, AP2, and AP3, respectively, with a maximum bouncing height of 96 ft, 77 ft, and 20 ft, respectively. See Appendix A for detailed simulation information.



**Figure 2-11: Rockfall simulation results for profile N4.**

Vertical axis is elevation (foot) and horizontal axis is distance from rockfall source (foot). Each small dot represents the position of a boulder during rockfall. AP1, AP2, and AP3 are analysis points at the lower wet Cave (Wai a Kanaloa), the mauka edge, and the point 60 ft down the makai edge of the paved road. The numbers (1, 3, 5, 7...) are slope section references. Upper slope profile was estimated using a laser range finder and a clinometer and lower slope profile was measured. About 100%, 94%, and 14% simulated rockfalls reach analysis points AP1, AP2, and AP3, respectively, with a maximum bouncing height of 159 ft, 106 ft, and 0.7 ft, respectively. See Appendix A for detailed simulation information.



**Figure 2-12: Rockfall simulation results for profile N5.**

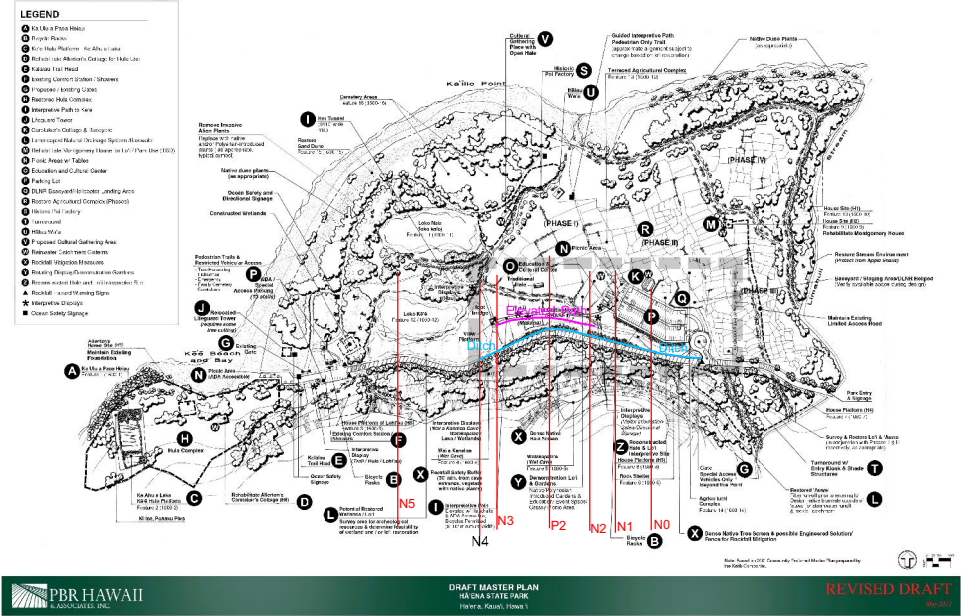
Vertical axis is elevation (foot) and horizontal axis is distance from rockfall source (foot). Each small dot represents the position of a boulder during rockfall. AP1, AP2, and AP3 are analysis points at the mauka edge, makai edge, and 60 ft down the makai edge of the paved road. The numbers (1, 3, 5, 7...) are slope section references. Upper slope profile was estimated using a laser range finder and a clinometer and lower slope profile was measured. About 84%, 9%, and 0% simulated rockfalls reach analysis points AP1, AP2, and AP3, respectively, with a maximum bouncing height of 5.7 ft, 0.7 ft, and 0.0 ft, respectively. See Appendix A for detailed simulation information.



# Section 3.0

## Engineering Planning Study

Figure 2-15: Drainage/Catchment Ditch and Elevated Walk Path Mitigation



### 3.0 ENGINEERING PLANNING STUDY

#### 3.1 ROCKFALL ENGINEERING MITIGATION METHODS

This section provides typical narratives and schematic drawings for engineered rockfall mitigation solutions. These solutions are among the most widely used rockfall mitigation methods in the industry.

There are two general ways of approaching engineering mitigation solutions: permanent and temporary. Permanent mitigation solutions provide a high level of protection against falling rocks for the entire site with the intent to remain effective for many years (the design life of the system used). The first six mitigation methods described below, from wire mesh drape system to retaining wall, are permanent design alternatives. Temporary design alternatives usually provide emergency or cost-effective rockfall hazard reduction, usually do not provide full hazard protection coverage of a rockfall site, and may need to be re-visited or repeated periodically as new rockfall features develop. The use of temporary methods must be based strictly on the results of a risk management process initiated by the owner of the project. Temporary methods are preferred by property owners when there is a need for emergency rockfall hazard reduction, permanent mitigation is cost prohibitive, or funding for permanent mitigation is not available. Scaling of rocks described below is a temporary rockfall mitigation method.

##### 1. DESIGN ALTERNATIVE NO. 1- WIRE MESH DRAPE SYSTEM

Design Alternative No. 1 provides for the installation of wire mesh or ringnet drape system over entire slope that could send falling rocks to roadways or other protected structures. As shown in Figure 3-1, the draped wire mesh or ringnet should be anchored at the top of the slope and extend to the bottom. Falling debris are restrained behind the drape. Debris would be deposited into a small catchment area at the base.

This design alternative requires periodic inspection and maintenance. The mesh should be inspected for corrosion and damage from falling debris. Steel components may need to be repaired or replaced. Rockfall debris should be cleared from behind the mesh and from the catchment area.

The main benefit of this design alternative is that the mesh covering offers a high level of rockfall protection. This system can be installed in places where limited catchment area prevents the use of other systems like the rockfall impact fence and catchment ditch zone. This system is cost effective for small slopes with limited catchment area. The drawbacks of this design alternative are visual impact and the high initial construction cost.

Wire mesh drape system is not suitable for Haena State Park: 1) it is cost-prohibitive at a cost of 206.5 million dollars (see Appendix B for cost estimate) and a construction time of 8 months, and 2) although vegetation would grow through mesh openings, portions of the mesh covering bare rocks may become visible creating an aesthetic drawback.

##### 2. DESIGN ALTERNATIVE NO. 2- ANCHORED WIRE MESH SYSTEM

Design Alternative No. 2 provides for the installation of anchored wire mesh over the entire slope that could otherwise send falling rocks onto roadways or other protected structures. After cleaning, scaling and leveling, the terrain surface is covered by a high strength steel wire mesh and tensioned with pre-installed anchors typically spaced 8 to 10 feet apart throughout the coverage area, as shown in Figure 3-2. The anchors pull the mesh tightly against the slope. This system is designed to prevent rockfalls by restraining the loose material in place. If the slope has large scale landslide potential, the anchors can be designed to stabilize the slope.

This design alternative requires periodic inspection and some maintenance where required. As with all anchored wire mesh systems, the steel components must be inspected for signs of corrosion, fatigue, and damage. Parts may require repair or replacement if damaged.

The benefit of using this design alternative is that it stabilizes slope and restrains loose material in place. The wire mesh held tightly against the slope improves soil retention and vegetation growth for a natural green appearance making the wire mesh virtually invisible. The system can be integrated to accommodate trees and other existing slope features. Furthermore, this system requires no catchment zone, and therefore can be installed practically at any area where other mitigation systems are ineffective. The drawbacks of this alternative are high initial construction cost and that the area beneath the wire mesh becomes unusable.

Anchored wire mesh system is not suitable for Haena State Park: 1) it is cost-prohibitive at a cost of 340.4 million dollars (see Appendix B for cost estimate) and a construction time of about 12 months, and 2) although vegetation grows through mesh openings, the mesh could become visible where covering rock outcrops. This may be unacceptable for a State park that is renowned for its natural beauty.

##### 3. DESIGN ALTERNATIVE NO. 3- IMPACT FENCE SYSTEM

Impact fence system provides for the installation of a rockfall impact fence along the shoulder or toe of slope to intercept rolling rocks from upslope (see Figure 3-3). The fence provides blanket rockfall protection for large areas. The system can be designed to absorb various levels of energy and jumping heights produced from falling rocks for specific site conditions.

This design alternative requires periodic maintenance to repair the fence. Braking elements need to be checked and replaced, if necessary, after each major impact. Rocks embedded in the fence should be removed.

Large slopes can be mitigated with a single fence installed at the base thus making this design alternative beneficial. The main drawback is the catchment area required. Sites with launching features or little shoulder room may require widening or realignment to accommodate the fence. Additional drawbacks include periodic maintenance costs and some visual impact.

Impact fence system is suitable for most areas of Haena State Park with a cost of 8.6 million dollars (see Appendix B for cost estimate) and a construction time of about 6 months. The impact fence will mostly be hidden from view by trees and other vegetation so its adverse aesthetic impact is limited.

##### 4. DESIGN ALTERNATIVE NO. 4 - COMBINATION IMPACT FENCE AND DRAPE OR ANCHORED WIRE MESH SYSTEM

This alternative is a combination of Design Alternative No. 2 and No. 3. It includes installation of a rockfall impact fence in strategic locations to intercept falling rocks and a draped or anchored wire mesh system over steep slopes that are right next to protected structures with no catchment zone in between for the installation of an impact fence (see Figure 3-4). The fence would provide blanket rockfall protection intercepting rolling rocks from upslope, and the anchored wire mesh system would inhibit rockfalls just above protected structures.

This system is most beneficial for areas with limited shoulder having high continuous natural slopes. The drawback is the higher construction cost and some visual impact.

Impact fence and anchored wire mesh system is suitable for Haena State Park with a cost of 9.8 million dollars (see Appendix B for cost estimate) and construction time of about 9 months. The impact fence will mostly be hidden from view by trees and other vegetation so its adverse aesthetic



impact is limited. The anchored wire mesh system is mainly installed at the area around the Wet Cave (Wai a Kanaloa) where high steep cliffs are right next to roadway and popular visitor areas.

#### 5. DESIGN ALTERNATIVE NO. 5- CATCHMENT DITCH

Design Alternative No. 5 provides for the construction of a catchment ditch along the shoulder, as shown by Figure 3-5. The ditch should be designed based on site conditions to provide adequate catchment zone. Roads with little shoulder width will require partial cutting of the slope or realignment of the road in order to accomplish the designed effects.

This design alternative requires low maintenance. The ditch should be cleared of rockfall debris periodically.

This design alternative is beneficial because large slopes can be mitigated with a single catchment ditch along the base. Also, the ditch improves drainage capacity. The drawback is associated with the large catchment zone area and rock excavation required. Additionally, existing utilities along the shoulder may require modification or relocation.

Catchment ditch is suitable for Haena State Park with a cost of 6.8 million dollars (see Appendix B for cost estimate) and a construction time of about 8 months. An anchored wire mesh system is needed at the area around the Wet Cave (Wai a Kanaloa) where high steep cliffs are right next to roadway and popular visitor areas with no room for a catchment ditch. Impact fences may be needed in locations where a catchment ditch is not effective in intercepting falling rocks. The position and dimension of the catchment ditch should be verified by rockfall simulation at each location.

#### 6. DESIGN ALTERNATIVE NO. 6- ROADWAY REALIGNMENT

Design alternative No. 6 provides for construction of a new realigned roadway parallel to the existing road where the existing roadway is too close to the mountain. The new roadway will be constructed on the makai side of the existing road using fill material and mechanically stabilized earth (MSE) walls as necessary. The existing road will be used as a rock catchment area. An impact protection fence will be installed in areas where the new road is still in close proximity to the rockfall path. This design alternative requires some ground excavation and backfilling. With the roadway pushed away from the mountain side, the access to the caves could easily become limited for public safety and hazard control.

The construction cost to realign the roadway and installation of the necessary safety features is estimated at \$15.5 M (see Appendix B for cost estimate) with a construction time of about 12 months.

The benefits of this design alternative include low maintenance, longevity, and simplicity and effectiveness of design. The drawback is increased construction costs. This design alternative is very suitable for Haena State Park.

#### 7. DESIGN ALTERNATIVE NO. 7- ROCK SCALING (TEMPORARY FIX)

During scaling, rock outcrops that are ready to fall are removed from the slope by using hands, prying bars, and hydraulic jacks or airbags for large rocks. Scaling is most cost-effective when there are no structures to be protected at the base of the slope where the scaled rocks are allowed to run down the slope freely. The only significant structure at Haena State Park is the paved road surface which, if damaged during scaling, can be easily repaired by patching the impact holes made by scaled rocks. Alternatively, metal plates or other road covers can be used to reduce damage to the paved road at additional cost.

After a thorough scaling, the rockfall hazard is generally maintained at a low level for quite a few years because the geological processes associated with natural production of rockfalls are generally slow requiring many years to generate a rock outcrop that is ready to fall. Exceptions, however, exist. For example, if a new water channel develops on a steep soft soil slope with embedded boulders, new rockfall hazards will be created after almost every surface runoff. The slopes at Haena State Park consist of nearly horizontal lava flow layers with limited weathering and talus slopes with limited fine or soil material. The geological processes associated with natural production of rockfalls at Haena State Park are reasonably slow.

The steep slopes around the Wet Cave (Wai a Kanaloa) are the most hazardous at Haena State Park and should be scaled first. The area around Profile P2, which is close to both wet caves, has the highest percentage of potential rockfalls anticipated to reach the roadway and should be scaled first. The other areas have low percentage (less than 5%) of rockfalls reaching roadway or beach and should be scaled if additional funding is available. The cost of scaling is \$750,000 for two crews of three scalars each crew to work for 75 days (daily cost \$10,000) to scale the wet caves' area and above, and the identified boulder sites (B1 to B30). Scaling of large rocks in other areas that have a reasonable chance of reaching roadway or beach or other structures is recommended if additional funding is available, with an estimated additional cost at 1.5 million dollars.

During rock scaling operation, it is highly recommended that the contractors' scope of work is directed and validated on site by geologists or engineers experienced in rock scaling.

#### 7. OTHER MITIGATION METHODS

There are many other rockfall mitigation methods. Rock demolition, bolting, cable lashing, pedestal support, and local netting can be used independently or in combination with other mitigation methods. High-cost methods like constructing concrete canopy, or elevated roadways above rock fallout zones can also be used if specific conditions warrant the high costs.

#### 3.2 RECOMMENDED ROCKFALL MITIGATION DESIGN AT HAENA STATE PARK

Design for the mitigation alternatives are based on factors such as public safety, least impact to the environment, construction cost, and sound engineering principles. The recommendations were provided to develop preliminary construction cost data used to establish project development and funding. The final remedial design may vary from the preliminary design based on other factors including detailed rockfall protection characteristics, land acquisitions, community needs, environmental issues, cultural considerations, aesthetics, and local politics.

For permanent rockfall mitigation design, the combination of impact fence and anchored wire mesh system is recommended due to its effectiveness, and least disturbance to environment with a cost of about 9.8 million dollars and a construction period of eight months.

For temporary rockfall mitigation design, scaling is recommended due to its ease of construction, least disturbance to environment, and cost effectiveness in rockfall hazard reduction, with a cost of \$750,000 and a construction period of four months to scale the high hazard areas around both Wet Caves and the identified boulder sites. It should be noted that rock scaling is a temporary solution and should only be used to reduce rockfall potentials. For an engineered rockfall protection methodology any of the permanent mitigation methods may be considered. An additional 1.5 million dollars and a construction period of six months are needed to scale the remaining other areas. Only rocks that are likely to reach the roadway or other protected structures will be scaled.

It has been noted that the North Shore and specifically the Haena communities have been resistive to any disturbance and potential devastation to the sacred mountains at Haena brought about as the result of any rockfall mitigation and construction. Consequently, there are various other plans being

drawn up in cooperation with the community in terms of long term and short term mitigation on for rockfall protection in this area. The long term plan is to divert the public traffic away from the high rockfall zones. This would be accomplished by closing the highway to both vehicular and on-foot public travelers while redirecting them through walkways that are built in the safe rockfall zones. This is part of a master planning process that the State is currently working on with the public. The proposed facilities and pathways for the master planning of Haena State Park are outside of rockfall reach zones (Figure 2-6). To further increase rockfall protection, the proposed pathways can be elevated by 2 ft (Figure 3-6) and the proposed parking lot can be fronted at mauka side by a drainage/catchment ditch with 2 ft depth (Figure 3-7), as suggested by the simulations shown in Figure 2-13, Figure 2-14, and Figure 2-15. The cost of such improvements would vary depending on a number of factors including the topographic survey, soil condition, ground water levels, cultural interests, and so on, and is best to remain for determination during design phase.

For the short term mitigation solution and in the interim, we are proposing demolition and stabilization of some of the larger rocks (a total of 4 to 6 rocks) along the base of the mountain near the areas of the Wet caves. The way this procedure has been proposed is to remove each unstable rock using rock scaling bars or airbags only. Once these rocks are dislodged, they should be brought to rest in a stable location along the foothills. All dislodged rocks are planned to be left at the site. The cost of this effort has been estimated at about \$400,000 and a construction period of about three weeks.

### 3.3 SIMILAR ROCKFALL PROJECTS AND EXPERIENCED CONTRACTORS

A rockfall protection fence and roadway realignment method was used at Waimea Bay in June 2000 to protect Kamehameha Highway from potential rockfalls and at the Old Puunui Quarry site to protect residents from the upslope boulders. The special rockfall protection fence was designed and manufactured by GeoBrugg. Rockfall catchment ditch, rock demolition, bolting, and cable netting have been performed in various locations on Oahu including at Waimea Bay, at Makapuu during a major scaling and netting of the mountain slopes, and at Laie of Hawaii Kai. The recently completed Kailua Road project used a combination of rockfall impact fence, both draped and anchored mesh systems, rockfall catchment ditch, rock scaling, rock bolting, local netting, and cable lashing. The latest major scaling operation performed in Hawaii was the scaling of 130 bunkers at Waialeale. Tens of thousands of boulders, some of them over ten tons, were scaled from the slopes above the bunkers. A large number of boulders were scaled easily by hand, reflecting their high rockfall potential.

The following general contractors are among those who have been involved with rock scaling/demolition/bolting and/or rockfall fence/net/ditch installation in Hawaii:

- High Tech Rockfall Construction
- AIS Construction
- Prometheus Construction
- Royal Contracting Co. Ltd.
- Kiewit Pacific Co.
- Good Fellow Brothers, Inc.

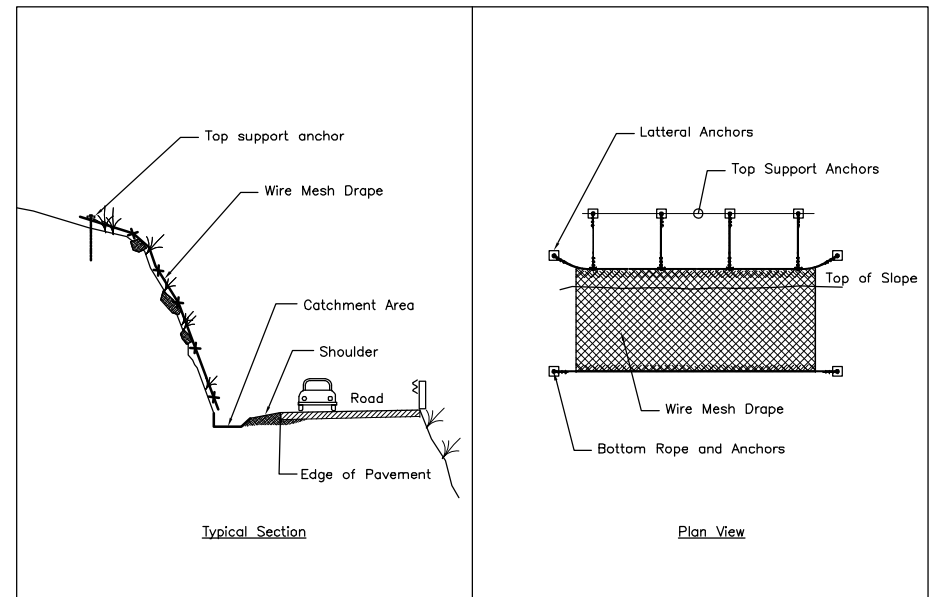


Figure 3-1  
Design Alternative No. 1  
Wire Mesh Drape System

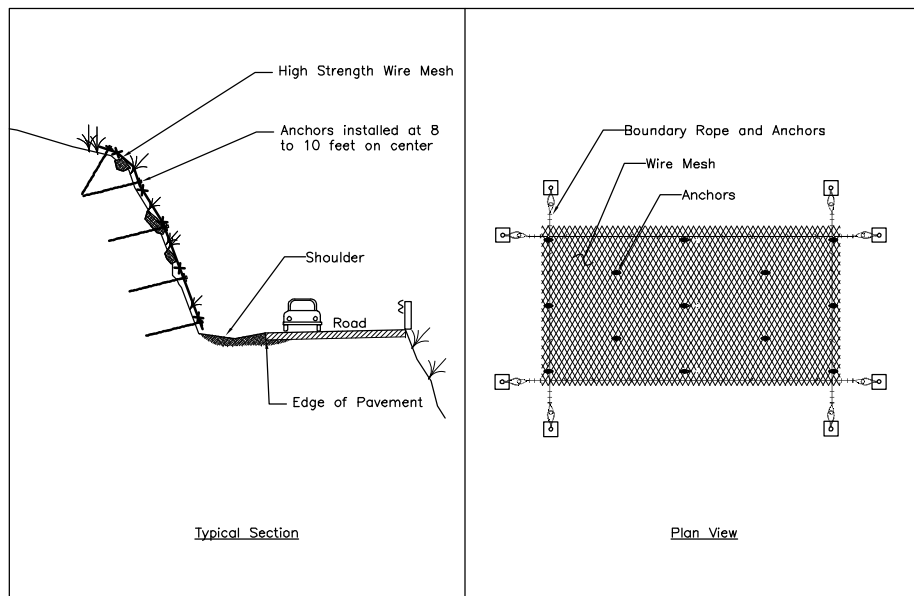


Figure 3-2  
Design Alternative No. 2  
Anchored Wire Mesh

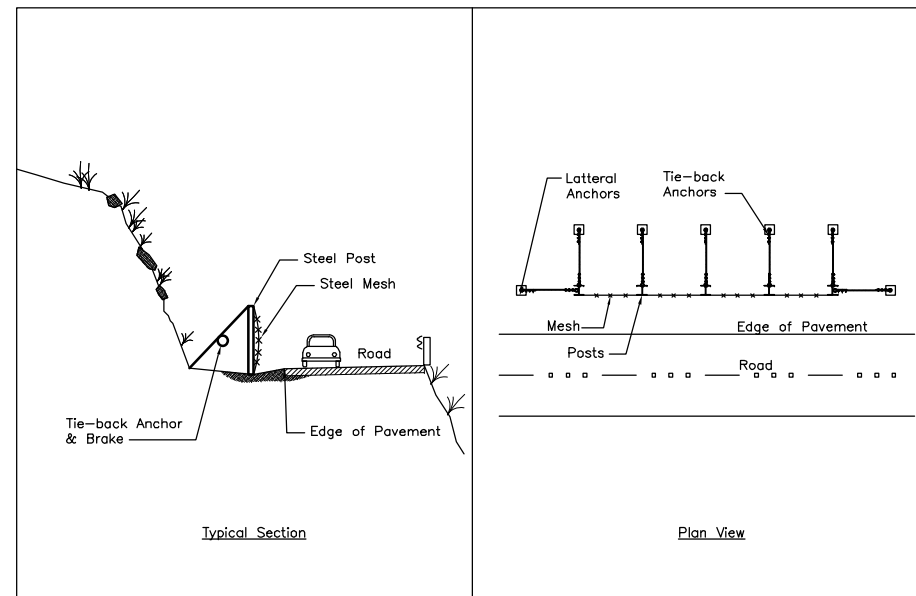


Figure 3-3  
Design Alternative No. 3  
Impact Fence System

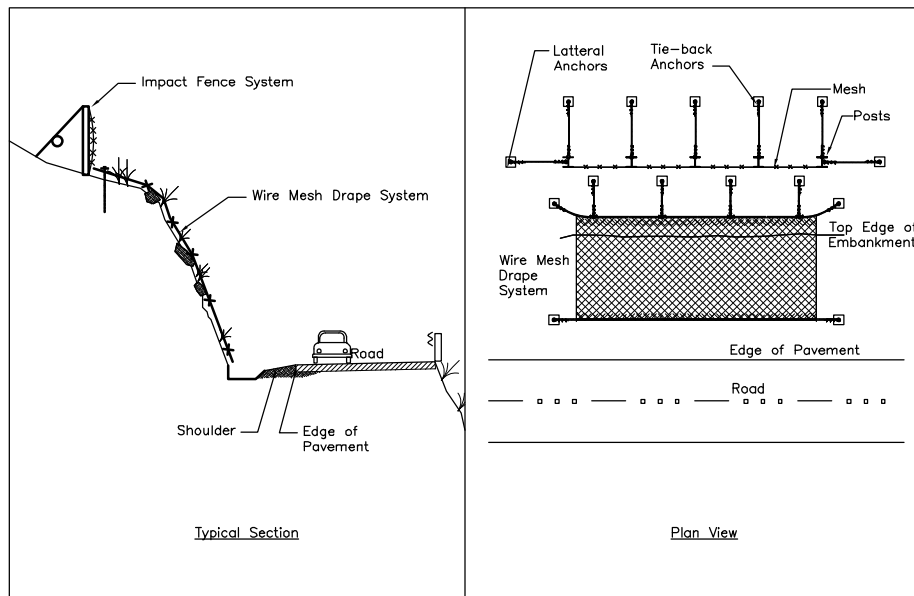


Figure 3-4  
Design Alternative No. 4  
Combination Impact Fence & Wire Mesh Drape

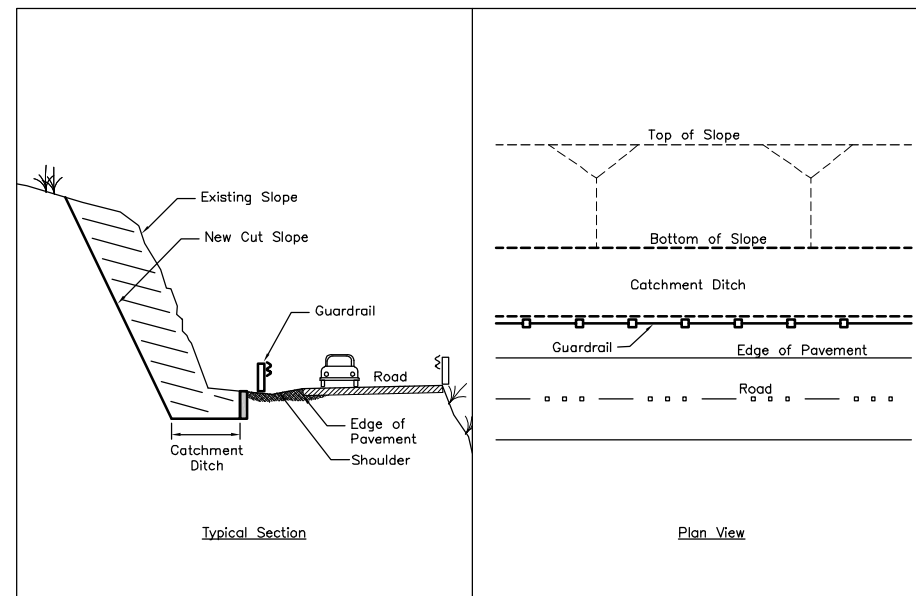
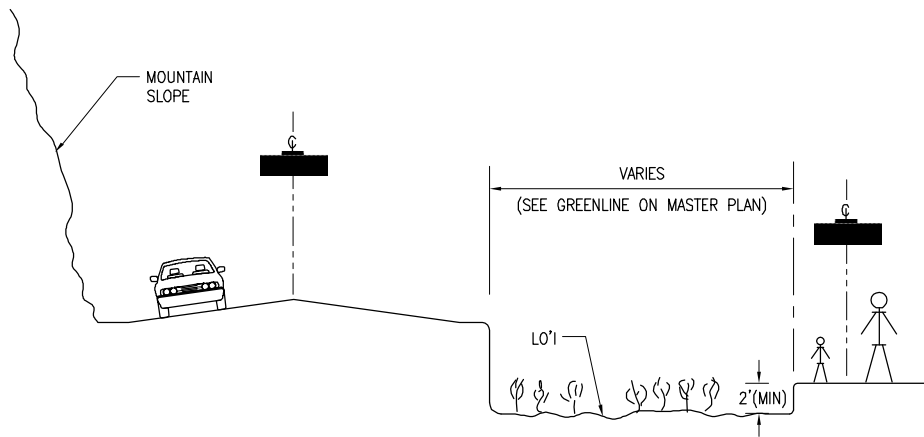
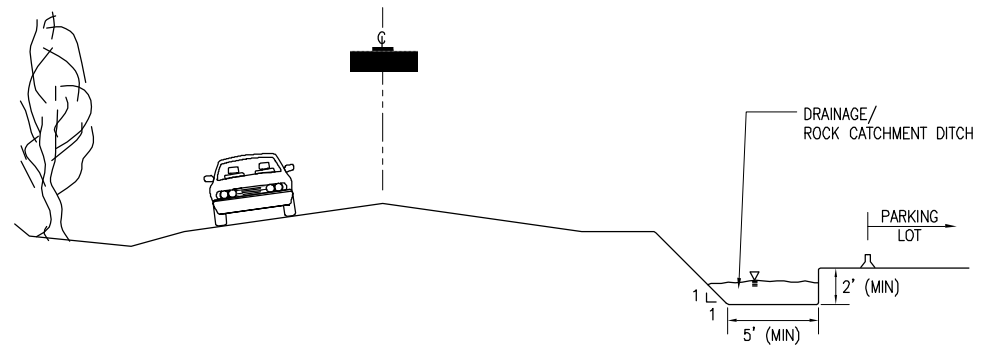


Figure 3-5  
Design Alternative No. 5  
Catchment Ditch



SCHEMATIC SECTION AT LO'I  
NOT TO SCALE

Figure 3-6  
Elevated Walkway



SCHEMATIC SECTION @ PARKING LOT  
NOT TO SCALE

Figure 3-7  
Drainage/Catchment Ditch at Parking Lot



#### 4.0 REFERENCES

- Australian Geomechanics Society. 2000. *Landslide Risk Management Concepts and Guidelines*. Sub-committee on Landslide Risk Management. March.
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- MacDonald, G. A., A. T. Abbott, and F. L. Peterson. 1983. *Volcanoes in the Sea, The Geology of Hawaii*. 2nd ed. Honolulu: Univ. of Hawaii Press.
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## Appendix A Rockfall Simulation Data

**Rockfall simulation input and output data for profile P1**

CRSP Input File-L:\work\Infra\Rockfall Projects\Haena State Park\CRSP\G185 m.bmp

## Input File Specifications

Units of Measure: U.S.  
 Total Number of Cells: 23  
 Analysis Point 1 X-Coordinate: 433  
 Analysis Point 2 X-Coordinate:  
 Analysis Point 3 X-Coordinate:  
 Initial Y-Top Starting Zone Coordinate: 575  
 Initial Y-Base Starting Zone Coordinate: 575

## Remarks:

## Cell Data

| Cell No. | S.R. | Tang. | C. | Norm. | C. | Begin X | Begin Y | End X | End Y |
|----------|------|-------|----|-------|----|---------|---------|-------|-------|
| 1        | .8   | .8    | .2 | 0     |    | 616     | 15      | 618   |       |
| 2        | .8   | .8    | .2 | 15    |    | 618     | 31      | 616   |       |
| 3        | .8   | .8    | .2 | 31    |    | 616     | 48      | 609   |       |
| 4        | .8   | .8    | .2 | 48    |    | 609     | 73      | 601   |       |
| 5        | .8   | .8    | .2 | 73    |    | 601     | 85      | 598   |       |
| 6        | .8   | .8    | .2 | 85    |    | 598     | 100     | 588   |       |
| 7        | .8   | .8    | .2 | 100   |    | 588     | 113     | 579   |       |
| 8        | .8   | .8    | .2 | 113   |    | 579     | 127     | 566   |       |
| 9        | .8   | .8    | .2 | 127   |    | 566     | 141     | 553   |       |
| 10       | .8   | .8    | .2 | 141   |    | 553     | 154     | 537   |       |
| 11       | .8   | .8    | .2 | 154   |    | 537     | 169     | 517   |       |
| 12       | .8   | .8    | .2 | 169   |    | 517     | 182     | 495   |       |
| 13       | .8   | .8    | .2 | 182   |    | 495     | 200     | 472   |       |
| 14       | .8   | .8    | .2 | 200   |    | 472     | 215     | 448   |       |
| 15       | .8   | .8    | .2 | 215   |    | 448     | 227     | 431   |       |
| 16       | .8   | .8    | .2 | 227   |    | 431     | 257     | 326   |       |
| 17       | .8   | .8    | .2 | 257   |    | 326     | 278     | 251   |       |
| 18       | 1.5  | .8    | .2 | 278   |    | 251     | 279     | 50    |       |
| 19       | 1.5  | .8    | .2 | 279   |    | 50      | 299     | 55    |       |
| 20       | 1.5  | .8    | .2 | 299   |    | 55      | 329     | 46    |       |
| 21       | 1.5  | .8    | .2 | 329   |    | 46      | 381     | 30    |       |
| 22       | 1.5  | .8    | .2 | 381   |    | 30      | 433     | 25    |       |
| 23       | 1.5  | .8    | .2 | 433   |    | 25      | 434     | 25    |       |

CRSP Simulation Specifications: Used with L:\work\Infra\Rockfall Projects\Haena State Park\CRSP\G185 m.bmp

Total Number of Rocks Simulated: 200  
 Starting Velocity in X-Direction: 1 ft/sec  
 Starting Velocity in Y-Direction: -1 ft/sec

Starting Cell Number: 1  
 Ending Cell Number: 23  
 Rock Density: 145 lb/ft<sup>3</sup>  
 Rock Shape: Spherical  
 Diameter: 4 ft

CRSP Analysis Point 1 Data- L:\work\Infra\Rockfall Projects\Haena State Park\CRSP\G185 m.bmp

Analysis Point 1: X = 433, Y = 25

Total Rocks Passing Analysis Point: 7

| Cumulative Probability | Velocity (ft/sec) | Energy (ft-lb) | Bounce Ht. (ft) |
|------------------------|-------------------|----------------|-----------------|
| 50%                    | 11.79             | 16246          | 0.27            |
| 75%                    | 14.67             | 25104          | 1.26            |
| 90%                    | 17.27             | 33072          | 2.14            |
| 95%                    | 18.83             | 37855          | 2.67            |
| 98%                    | 20.57             | 43223          | 3.26            |

| Velocity (ft/sec) | Bounce Height (ft) | Kinetic Energy (ft-lb) |
|-------------------|--------------------|------------------------|
| Maximum: 21.12    | Maximum: .41       | Maximum: 45403         |
| Average: 11.79    | Average: .29       | Average: 16246         |
| Minimum: 8.48     | G. Mean: .27       | Std. Dev.: 13119       |
| Std. Dev.: 4.27   | Std. Dev.: 1.45    |                        |

## Remarks:

CRSP Data Collected at End of Each Cell- L:\work\Infra\Rockfall Projects\Haena State Park\CRSP\G185 m.bmp

Velocity Units: ft/sec Bounce Height Units: ft

Cell # Max. Vel. Avg. Vel. S.D. Vel. Max. Bounce Ht. Avg. Bounce Ht.

|   |          |                  |      |   |   |
|---|----------|------------------|------|---|---|
| 1 | No rocks | past end of cell |      |   |   |
| 2 | No rocks | past end of cell |      |   |   |
| 3 | No rocks | past end of cell |      |   |   |
| 4 | No rocks | past end of cell |      |   |   |
| 5 | No rocks | past end of cell |      |   |   |
| 6 | No rocks | past end of cell |      |   |   |
| 7 | No rocks | past end of cell |      |   |   |
| 8 | 22       | 18               | 1.42 | 1 | 0 |

|    |     |     |       |     |     |
|----|-----|-----|-------|-----|-----|
| 9  | 32  | 27  | 2.01  | 3   | 0   |
| 10 | 43  | 37  | 3.44  | 6   | 2   |
| 11 | 55  | 44  | 4.1   | 8   | 3   |
| 12 | 63  | 54  | 5.08  | 14  | 6   |
| 13 | 73  | 54  | 7.3   | 11  | 3   |
| 14 | 80  | 62  | 7.13  | 17  | 7   |
| 15 | 81  | 65  | 7.35  | 19  | 7   |
| 16 | 107 | 87  | 9.6   | 81  | 59  |
| 17 | 126 | 104 | 10.93 | 126 | 84  |
| 18 | 127 | 105 | 10.99 | 325 | 282 |
| 19 | 145 | 121 | 12.19 | 286 | 219 |
| 20 | 173 | 146 | 13.94 | 229 | 124 |
| 21 | 173 | 55  | 64.11 | 94  | 11  |
| 22 | 21  | 12  | 4.27  | 0   | 0   |
| 23 | 16  | 10  | 3.59  | 1   | 0   |

CRSP Rocks Stopped Data- L:\work\Infra\Rockfall Projects\Haena State Park\CRSP\G185 m.bmp

| X Interval    | Rocks Stopped |
|---------------|---------------|
| 0 To 10 ft    | 0             |
| 10 To 20 ft   | 0             |
| 20 To 30 ft   | 0             |
| 30 To 40 ft   | 0             |
| 40 To 50 ft   | 0             |
| 50 To 60 ft   | 0             |
| 60 To 70 ft   | 0             |
| 70 To 80 ft   | 0             |
| 80 To 90 ft   | 0             |
| 90 To 100 ft  | 0             |
| 100 To 110 ft | 0             |
| 110 To 120 ft | 0             |
| 120 To 130 ft | 0             |
| 130 To 140 ft | 0             |
| 140 To 150 ft | 0             |
| 150 To 160 ft | 0             |
| 160 To 170 ft | 0             |
| 170 To 180 ft | 0             |
| 180 To 190 ft | 0             |
| 190 To 200 ft | 0             |
| 200 To 210 ft | 0             |
| 210 To 220 ft | 0             |
| 220 To 230 ft | 0             |
| 230 To 240 ft | 0             |
| 240 To 250 ft | 0             |
| 250 To 260 ft | 0             |
| 260 To 270 ft | 0             |
| 270 To 280 ft | 0             |
| 280 To 290 ft | 0             |
| 290 To 300 ft | 0             |
| 300 To 310 ft | 0             |
| 310 To 320 ft | 0             |

|               |    |
|---------------|----|
| 320 To 330 ft | 0  |
| 330 To 340 ft | 5  |
| 340 To 350 ft | 11 |
| 350 To 360 ft | 14 |
| 360 To 370 ft | 16 |
| 370 To 380 ft | 12 |
| 380 To 390 ft | 37 |
| 390 To 400 ft | 38 |
| 400 To 410 ft | 29 |
| 410 To 420 ft | 20 |
| 420 To 430 ft | 11 |
| 430 To 434 ft | 0  |

**Rockfall simulation input and output data for profile P**

CRSP Input File-L:\work\Infra\Rockfall Projects\Haena State Park\CRSP\G187.bmp

## Input File Specifications

Units of Measure: U.S.  
 Total Number of Cells: 18  
 Analysis Point 1 X-Coordinate: 874  
 Analysis Point 2 X-Coordinate:  
 Analysis Point 3 X-Coordinate:  
 Initial Y-Top Starting Zone Coordinate: 1055  
 Initial Y-Base Starting Zone Coordinate: 1055

Remarks:

## Cell Data

| Cell No. | S.R. | Tang. C. | Norm. C. | Begin X | Begin Y | End X | End Y |
|----------|------|----------|----------|---------|---------|-------|-------|
| 1        | .8   | .8       | .2       | 0       | 1055    | 74    | 957   |
| 2        | .8   | .8       | .2       | 74      | 957     | 144   | 848   |
| 3        | .8   | .8       | .2       | 144     | 848     | 209   | 702   |
| 4        | .8   | .8       | .2       | 209     | 702     | 253   | 590   |
| 5        | .8   | .8       | .2       | 253     | 590     | 322   | 466   |
| 6        | .8   | .8       | .2       | 322     | 466     | 406   | 373   |
| 7        | .8   | .8       | .2       | 406     | 373     | 462   | 308   |
| 8        | .8   | .8       | .2       | 462     | 308     | 532   | 239   |
| 9        | .8   | .8       | .2       | 532     | 239     | 598   | 177   |
| 10       | .8   | .8       | .2       | 593     | 177     | 640   | 132   |
| 11       | .8   | .8       | .2       | 640     | 132     | 669   | 111   |
| 12       | 1.5  | .8       | .2       | 669     | 111     | 734   | 71    |
| 13       | 1.5  | .8       | .2       | 734     | 71      | 773   | 59    |
| 14       | 1.5  | .8       | .2       | 773     | 59      | 790   | 45    |
| 15       | 1.5  | .8       | .2       | 790     | 45      | 821   | 43    |
| 16       | 1.5  | .8       | .2       | 821     | 43      | 851   | 31    |
| 17       | 1.5  | .8       | .2       | 851     | 31      | 870   | 20    |
| 18       | 1.5  | .8       | .2       | 870     | 20      | 874   | 20    |

CRSP Simulation Specifications: Used with L:\work\Infra\Rockfall Projects\Haena State Park\CRSP\G187.bmp

Total Number of Rocks Simulated: 200  
 Starting Velocity in X-Direction: 1 ft/sec  
 Starting Velocity in Y-Direction: -1 ft/sec  
 Starting Cell Number: 1  
 Ending Cell Number: 18  
 Rock Density: 145 lb/ft<sup>3</sup>  
 Rock Shape: Spherical  
 Diameter: 4 ft

CRSP Analysis Point 1 Data- L:\work\Infra\Rockfall Projects\Haena State Park\CRSP\G187.bmp

Analysis Point 1: X = 874, Y = 20

Total Rocks Passing Analysis Point: 127

| Cumulative Probability | Velocity (ft/sec) | Energy (ftlb) | Bounce Ht. (ft) |
|------------------------|-------------------|---------------|-----------------|
| 50%                    | 18.55             | 51397         | 0.33            |
| 75%                    | 27.36             | 101360        | 4.93            |
| 90%                    | 35.28             | 146299        | 9.08            |
| 95%                    | 40.04             | 173278        | 11.56           |
| 98%                    | 45.38             | 203558        | 14.35           |

| Velocity (ft/sec) | Bounce Height (ft) | Kinetic Energy (ftlb) |
|-------------------|--------------------|-----------------------|
| Maximum: 67.31    | Maximum: 8.91      | Maximum: 450329       |
| Average: 18.55    | Average: .9        | Average: 51397        |
| Minimum: 2.87     | G. Mean: .33       | Std. Dev.: 73997      |
| Std. Dev.: 13.05  | Std. Dev.: 6.82    |                       |

Remarks:

CRSP Data Collected at End of Each Cell- L:\work\Infra\Rockfall Projects\Haena State Park\CRSP\G187.bmp

Velocity Units: ft/sec Bounce Height Units: ft

| Cell # | Max. Vel. | Avg. Vel. | S.D. Vel. | Max. Bounce Ht. | Avg. Bounce Ht. |
|--------|-----------|-----------|-----------|-----------------|-----------------|
| 1      | 68        | 55        | 5.4       | 12              | 4               |
| 2      | 102       | 77        | 11.34     | 25              | 9               |
| 3      | 135       | 107       | 17.08     | 75              | 27              |
| 4      | 155       | 121       | 20.59     | 113             | 33              |
| 5      | 167       | 103       | 23.54     | 80              | 15              |
| 6      | 133       | 81        | 14.94     | 22              | 7               |
| 7      | 123       | 87        | 14.21     | 32              | 8               |
| 8      | 128       | 79        | 13.68     | 22              | 6               |
| 9      | 113       | 83        | 13.96     | 23              | 6               |
| 10     | 118       | 79        | 12.81     | 22              | 6               |
| 11     | 117       | 71        | 13.02     | 18              | 3               |
| 12     | 92        | 59        | 11.53     | 17              | 6               |
| 13     | 73        | 40        | 11.33     | 10              | 2               |
| 14     | 76        | 46        | 10.7      | 17              | 7               |

|    |    |    |       |    |   |
|----|----|----|-------|----|---|
| 15 | 62 | 23 | 12.17 | 4  | 1 |
| 16 | 63 | 23 | 12.29 | 7  | 1 |
| 17 | 66 | 27 | 11.47 | 11 | 1 |
| 18 | 67 | 19 | 13.05 | 9  | 0 |

CRSP Rocks Stopped Data- L:\work\Infra\Rockfall Projects\Haena State Park\CRSP\G187.bmp

| X Interval    | Rocks Stopped |
|---------------|---------------|
| 0 To 10 ft    | 0             |
| 10 To 20 ft   | 0             |
| 20 To 30 ft   | 0             |
| 30 To 40 ft   | 0             |
| 40 To 50 ft   | 0             |
| 50 To 60 ft   | 0             |
| 60 To 70 ft   | 0             |
| 70 To 80 ft   | 0             |
| 80 To 90 ft   | 0             |
| 90 To 100 ft  | 0             |
| 100 To 110 ft | 0             |
| 110 To 120 ft | 0             |
| 120 To 130 ft | 0             |
| 130 To 140 ft | 0             |
| 140 To 150 ft | 0             |
| 150 To 160 ft | 0             |
| 160 To 170 ft | 0             |
| 170 To 180 ft | 0             |
| 180 To 190 ft | 0             |
| 190 To 200 ft | 0             |
| 200 To 210 ft | 0             |
| 210 To 220 ft | 0             |
| 220 To 230 ft | 0             |
| 230 To 240 ft | 0             |
| 240 To 250 ft | 0             |
| 250 To 260 ft | 0             |
| 260 To 270 ft | 0             |
| 270 To 280 ft | 0             |
| 280 To 290 ft | 0             |
| 290 To 300 ft | 0             |
| 300 To 310 ft | 0             |
| 310 To 320 ft | 0             |
| 320 To 330 ft | 0             |
| 330 To 340 ft | 0             |
| 340 To 350 ft | 0             |
| 350 To 360 ft | 0             |
| 360 To 370 ft | 0             |
| 370 To 380 ft | 0             |
| 380 To 390 ft | 0             |
| 390 To 400 ft | 0             |
| 400 To 410 ft | 0             |
| 410 To 420 ft | 0             |
| 420 To 430 ft | 0             |

|               |    |
|---------------|----|
| 430 To 440 ft | 0  |
| 440 To 450 ft | 0  |
| 450 To 460 ft | 0  |
| 460 To 470 ft | 0  |
| 470 To 480 ft | 0  |
| 480 To 490 ft | 0  |
| 490 To 500 ft | 0  |
| 500 To 510 ft | 0  |
| 510 To 520 ft | 0  |
| 520 To 530 ft | 0  |
| 530 To 540 ft | 0  |
| 540 To 550 ft | 0  |
| 550 To 560 ft | 0  |
| 560 To 570 ft | 0  |
| 570 To 580 ft | 0  |
| 580 To 590 ft | 0  |
| 590 To 600 ft | 0  |
| 600 To 610 ft | 0  |
| 610 To 620 ft | 0  |
| 620 To 630 ft | 0  |
| 630 To 640 ft | 0  |
| 640 To 650 ft | 0  |
| 650 To 660 ft | 0  |
| 660 To 670 ft | 0  |
| 670 To 680 ft | 0  |
| 680 To 690 ft | 0  |
| 690 To 700 ft | 0  |
| 700 To 710 ft | 0  |
| 710 To 720 ft | 0  |
| 720 To 730 ft | 0  |
| 730 To 740 ft | 0  |
| 740 To 750 ft | 0  |
| 750 To 760 ft | 0  |
| 760 To 770 ft | 0  |
| 770 To 780 ft | 0  |
| 780 To 790 ft | 0  |
| 790 To 800 ft | 2  |
| 800 To 810 ft | 22 |
| 810 To 820 ft | 28 |
| 820 To 830 ft | 5  |
| 830 To 840 ft | 5  |
| 840 To 850 ft | 2  |
| 850 To 860 ft | 0  |
| 860 To 870 ft | 0  |
| 870 To 874 ft | 9  |



**Rockfall simulation input and output data for profile P**

CRSP Input File-L:\work\Infra\Rockfall Projects\Haena State Park\CRSP\G190.dat

## Input File Specifications

Units of Measure: U.S.  
 Total Number of Cells: 18  
 Analysis Point 1 X-Coordinate: 948  
 Analysis Point 2 X-Coordinate:  
 Analysis Point 3 X-Coordinate:  
 Initial Y-Top Starting Zone Coordinate: 1026  
 Initial Y-Base Starting Zone Coordinate: 1026

Remarks:

## Cell Data

| Cell No. | S.R. | Tang. C. | Norm. C. | Begin X | Begin Y | End X | End Y |
|----------|------|----------|----------|---------|---------|-------|-------|
| 1        | .8   | .8       | .2       | 0       | 1026    | 107   | 933   |
| 2        | .8   | .8       | .2       | 107     | 933     | 209   | 841   |
| 3        | .8   | .8       | .2       | 209     | 841     | 249   | 752   |
| 4        | .8   | .8       | .2       | 249     | 752     | 284   | 657   |
| 5        | .8   | .8       | .2       | 284     | 657     | 313   | 554   |
| 6        | .8   | .8       | .2       | 313     | 554     | 342   | 457   |
| 7        | .8   | .8       | .2       | 342     | 457     | 382   | 379   |
| 8        | .8   | .8       | .2       | 382     | 379     | 442   | 327   |
| 9        | .8   | .8       | .2       | 442     | 327     | 497   | 279   |
| 10       | .8   | .8       | .2       | 497     | 279     | 603   | 219   |
| 11       | .8   | .8       | .2       | 603     | 219     | 678   | 161   |
| 12       | .8   | .8       | .2       | 678     | 161     | 682   | 157   |
| 13       | 1.5  | .8       | .2       | 682     | 157     | 683   | 142   |
| 14       | 1.5  | .8       | .2       | 683     | 142     | 733   | 103   |
| 15       | 1.5  | .8       | .2       | 733     | 103     | 797   | 55    |
| 16       | 1.5  | .8       | .2       | 797     | 55      | 843   | 29    |
| 17       | 1.5  | .8       | .2       | 843     | 29      | 933   | 21    |
| 18       | 1.5  | .8       | .2       | 933     | 21      | 948   | 20    |

CRSP Simulation Specifications: Used with L:\work\Infra\Rockfall Projects\Haena State Park\CRSP\G190.dat

Total Number of Rocks Simulated: 200  
 Starting Velocity in X-Direction: 1 ft/sec  
 Starting Velocity in Y-Direction: -1 ft/sec  
 Starting Cell Number: 1  
 Ending Cell Number: 18  
 Rock Density: 145 lb/ft<sup>3</sup>  
 Rock Shape: Spherical  
 Diameter: 4 ft

CRSP Analysis Point 1 Data- L:\work\Infra\Rockfall Projects\Haena State Park\CRSP\G190.dat

Analysis Point 1: X = 948, Y = 20

Total Rocks Passing Analysis Point: 8

| Cumulative Probability | Velocity (ft/sec) | Energy (ftlb) | Bounce Ht. (ft) |
|------------------------|-------------------|---------------|-----------------|
| 50%                    | 18.14             | 37200         | 0.31            |
| 75%                    | 21.32             | 49063         | 7.55            |
| 90%                    | 24.19             | 59732         | 14.06           |
| 95%                    | 25.9              | 66137         | 17.97           |
| 98%                    | 27.83             | 73326         | 22.36           |

| Velocity (ft/sec) | Bounce Height (ft) | Kinetic Energy (ftlb) |
|-------------------|--------------------|-----------------------|
| Maximum: 25.35    | Maximum: 1.63      | Maximum: 66587        |
| Average: 18.14    | Average: .69       | Average: 37200        |
| Minimum: 10.45    | G. Mean: .31       | Std. Dev.: 17568      |
| Std. Dev.: 4.71   | Std. Dev.: 10.72   |                       |

Remarks:

CRSP Data Collected at End of Each Cell- L:\work\Infra\Rockfall Projects\Haena State Park\CRSP\G190.dat

Velocity Units: ft/sec Bounce Height Units: ft

| Cell # | Max. Vel. | Avg. Vel. | S.D. Vel. | Max. Bounce Ht. | Avg. Bounce Ht. |
|--------|-----------|-----------|-----------|-----------------|-----------------|
| 1      | 60        | 49        | 4.59      | 8               | 2               |
| 2      | 78        | 62        | 6.9       | 12              | 4               |
| 3      | 102       | 83        | 8.36      | 65              | 46              |
| 4      | 125       | 104       | 9.32      | 121             | 80              |
| 5      | 144       | 122       | 10.12     | 181             | 118             |
| 6      | 167       | 141       | 10.97     | 224             | 138             |
| 7      | 190       | 161       | 22.91     | 213             | 90              |
| 8      | 194       | 71        | 49.02     | 95              | 8               |
| 9      | 85        | 57        | 7.71      | 12              | 3               |
| 10     | 78        | 53        | 7         | 11              | 2               |
| 11     | 82        | 61        | 7.98      | 16              | 3               |
| 12     | 84        | 62        | 8         | 15              | 4               |
| 13     | 84        | 62        | 8.04      | 29              | 18              |
| 14     | 98        | 64        | 18.09     | 29              | 6               |
| 15     | 99        | 52        | 11.49     | 16              | 5               |

|    |    |    |       |    |   |
|----|----|----|-------|----|---|
| 16 | 71 | 44 | 10.15 | 13 | 3 |
| 17 | 30 | 17 | 8.13  | 2  | 0 |
| 18 | 25 | 18 | 4.71  | 2  | 0 |

CRSP Rocks Stopped Data- L:\work\Infra\Rockfall Projects\Haena State Park\CRSP\G190.dat

| X Interval    | Rocks Stopped |
|---------------|---------------|
| 0 To 10 ft    | 0             |
| 10 To 20 ft   | 0             |
| 20 To 30 ft   | 0             |
| 30 To 40 ft   | 0             |
| 40 To 50 ft   | 0             |
| 50 To 60 ft   | 0             |
| 60 To 70 ft   | 0             |
| 70 To 80 ft   | 0             |
| 80 To 90 ft   | 0             |
| 90 To 100 ft  | 0             |
| 100 To 110 ft | 0             |
| 110 To 120 ft | 0             |
| 120 To 130 ft | 0             |
| 130 To 140 ft | 0             |
| 140 To 150 ft | 0             |
| 150 To 160 ft | 0             |
| 160 To 170 ft | 0             |
| 170 To 180 ft | 0             |
| 180 To 190 ft | 0             |
| 190 To 200 ft | 0             |
| 200 To 210 ft | 0             |
| 210 To 220 ft | 0             |
| 220 To 230 ft | 0             |
| 230 To 240 ft | 0             |
| 240 To 250 ft | 0             |
| 250 To 260 ft | 0             |
| 260 To 270 ft | 0             |
| 270 To 280 ft | 0             |
| 280 To 290 ft | 0             |
| 290 To 300 ft | 0             |
| 300 To 310 ft | 0             |
| 310 To 320 ft | 0             |
| 320 To 330 ft | 0             |
| 330 To 340 ft | 0             |
| 340 To 350 ft | 0             |
| 350 To 360 ft | 0             |
| 360 To 370 ft | 0             |
| 370 To 380 ft | 0             |
| 380 To 390 ft | 0             |
| 390 To 400 ft | 0             |
| 400 To 410 ft | 0             |
| 410 To 420 ft | 0             |
| 420 To 430 ft | 0             |
| 430 To 440 ft | 0             |

|               |    |
|---------------|----|
| 440 To 450 ft | 0  |
| 450 To 460 ft | 0  |
| 460 To 470 ft | 0  |
| 470 To 480 ft | 0  |
| 480 To 490 ft | 0  |
| 490 To 500 ft | 0  |
| 500 To 510 ft | 0  |
| 510 To 520 ft | 0  |
| 520 To 530 ft | 0  |
| 530 To 540 ft | 0  |
| 540 To 550 ft | 0  |
| 550 To 560 ft | 0  |
| 560 To 570 ft | 0  |
| 570 To 580 ft | 0  |
| 580 To 590 ft | 0  |
| 590 To 600 ft | 0  |
| 600 To 610 ft | 0  |
| 610 To 620 ft | 0  |
| 620 To 630 ft | 0  |
| 630 To 640 ft | 0  |
| 640 To 650 ft | 0  |
| 650 To 660 ft | 0  |
| 660 To 670 ft | 0  |
| 670 To 680 ft | 0  |
| 680 To 690 ft | 0  |
| 690 To 700 ft | 0  |
| 700 To 710 ft | 0  |
| 710 To 720 ft | 0  |
| 720 To 730 ft | 0  |
| 730 To 740 ft | 0  |
| 740 To 750 ft | 0  |
| 750 To 760 ft | 0  |
| 760 To 770 ft | 0  |
| 770 To 780 ft | 0  |
| 780 To 790 ft | 0  |
| 790 To 800 ft | 0  |
| 800 To 810 ft | 0  |
| 810 To 820 ft | 0  |
| 820 To 830 ft | 0  |
| 830 To 840 ft | 0  |
| 840 To 850 ft | 0  |
| 850 To 860 ft | 3  |
| 860 To 870 ft | 14 |
| 870 To 880 ft | 31 |
| 880 To 890 ft | 28 |
| 890 To 900 ft | 25 |
| 900 To 910 ft | 31 |
| 910 To 920 ft | 31 |
| 920 To 930 ft | 17 |
| 930 To 940 ft | 8  |
| 940 To 948 ft | 4  |

**Rockfall simulation input and output data for profile P**

CRSP Input File - L:\work\Infra\Rockfall Projects\Haena State Park\CRSP\G193.dat

## Input File Specifications

Units of Measure: U.S.  
 Total Number of Cells: 11  
 Analysis Point 1 X-Coordinate: 403  
 Analysis Point 2 X-Coordinate:  
 Analysis Point 3 X-Coordinate:  
 Initial Y-Top Starting Zone Coordinate: 258  
 Initial Y-Base Starting Zone Coordinate: 258

Remarks:

## Cell Data

Cell No. S.R. Tang. C. Norm. C. Begin X Begin Y End X End Y

|    |     |    |    |     |     |     |     |
|----|-----|----|----|-----|-----|-----|-----|
| 1  | .8  | .8 | .2 | 0   | 228 | 49  | 206 |
| 2  | .8  | .8 | .2 | 49  | 206 | 90  | 180 |
| 3  | .8  | .8 | .2 | 90  | 180 | 126 | 159 |
| 4  | .8  | .8 | .2 | 126 | 159 | 164 | 135 |
| 5  | .8  | .8 | .2 | 164 | 135 | 198 | 112 |
| 6  | .8  | .8 | .2 | 198 | 112 | 206 | 103 |
| 7  | 1.5 | .8 | .2 | 206 | 103 | 207 | 80  |
| 8  | 1.5 | .8 | .2 | 207 | 80  | 272 | 41  |
| 9  | 1.5 | .8 | .2 | 272 | 41  | 337 | 31  |
| 10 | 1.5 | .8 | .2 | 337 | 31  | 403 | 25  |
| 11 | .8  | .8 | .2 | 403 | 25  | 404 | 25  |

CRSP Simulation Specifications: Used with L:\work\Infra\Rockfall Projects\Haena State Park\CRSP\G193.dat

Total Number of Rocks Simulated: 200  
 Starting Velocity in X-Direction: 1 ft/sec  
 Starting Velocity in Y-Direction: -1 ft/sec  
 Starting Cell Number: 1  
 Ending Cell Number: 11  
 Rock Density: 145 lb/ft<sup>3</sup>  
 Rock Shape: Spherical  
 Diameter: 4 ft

CRSP Analysis Point 1 Data - L:\work\Infra\Rockfall Projects\Haena State Park\CRSP\G193.dat

Analysis Point 1: X = 403, Y = 25

Total Rocks Passing Analysis Point: 1

Cumulative Probability Velocity (ft/sec) Energy (ftlb) Bounce Ht. (ft)

|     |      |      |      |
|-----|------|------|------|
| 50% | 6.63 | 4516 | 0.02 |
| 75% | 6.63 | 4516 | 0.69 |
| 90% | 6.63 | 4516 | 1.3  |
| 95% | 6.63 | 4516 | 1.66 |
| 98% | 6.63 | 4516 | 2.07 |

Velocity (ft/sec) Bounce Height (ft) Kinetic Energy (ftlb)

Maximum: 6.63 Maximum: .02 Maximum: 4516  
 Average: 6.63 Average: .02 Average: 4516  
 Minimum: 6.63 G. Mean: .02 Std. Dev.: 0  
 Std. Dev.: 0 Std. Dev.: 1

Remarks:

CRSP Data Collected at End of Each Cell - L:\work\Infra\Rockfall Projects\Haena State Park\CRSP\G193.dat

Velocity Units: ft/sec Bounce Height Units: ft

Cell # Max. Vel. Avg. Vel. S.D. Vel. Max. Bounce Ht. Avg. Bounce Ht.

|    |    |    |      |    |    |
|----|----|----|------|----|----|
| 1  | 26 | 21 | 2.04 | 1  | 0  |
| 2  | 39 | 32 | 2.77 | 3  | 1  |
| 3  | 44 | 36 | 3.44 | 4  | 1  |
| 4  | 52 | 42 | 4.09 | 5  | 1  |
| 5  | 59 | 46 | 4.73 | 6  | 2  |
| 6  | 63 | 50 | 5.26 | 10 | 4  |
| 7  | 64 | 50 | 5.33 | 32 | 27 |
| 8  | 80 | 38 | 9.18 | 9  | 2  |
| 9  | 33 | 17 | 7.16 | 5  | 0  |
| 10 | 7  | 7  | 0    | 0  | 0  |
| 11 | 5  | 5  | 0    | 0  | 0  |

CRSP Rocks Stopped Data - L:\work\Infra\Rockfall Projects\Haena State Park\CRSP\G193.dat

X Interval Rocks Stopped

|             |   |
|-------------|---|
| 0 To 10 ft  | 0 |
| 10 To 20 ft | 0 |
| 20 To 30 ft | 0 |

|               |    |
|---------------|----|
| 30 To 40 ft   | 0  |
| 40 To 50 ft   | 0  |
| 50 To 60 ft   | 0  |
| 60 To 70 ft   | 0  |
| 70 To 80 ft   | 0  |
| 80 To 90 ft   | 0  |
| 90 To 100 ft  | 0  |
| 100 To 110 ft | 0  |
| 110 To 120 ft | 0  |
| 120 To 130 ft | 0  |
| 130 To 140 ft | 0  |
| 140 To 150 ft | 0  |
| 150 To 160 ft | 0  |
| 160 To 170 ft | 0  |
| 170 To 180 ft | 0  |
| 180 To 190 ft | 0  |
| 190 To 200 ft | 0  |
| 200 To 210 ft | 0  |
| 210 To 220 ft | 0  |
| 220 To 230 ft | 0  |
| 230 To 240 ft | 0  |
| 240 To 250 ft | 0  |
| 250 To 260 ft | 0  |
| 260 To 270 ft | 0  |
| 270 To 280 ft | 0  |
| 280 To 290 ft | 4  |
| 290 To 300 ft | 16 |
| 300 To 310 ft | 25 |
| 310 To 320 ft | 26 |
| 320 To 330 ft | 26 |
| 330 To 340 ft | 25 |
| 340 To 350 ft | 20 |
| 350 To 360 ft | 26 |
| 360 To 370 ft | 12 |
| 370 To 380 ft | 12 |
| 380 To 390 ft | 5  |
| 390 To 400 ft | 2  |
| 400 To 404 ft | 0  |

**Rockfall simulation input and output data for profile P**

CRSP Input File-L:\work\Infra\Rockfall Projects\Haena State Park\CRSP\G194m.bmp

## Input File Specifications

Units of Measure: U.S.  
 Total Number of Cells: 26  
 Analysis Point 1 X-Coordinate: 1155  
 Analysis Point 2 X-Coordinate: 1196  
 Analysis Point 3 X-Coordinate:  
 Initial Y-Top Starting Zone Coordinate: 1010  
 Initial Y-Base Starting Zone Coordinate: 1010

## Remarks:

## Cell Data

| Cell No. | S.R. | Tang. C. | Norm. C. | Begin X | Begin Y | End X | End Y |
|----------|------|----------|----------|---------|---------|-------|-------|
| 1        | .8   | .8       | .2       | 0       | 1029    | 66    | 1012  |
| 2        | .8   | .8       | .2       | 66      | 1012    | 106   | 976   |
| 3        | .8   | .8       | .2       | 106     | 976     | 152   | 925   |
| 4        | .8   | .8       | .2       | 152     | 925     | 203   | 876   |
| 5        | .8   | .8       | .2       | 203     | 876     | 261   | 814   |
| 6        | .8   | .8       | .2       | 261     | 814     | 333   | 715   |
| 7        | .8   | .8       | .2       | 333     | 715     | 397   | 615   |
| 8        | .8   | .8       | .2       | 397     | 615     | 466   | 509   |
| 9        | .8   | .8       | .2       | 466     | 509     | 531   | 402   |
| 10       | .8   | .8       | .2       | 531     | 402     | 605   | 305   |
| 11       | 1.5  | .8       | .2       | 605     | 305     | 698   | 244   |
| 12       | 1.5  | .8       | .2       | 698     | 244     | 772   | 212   |
| 13       | 1.5  | .8       | .2       | 772     | 212     | 873   | 164   |
| 14       | 1.5  | .8       | .2       | 873     | 164     | 933   | 117   |
| 15       | 1.5  | .8       | .2       | 933     | 117     | 963   | 110   |
| 16       | 1.5  | .8       | .2       | 963     | 110     | 994   | 94    |
| 17       | 1.5  | .8       | .2       | 994     | 94      | 1029  | 73    |
| 18       | 1.5  | .8       | .2       | 1029    | 73      | 1038  | 62    |
| 19       | 1.5  | .8       | .2       | 1038    | 62      | 1043  | 62    |
| 20       | 1.5  | .8       | .2       | 1043    | 62      | 1046  | 66    |
| 21       | 1.5  | .8       | .2       | 1046    | 66      | 1047  | 66    |
| 22       | 1.5  | .8       | .2       | 1047    | 66      | 1088  | 49    |
| 23       | 1.5  | .8       | .2       | 1088    | 49      | 1102  | 33    |
| 24       | 1.5  | .8       | .2       | 1102    | 33      | 1142  | 33    |
| 25       | 1.5  | .8       | .2       | 1142    | 33      | 1176  | 10    |
| 26       | 1.5  | .8       | .2       | 1176    | 10      | 1196  | 7     |

CRSP Simulation Specifications: Used with L:\work\Infra\Rockfall Projects\Haena State Park\CRSP\G194m.bmp

Total Number of Rocks Simulated: 100  
 Starting Velocity in X-Direction: 1 ft/sec  
 Starting Velocity in Y-Direction: -1 ft/sec  
 Starting Cell Number: 1  
 Ending Cell Number: 26  
 Rock Density: 165 lb/ft<sup>3</sup>  
 Rock Shape: Spherical  
 Diameter: 4 ft

CRSP Analysis Point 1 Data- L:\work\Infra\Rockfall Projects\Haena State Park\CRSP\G194m.bmp

Analysis Point 1: X = 1155, Y = 24

NO ROCKS PAST ANALYSIS POINT 1

CRSP Analysis Point 2 Data- L:\work\Infra\Rockfall Projects\Haena State Park\CRSP\G194m.bmp

Analysis Point 2: X = 1196, Y = 7

NO ROCKS PAST ANALYSIS POINT 2

CRSP Data Collected at End of Each Cell- L:\work\Infra\Rockfall Projects\Haena State Park\CRSP\G194m.bmp

Velocity Units: ft/sec    Bounce Height Units: ft

Cell #    Max. Vel.    Avg. Vel.    S.D. Vel.    Max. Bounce Ht.    Avg. Bounce Ht.

|    |          |                  |       |    |    |
|----|----------|------------------|-------|----|----|
| 1  | No rocks | past end of cell |       |    |    |
| 2  | 38       | 32               | 2.75  | 4  | 1  |
| 3  | 62       | 51               | 4.97  | 9  | 2  |
| 4  | 71       | 58               | 6.84  | 11 | 3  |
| 5  | 86       | 68               | 9.36  | 14 | 5  |
| 6  | 105      | 84               | 10.88 | 34 | 10 |
| 7  | 124      | 92               | 15.2  | 39 | 11 |
| 8  | 140      | 100              | 15.31 | 37 | 14 |
| 9  | 151      | 106              | 19.99 | 50 | 14 |
| 10 | 146      | 91               | 17.19 | 32 | 9  |
| 11 | 89       | 54               | 14.32 | 17 | 5  |

|    |          |                  |       |    |   |
|----|----------|------------------|-------|----|---|
| 12 | 70       | 39               | 11.47 | 10 | 2 |
| 13 | 55       | 31               | 10.05 | 8  | 1 |
| 14 | 75       | 42               | 10.43 | 19 | 3 |
| 15 | 43       | 21               | 8.6   | 4  | 1 |
| 16 | 46       | 25               | 8.13  | 8  | 1 |
| 17 | 47       | 28               | 6.7   | 6  | 2 |
| 18 | 54       | 35               | 6.43  | 12 | 5 |
| 19 | 51       | 24               | 13.96 | 9  | 1 |
| 20 | 37       | 34               | 0     | 2  | 1 |
| 21 | 38       | 35               | 0     | 1  | 0 |
| 22 | 34       | 25               | 0     | 2  | 0 |
| 23 | 44       | 35               | 0     | 7  | 4 |
| 24 | No rocks | past end of cell |       |    |   |
| 25 | No rocks | past end of cell |       |    |   |
| 26 | No rocks | past end of cell |       |    |   |

CRSP Rocks Stopped Data- L:\work\Infra\Rockfall Projects\Haena State Park\CRSP\G194m.bmp

X Interval    Rocks Stopped

|               |   |
|---------------|---|
| 0 To 10 ft    | 0 |
| 10 To 20 ft   | 0 |
| 20 To 30 ft   | 0 |
| 30 To 40 ft   | 0 |
| 40 To 50 ft   | 0 |
| 50 To 60 ft   | 0 |
| 60 To 70 ft   | 0 |
| 70 To 80 ft   | 0 |
| 80 To 90 ft   | 0 |
| 90 To 100 ft  | 0 |
| 100 To 110 ft | 0 |
| 110 To 120 ft | 0 |
| 120 To 130 ft | 0 |
| 130 To 140 ft | 0 |
| 140 To 150 ft | 0 |
| 150 To 160 ft | 0 |
| 160 To 170 ft | 0 |
| 170 To 180 ft | 0 |
| 180 To 190 ft | 0 |
| 190 To 200 ft | 0 |
| 200 To 210 ft | 0 |
| 210 To 220 ft | 0 |
| 220 To 230 ft | 0 |
| 230 To 240 ft | 0 |
| 240 To 250 ft | 0 |
| 250 To 260 ft | 0 |
| 260 To 270 ft | 0 |
| 270 To 280 ft | 0 |
| 280 To 290 ft | 0 |
| 290 To 300 ft | 0 |
| 300 To 310 ft | 0 |
| 310 To 320 ft | 0 |



|               |   |
|---------------|---|
| 320 To 330 ft | 0 |
| 330 To 340 ft | 0 |
| 340 To 350 ft | 0 |
| 350 To 360 ft | 0 |
| 360 To 370 ft | 0 |
| 370 To 380 ft | 0 |
| 380 To 390 ft | 0 |
| 390 To 400 ft | 0 |
| 400 To 410 ft | 0 |
| 410 To 420 ft | 0 |
| 420 To 430 ft | 0 |
| 430 To 440 ft | 0 |
| 440 To 450 ft | 0 |
| 450 To 460 ft | 0 |
| 460 To 470 ft | 0 |
| 470 To 480 ft | 0 |
| 480 To 490 ft | 0 |
| 490 To 500 ft | 0 |
| 500 To 510 ft | 0 |
| 510 To 520 ft | 0 |
| 520 To 530 ft | 0 |
| 530 To 540 ft | 0 |
| 540 To 550 ft | 0 |
| 550 To 560 ft | 0 |
| 560 To 570 ft | 0 |
| 570 To 580 ft | 0 |
| 580 To 590 ft | 0 |
| 590 To 600 ft | 0 |
| 600 To 610 ft | 0 |
| 610 To 620 ft | 0 |
| 620 To 630 ft | 0 |
| 630 To 640 ft | 0 |
| 640 To 650 ft | 0 |
| 650 To 660 ft | 0 |
| 660 To 670 ft | 0 |
| 670 To 680 ft | 0 |
| 680 To 690 ft | 0 |
| 690 To 700 ft | 0 |
| 700 To 710 ft | 0 |
| 710 To 720 ft | 0 |
| 720 To 730 ft | 0 |
| 730 To 740 ft | 0 |
| 740 To 750 ft | 0 |
| 750 To 760 ft | 0 |
| 760 To 770 ft | 0 |
| 770 To 780 ft | 0 |
| 780 To 790 ft | 0 |
| 790 To 800 ft | 0 |
| 800 To 810 ft | 0 |
| 810 To 820 ft | 0 |
| 820 To 830 ft | 0 |
| 830 To 840 ft | 0 |
| 840 To 850 ft | 0 |
| 850 To 860 ft | 0 |
| 860 To 870 ft | 0 |

|                 |    |
|-----------------|----|
| 870 To 880 ft   | 0  |
| 880 To 890 ft   | 0  |
| 890 To 900 ft   | 0  |
| 900 To 910 ft   | 0  |
| 910 To 920 ft   | 0  |
| 920 To 930 ft   | 0  |
| 930 To 940 ft   | 0  |
| 940 To 950 ft   | 0  |
| 950 To 960 ft   | 5  |
| 960 To 970 ft   | 2  |
| 970 To 980 ft   | 0  |
| 980 To 990 ft   | 0  |
| 990 To 1000 ft  | 0  |
| 1000 To 1010 ft | 0  |
| 1010 To 1020 ft | 0  |
| 1020 To 1030 ft | 0  |
| 1030 To 1040 ft | 5  |
| 1040 To 1050 ft | 85 |
| 1050 To 1060 ft | 0  |
| 1060 To 1070 ft | 0  |
| 1070 To 1080 ft | 0  |
| 1080 To 1090 ft | 0  |
| 1090 To 1100 ft | 0  |
| 1100 To 1110 ft | 0  |
| 1110 To 1120 ft | 2  |
| 1120 To 1130 ft | 1  |
| 1130 To 1140 ft | 0  |
| 1140 To 1150 ft | 0  |
| 1150 To 1160 ft | 0  |
| 1160 To 1170 ft | 0  |
| 1170 To 1180 ft | 0  |
| 1180 To 1190 ft | 0  |
| 1190 To 1196 ft | 0  |

**Rockfall simulation input and output data for profile □□**

## Input File Specifications

Units of Measure: U.S.  
 Total Number of Cells: 10  
 Analysis Point 1 X-Coordinate: 376  
 Analysis Point 2 X-Coordinate: 400  
 Analysis Point 3 X-Coordinate: 460  
 Initial Y-Top Starting Zone Coordinate: 507  
 Initial Y-Base Starting Zone Coordinate: 507

## Remarks:

## Cell Data

| Cell No. | S.R. | Tang. C. | Norm. C. | Begin X | Begin Y | End X | End Y |
|----------|------|----------|----------|---------|---------|-------|-------|
| 1        | .8   | .8       | .2       | 0       | 507     | 66    | 432   |
| 2        | .8   | .8       | .2       | 66      | 432     | 66.1  | 369   |
| 3        | .8   | .8       | .2       | 66.1    | 369     | 218.4 | 173.8 |
| 4        | .8   | .8       | .2       | 218.4   | 173.8   | 221.6 | 171.5 |
| 5        | .8   | .8       | .2       | 221.6   | 171.5   | 221.7 | 24.4  |
| 6        | .8   | .8       | .2       | 221.7   | 24.4    | 242   | 30    |
| 7        | .8   | .8       | .2       | 242     | 30      | 272   | 21    |
| 8        | .8   | .8       | .2       | 272     | 21      | 324   | 5     |
| 9        | .8   | .8       | .2       | 324     | 5       | 376   | 0     |
| 10       | .8   | .8       | .2       | 376     | 0       | 500   | 0     |

CRSP Simulation Specifications: Used with C:\Users\Yucheng\Documents\Pan\Haena State Park\CRSP\P1 New.dat

Total Number of Rocks Simulated: 1000  
 Starting Velocity in X-Direction: 1 ft/sec  
 Starting Velocity in Y-Direction: -1 ft/sec  
 Starting Cell Number: 1  
 Ending Cell Number: 10  
 Rock Density: 155 lb/ft<sup>3</sup>  
 Rock Shape: Spherical  
 Diameter: 4 ft

CRSP Analysis Point 1 Data - C:\Users\Yucheng\Documents\Pan\Haena State Park\CRSP\P1 New.dat

Analysis Point 1: X = 376, Y = 0

Total Rocks Passing Analysis Point: 808

| Cumulative Probability | Velocity (ft/sec) | Energy (ft-lb) | Bounce Ht. (ft) |
|------------------------|-------------------|----------------|-----------------|
| 50%                    | 18.09             | 45356          | 0.11            |
| 75%                    | 24.5              | 104656         | 5.9             |
| 90%                    | 30.27             | 157993         | 11.1            |
| 95%                    | 33.73             | 190014         | 14.23           |
| 98%                    | 37.62             | 225953         | 17.74           |

| Velocity (ft/sec) | Bounce Height (ft) | Kinetic Energy (ft-lb) |
|-------------------|--------------------|------------------------|
| Maximum: 120.08   | Maximum: 18.26     | Maximum: 1277169       |
| Average: 18.09    | Average: .39       | Average: 45356         |
| Minimum: 3.09     | G. Mean: .11       | Std. Dev.: 87826       |
| Std. Dev.: 9.5    | Std. Dev.: 8.57    |                        |

## Remarks:

CRSP Analysis Point 2 Data - C:\Users\Yucheng\Documents\Pan\Haena State Park\CRSP\P1 New.dat

Analysis Point 2: X = 400, Y = 0

Total Rocks Passing Analysis Point: 379

| Cumulative Probability | Velocity (ft/sec) | Energy (ft-lb) | Bounce Ht. (ft) |
|------------------------|-------------------|----------------|-----------------|
| 50%                    | 12.44             | 20757          | 0.07            |
| 75%                    | 15.86             | 31404          | 6.1             |
| 90%                    | 18.94             | 40981          | 11.52           |
| 95%                    | 20.79             | 46730          | 14.77           |
| 98%                    | 22.87             | 53183          | 18.43           |

| Velocity (ft/sec) | Bounce Height (ft) | Kinetic Energy (ft-lb) |
|-------------------|--------------------|------------------------|
| Maximum: 28.11    | Maximum: 1.5       | Maximum: 89967         |
| Average: 12.44    | Average: .22       | Average: 20757         |
| Minimum: 2.79     | G. Mean: .07       | Std. Dev.: 15769       |
| Std. Dev.: 5.07   | Std. Dev.: 8.93    |                        |

## Remarks:

CRSP Analysis Point 3 Data - C:\Users\Yucheng\Documents\Pan\Haena State Park\CRSP\P1 New.dat

Analysis Point 3: X = 460, Y = 0

NO ROCKS PAST ANALYSIS POINT 3

CRSP Data Collected at End of Each Cell - C:\Users\Yucheng\Documents\Pan\Haena State Park\CRSP\P1 New.dat

Velocity Units: ft/sec    Bounce Height Units: ft

Cell #    Max. Vel.    Avg. Vel.    S.D. Vel.    Max. Bounce Ht.    Avg. Bounce Ht.

|    |          |                  |       |     |     |
|----|----------|------------------|-------|-----|-----|
| 1  | 59       | 48               | 4.57  | 8   | 2   |
| 2  | 60       | 48               | 4.59  | 71  | 65  |
| 3  | 102      | 72               | 10.41 | 23  | 7   |
| 4  | 104      | 70               | 12.6  | 21  | 5   |
| 5  | 104      | 70               | 12.61 | 167 | 152 |
| 6  | 116      | 81               | 14    | 137 | 121 |
| 7  | 134      | 98               | 15.36 | 126 | 80  |
| 8  | 136      | 56               | 38.61 | 89  | 10  |
| 9  | 120      | 18               | 9.5   | 18  | 0   |
| 10 | No rocks | past end of cell |       |     |     |

CRSP Rocks Stopped Data - C:\Users\Yucheng\Documents\Pan\Haena State Park\CRSP\P1 New.dat

| X Interval    | Rocks Stopped |
|---------------|---------------|
| 0 To 10 ft    | 0             |
| 10 To 20 ft   | 0             |
| 20 To 30 ft   | 0             |
| 30 To 40 ft   | 0             |
| 40 To 50 ft   | 0             |
| 50 To 60 ft   | 0             |
| 60 To 70 ft   | 0             |
| 70 To 80 ft   | 0             |
| 80 To 90 ft   | 0             |
| 90 To 100 ft  | 0             |
| 100 To 110 ft | 0             |

|               |     |
|---------------|-----|
| 110 To 120 ft | 0   |
| 120 To 130 ft | 0   |
| 130 To 140 ft | 0   |
| 140 To 150 ft | 0   |
| 150 To 160 ft | 0   |
| 160 To 170 ft | 0   |
| 170 To 180 ft | 0   |
| 180 To 190 ft | 0   |
| 190 To 200 ft | 0   |
| 200 To 210 ft | 0   |
| 210 To 220 ft | 0   |
| 220 To 230 ft | 0   |
| 230 To 240 ft | 0   |
| 240 To 250 ft | 0   |
| 250 To 260 ft | 0   |
| 260 To 270 ft | 0   |
| 270 To 280 ft | 0   |
| 280 To 290 ft | 0   |
| 290 To 300 ft | 0   |
| 300 To 310 ft | 0   |
| 310 To 320 ft | 0   |
| 320 To 330 ft | 0   |
| 330 To 340 ft | 2   |
| 340 To 350 ft | 14  |
| 350 To 360 ft | 43  |
| 360 To 370 ft | 76  |
| 370 To 380 ft | 120 |
| 380 To 390 ft | 182 |
| 390 To 400 ft | 186 |
| 400 To 410 ft | 169 |
| 410 To 420 ft | 121 |
| 420 To 430 ft | 53  |
| 430 To 440 ft | 28  |
| 440 To 450 ft | 6   |
| 450 To 460 ft | 0   |
| 460 To 470 ft | 0   |
| 470 To 480 ft | 0   |
| 480 To 490 ft | 0   |
| 490 To 500 ft | 0   |

**Rockfall simulation input and output data for profile 01**

01 - the small launch pad

**Input File Specifications**

Units of Measure: U.S.  
 Total Number of Cells: 12  
 Analysis Point 1 X-Coordinate: 322  
 Analysis Point 2 X-Coordinate: 346  
 Analysis Point 3 X-Coordinate: 406  
 Initial Y-Top Starting Zone Coordinate: 509  
 Initial Y-Base Starting Zone Coordinate: 509

Remarks:

**Cell Data**

Cell No. S.R. Tang. C. Norm. C. Begin X Begin Y End X End Y

|    |    |    |    |       |       |       |       |
|----|----|----|----|-------|-------|-------|-------|
| 1  | .8 | .8 | .2 | 0     | 509   | 66    | 434   |
| 2  | .8 | .8 | .2 | 66    | 434   | 66.1  | 392   |
| 3  | .8 | .8 | .2 | 66.1  | 392   | 219.7 | 208.1 |
| 4  | .8 | .8 | .2 | 219.7 | 208.1 | 222.6 | 207.3 |
| 5  | .8 | .8 | .2 | 222.6 | 207.3 | 222.7 | 54.7  |
| 6  | .8 | .8 | .2 | 222.7 | 54.7  | 241   | 44    |
| 7  | .8 | .8 | .2 | 241   | 44    | 265   | 29    |
| 8  | .8 | .8 | .2 | 265   | 29    | 300   | 7     |
| 9  | .8 | .8 | .2 | 300   | 7     | 322   | 2     |
| 10 | .8 | .8 | .2 | 322   | 2     | 337   | 4     |
| 11 | .8 | .8 | .2 | 337   | 4     | 346   | 3     |
| 12 | .8 | .8 | .2 | 346   | 3     | 500   | 0     |

CRSP Simulation Specifications: Used with C:\Users\Yucheng\Documents\Pan\Haena State Park\CRSP\N1Correct.doc

Total Number of Rocks Simulated: 1000  
 Starting Velocity in X-Direction: 1 ft/sec  
 Starting Velocity in Y-Direction: -1 ft/sec  
 Starting Cell Number: 1  
 Ending Cell Number: 12  
 Rock Density: 155 lb/ft<sup>3</sup>  
 Rock Shape: Spherical  
 Diameter: 4 ft

CRSP Analysis Point 1 Data - C:\Users\Yucheng\Documents\Pan\Haena State Park\CRSP\N1Correct.doc

Analysis Point 1: X = 322, Y = 2

Total Rocks Passing Analysis Point: 1000

| Cumulative Probability | Velocity (ft/sec) | Energy (ft-lb) | Bounce Ht. (ft) |
|------------------------|-------------------|----------------|-----------------|
| 50%                    | 91.79             | 904203         | 8.43            |
| 75%                    | 121.52            | 1298257        | 20.95           |
| 90%                    | 148.26            | 1652685        | 32.21           |
| 95%                    | 164.32            | 1865470        | 38.97           |
| 98%                    | 182.34            | 2104284        | 46.56           |

| Velocity (ft/sec) | Bounce Height (ft) | Kinetic Energy (ft-lb) |
|-------------------|--------------------|------------------------|
| Maximum: 146.6    | Maximum: 150.22    | Maximum: 1842836       |
| Average: 91.79    | Average: 39.58     | Average: 904203        |
| Minimum: 7.71     | G. Mean: 8.43      | Std. Dev.: 583611      |
| Std. Dev.: 44.03  | Std. Dev.: 18.55   |                        |

Remarks:

CRSP Analysis Point 2 Data - C:\Users\Yucheng\Documents\Pan\Haena State Park\CRSP\N1Correct.doc

Analysis Point 2: X = 346, Y = 3

Total Rocks Passing Analysis Point: 654

| Cumulative Probability | Velocity (ft/sec) | Energy (ft-lb) | Bounce Ht. (ft) |
|------------------------|-------------------|----------------|-----------------|
| 50%                    | 57.3              | 509273         | 0.66            |
| 75%                    | 91.48             | 908600         | 21.85           |
| 90%                    | 122.21            | 1267768        | 40.91           |
| 95%                    | 140.67            | 1483400        | 52.35           |
| 98%                    | 161.38            | 1725408        | 65.19           |

| Velocity (ft/sec) | Bounce Height (ft) | Kinetic Energy (ft-lb) |
|-------------------|--------------------|------------------------|
| Maximum: 141.42   | Maximum: 116.84    | Maximum: 1750012       |
| Average: 57.3     | Average: 15.24     | Average: 509273        |
| Minimum: 2.97     | G. Mean: .66       | Std. Dev.: 591419      |
| Std. Dev.: 50.61  | Std. Dev.: 31.38   |                        |

Remarks:

CRSP Analysis Point 3 Data - C:\Users\Yucheng\Documents\Pan\Haena State Park\CRSP\N1Correct.doc

Analysis Point 3: X = 406, Y = 2

Total Rocks Passing Analysis Point: 56

| Cumulative Probability | Velocity (ft/sec) | Energy (ft-lb) | Bounce Ht. (ft) |
|------------------------|-------------------|----------------|-----------------|
| 50%                    | 15.62             | 66339          | 0.05            |
| 75%                    | 30.46             | 236777         | 7.34            |
| 90%                    | 43.81             | 390074         | 13.9            |
| 95%                    | 51.82             | 482109         | 17.84           |
| 98%                    | 60.81             | 585401         | 22.25           |

| Velocity (ft/sec) | Bounce Height (ft) | Kinetic Energy (ft-lb) |
|-------------------|--------------------|------------------------|
| Maximum: 127.01   | Maximum: 4.69      | Maximum: 1398117       |
| Average: 15.62    | Average: .29       | Average: 66339         |
| Minimum: 3.2      | G. Mean: .05       | Std. Dev.: 252424      |
| Std. Dev.: 21.98  | Std. Dev.: 10.8    |                        |

Remarks:

CRSP Data Collected at End of Each Cell - C:\Users\Yucheng\Documents\Pan\Haena State Park\CRSP\N1Correct.doc

Velocity Units: ft/sec Bounce Height Units: ft

| Cell # | Max. Vel. | Avg. Vel. | S.D. Vel. | Max. Bounce Ht. | Avg. Bounce Ht. |
|--------|-----------|-----------|-----------|-----------------|-----------------|
| 1      | 59        | 48        | 4.44      | 8               | 3               |
| 2      | 59        | 48        | 4.46      | 50              | 44              |
| 3      | 101       | 72        | 10.03     | 20              | 6               |
| 4      | 100       | 64        | 17.72     | 18              | 4               |
| 5      | 101       | 64        | 17.74     | 170             | 156             |
| 6      | 111       | 72        | 20.14     | 163             | 148             |
| 7      | 126       | 86        | 20.66     | 170             | 128             |
| 8      | 148       | 109       | 20.02     | 168             | 82              |
| 9      | 147       | 92        | 44.03     | 150             | 39              |

|    |          |                  |       |     |    |
|----|----------|------------------|-------|-----|----|
| 10 | 143      | 77               | 51.83 | 129 | 24 |
| 11 | 141      | 57               | 50.61 | 117 | 15 |
| 12 | No rocks | past end of cell |       |     |    |

CRSP Rocks Stopped Data - C:\Users\Yucheng\Documents\Pan\Haena State Park\CRSP\N1Correct.doc

| X Interval    | Rocks Stopped |
|---------------|---------------|
| 0 To 10 ft    | 0             |
| 10 To 20 ft   | 0             |
| 20 To 30 ft   | 0             |
| 30 To 40 ft   | 0             |
| 40 To 50 ft   | 0             |
| 50 To 60 ft   | 0             |
| 60 To 70 ft   | 0             |
| 70 To 80 ft   | 0             |
| 80 To 90 ft   | 0             |
| 90 To 100 ft  | 0             |
| 100 To 110 ft | 0             |
| 110 To 120 ft | 0             |
| 120 To 130 ft | 0             |
| 130 To 140 ft | 0             |
| 140 To 150 ft | 0             |
| 150 To 160 ft | 0             |
| 160 To 170 ft | 0             |
| 170 To 180 ft | 0             |
| 180 To 190 ft | 0             |
| 190 To 200 ft | 0             |
| 200 To 210 ft | 0             |
| 210 To 220 ft | 0             |
| 220 To 230 ft | 0             |
| 230 To 240 ft | 0             |
| 240 To 250 ft | 0             |
| 250 To 260 ft | 0             |
| 260 To 270 ft | 0             |
| 270 To 280 ft | 0             |
| 280 To 290 ft | 0             |
| 290 To 300 ft | 0             |
| 300 To 310 ft | 0             |
| 310 To 320 ft | 0             |
| 320 To 330 ft | 121           |
| 330 To 340 ft | 195           |
| 340 To 350 ft | 88            |
| 350 To 360 ft | 119           |
| 360 To 370 ft | 138           |
| 370 To 380 ft | 114           |
| 380 To 390 ft | 84            |
| 390 To 400 ft | 54            |
| 400 To 410 ft | 47            |
| 410 To 420 ft | 20            |



|               |    |
|---------------|----|
| 420 To 430 ft | 10 |
| 430 To 440 ft | 5  |
| 440 To 450 ft | 1  |
| 450 To 460 ft | 1  |
| 460 To 470 ft | 2  |
| 470 To 480 ft | 1  |
| 480 To 490 ft | 0  |
| 490 To 500 ft | 0  |

# **Rockfall simulation input and output data for profile 01** **01.it0out the small launchin pad**

## Input File Specifications

Units of Measure: U.S.  
 Total Number of Cells: 12  
 Analysis Point 1 X-Coordinate: 322  
 Analysis Point 2 X-Coordinate: 346  
 Analysis Point 3 X-Coordinate: 406  
 Initial Y-Top Starting Zone Coordinate: 509  
 Initial Y-Base Starting Zone Coordinate: 509

## Remarks:

## Cell Data

Cell No. S.R. Tang. C. Norm. C. Begin X Begin Y End X End Y

|    |    |    |    |       |       |       |       |  |  |
|----|----|----|----|-------|-------|-------|-------|--|--|
| 1  | .8 | .8 | .2 | 0     | 509   | 66    | 434   |  |  |
| 2  | .8 | .8 | .2 | 66    | 434   | 66.1  | 392   |  |  |
| 3  | .8 | .8 | .2 | 66.1  | 392   | 222.5 | 207.2 |  |  |
| 4  | .8 | .8 | .2 | 222.5 | 207.2 | 222.6 | 207.3 |  |  |
| 5  | .8 | .8 | .2 | 222.6 | 207.3 | 222.7 | 54.7  |  |  |
| 6  | .8 | .8 | .2 | 222.7 | 54.7  | 241   | 44    |  |  |
| 7  | .8 | .8 | .2 | 241   | 44    | 265   | 29    |  |  |
| 8  | .8 | .8 | .2 | 265   | 29    | 300   | 7     |  |  |
| 9  | .8 | .8 | .2 | 300   | 7     | 322   | 2     |  |  |
| 10 | .8 | .8 | .2 | 322   | 2     | 337   | 4     |  |  |
| 11 | .8 | .8 | .2 | 337   | 4     | 346   | 3     |  |  |
| 12 | .8 | .8 | .2 | 346   | 3     | 500   | 0     |  |  |

CRSP Simulation Specifications: Used with C:\Users\Yucheng\Documents\Pan\Haena State Park\CRSP\N1Correct.doc

Total Number of Rocks Simulated: 1000  
 Starting Velocity in X-Direction: 1 ft/sec  
 Starting Velocity in Y-Direction: -1 ft/sec  
 Starting Cell Number: 1  
 Ending Cell Number: 12  
 Rock Density: 155 lb/ft^3  
 Rock Shape: Spherical  
 Diameter: 4 ft

CRSP Analysis Point 1 Data - C:\Users\Yucheng\Documents\Pan\Haena State Park\CRSP\N1Correct.doc

Analysis Point 1: X = 322, Y = 2

Total Rocks Passing Analysis Point: 978

| Cumulative Probability | Velocity (ft/sec) | Energy (ft-lb) | Bounce Ht. (ft) |
|------------------------|-------------------|----------------|-----------------|
| 50%                    | 94.11             | 986860         | 5.24            |
| 75%                    | 126.91            | 1423906        | 17.65           |
| 90%                    | 156.4             | 1817002        | 28.81           |
| 95%                    | 174.11            | 2053002        | 35.51           |
| 98%                    | 193.99            | 2317871        | 43.03           |

| Velocity (ft/sec) | Bounce Height (ft) | Kinetic Energy (ft-lb) |
|-------------------|--------------------|------------------------|
| Maximum: 150.19   | Maximum: 102.55    | Maximum: 1933660       |
| Average: 94.11    | Average: 27.33     | Average: 986860        |
| Minimum: 10.44    | G. Mean: 5.24      | Std. Dev.: 647284      |
| Std. Dev.: 48.57  | Std. Dev.: 18.38   |                        |

Remarks:

CRSP Analysis Point 2 Data - C:\Users\Yucheng\Documents\Pan\Haena State Park\CRSP\N1Correct.doc

Analysis Point 2: X = 346, Y = 3

Total Rocks Passing Analysis Point: 600

| Cumulative Probability | Velocity (ft/sec) | Energy (ft-lb) | Bounce Ht. (ft) |
|------------------------|-------------------|----------------|-----------------|
| 50%                    | 45.79             | 410200         | 0.28            |
| 75%                    | 79.75             | 831584         | 14.79           |
| 90%                    | 110.29            | 1210593        | 27.84           |
| 95%                    | 128.63            | 1438135        | 35.68           |
| 98%                    | 149.21            | 1693512        | 44.47           |

| Velocity (ft/sec) | Bounce Height (ft) | Kinetic Energy (ft-lb) |
|-------------------|--------------------|------------------------|
| Maximum: 138.33   | Maximum: 60.72     | Maximum: 1692449       |
| Average: 45.79    | Average: 5.57      | Average: 410200        |
| Minimum: 2.61     | G. Mean: .28       | Std. Dev.: 624087      |
| Std. Dev.: 50.29  | Std. Dev.: 21.49   |                        |

Remarks:

CRSP Analysis Point 3 Data - C:\Users\Yucheng\Documents\Pan\Haena State Park\CRSP\N1Correct.doc

Analysis Point 3: X = 406, Y = 2

Total Rocks Passing Analysis Point: 48

| Cumulative Probability | Velocity (ft/sec) | Energy (ft-lb) | Bounce Ht. (ft) |
|------------------------|-------------------|----------------|-----------------|
| 50%                    | 11.12             | 16479          | 0.05            |
| 75%                    | 14.21             | 25022          | 5.78            |
| 90%                    | 16.99             | 32706          | 10.93           |
| 95%                    | 18.66             | 37319          | 14.03           |
| 98%                    | 20.54             | 42497          | 17.5            |

| Velocity (ft/sec) | Bounce Height (ft) | Kinetic Energy (ft-lb) |
|-------------------|--------------------|------------------------|
| Maximum: 20.11    | Maximum: 1.01      | Maximum: 45903         |
| Average: 11.12    | Average: .16       | Average: 16479         |
| Minimum: 3.62     | G. Mean: .05       | Std. Dev.: 12652       |
| Std. Dev.: 4.58   | Std. Dev.: 8.49    |                        |

Remarks:

CRSP Data Collected at End of Each Cell - C:\Users\Yucheng\Documents\Pan\Haena State Park\CRSP\N1Correct.doc

Velocity Units: ft/sec Bounce Height Units: ft

| Cell # | Max. Vel. | Avg. Vel. | S.D. Vel. | Max. Bounce Ht. | Avg. Bounce Ht. |
|--------|-----------|-----------|-----------|-----------------|-----------------|
| 1      | 59        | 48        | 4.83      | 8               | 2               |
| 2      | 59        | 48        | 4.84      | 50              | 44              |
| 3      | 99        | 73        | 9.77      | 19              | 6               |
| 4      | 99        | 72        | 11.07     | 19              | 6               |
| 5      | 100       | 72        | 11.09     | 171             | 158             |
| 6      | 110       | 82        | 11.04     | 162             | 145             |
| 7      | 125       | 96        | 12.37     | 149             | 119             |
| 8      | 147       | 117       | 15.79     | 129             | 69              |
| 9      | 150       | 94        | 48.57     | 103             | 27              |

|    |          |                  |       |    |    |
|----|----------|------------------|-------|----|----|
| 10 | 146      | 67               | 57.65 | 76 | 11 |
| 11 | 138      | 46               | 50.29 | 61 | 5  |
| 12 | No rocks | past end of cell |       |    |    |

CRSP Rocks Stopped Data - C:\Users\Yucheng\Documents\Pan\Haena State Park\CRSP\N1Correct.doc

| X Interval    | Rocks Stopped |
|---------------|---------------|
| 0 To 10 ft    | 0             |
| 10 To 20 ft   | 0             |
| 20 To 30 ft   | 0             |
| 30 To 40 ft   | 0             |
| 40 To 50 ft   | 0             |
| 50 To 60 ft   | 0             |
| 60 To 70 ft   | 0             |
| 70 To 80 ft   | 0             |
| 80 To 90 ft   | 0             |
| 90 To 100 ft  | 0             |
| 100 To 110 ft | 0             |
| 110 To 120 ft | 0             |
| 120 To 130 ft | 0             |
| 130 To 140 ft | 0             |
| 140 To 150 ft | 0             |
| 150 To 160 ft | 0             |
| 160 To 170 ft | 0             |
| 170 To 180 ft | 0             |
| 180 To 190 ft | 0             |
| 190 To 200 ft | 0             |
| 200 To 210 ft | 0             |
| 210 To 220 ft | 0             |
| 220 To 230 ft | 22            |
| 230 To 240 ft | 0             |
| 240 To 250 ft | 0             |
| 250 To 260 ft | 0             |
| 260 To 270 ft | 0             |
| 270 To 280 ft | 0             |
| 280 To 290 ft | 0             |
| 290 To 300 ft | 0             |
| 300 To 310 ft | 0             |
| 310 To 320 ft | 0             |
| 320 To 330 ft | 118           |
| 330 To 340 ft | 213           |
| 340 To 350 ft | 107           |
| 350 To 360 ft | 139           |
| 360 To 370 ft | 134           |
| 370 To 380 ft | 94            |
| 380 To 390 ft | 65            |
| 390 To 400 ft | 40            |
| 400 To 410 ft | 32            |
| 410 To 420 ft | 20            |

|               |   |
|---------------|---|
| 420 To 430 ft | 9 |
| 430 To 440 ft | 6 |
| 440 To 450 ft | 1 |
| 450 To 460 ft | 0 |
| 460 To 470 ft | 0 |
| 470 To 480 ft | 0 |
| 480 To 490 ft | 0 |
| 490 To 500 ft | 0 |

**Rockfall simulation input and output data for profile □□**

## Input File Specifications

Units of Measure: U.S.  
 Total Number of Cells: 15  
 Analysis Point 1 X-Coordinate: 405  
 Analysis Point 2 X-Coordinate: 655  
 Analysis Point 3 X-Coordinate: 735  
 Initial Y-Top Starting Zone Coordinate: 725  
 Initial Y-Base Starting Zone Coordinate: 725

Remarks:

## Cell Data

| Cell No. | S.R. | Tang. C. | Norm. C. | Begin X | Begin Y | End X | End Y |
|----------|------|----------|----------|---------|---------|-------|-------|
| 1        | .8   | .8       | .2       | 0       | 725     | 66    | 650   |
| 2        | .8   | .8       | .2       | 66      | 650     | 66.2  | 606   |
| 3        | .8   | .8       | .2       | 66.2    | 606     | 340   | 278   |
| 4        | .8   | .8       | .2       | 340     | 278     | 355   | 258   |
| 5        | .8   | .8       | .2       | 355     | 258     | 405   | 63    |
| 6        | .8   | .8       | .2       | 405     | 63      | 427   | 63    |
| 7        | .8   | .8       | .2       | 427     | 63      | 492   | 60    |
| 8        | .8   | .8       | .2       | 492     | 60      | 519   | 41    |
| 9        | .8   | .8       | .2       | 519     | 41      | 545   | 31    |
| 10       | .8   | .8       | .2       | 545     | 31      | 566   | 17    |
| 11       | .8   | .8       | .2       | 566     | 17      | 621   | 9     |
| 12       | .8   | .8       | .2       | 621     | 9       | 655   | 7     |
| 13       | .8   | .8       | .2       | 655     | 7       | 675   | 7     |
| 14       | .8   | .8       | .2       | 675     | 7       | 717   | 5     |
| 15       | .8   | .8       | .2       | 717     | 5       | 817   | 0     |

CRSP Simulation Specifications: Used with C:\Users\Yucheng\Documents\Pan\Haena State Park\CRSP\N2 new.doc

Total Number of Rocks Simulated: 1000  
 Starting Velocity in X-Direction: 1 ft/sec  
 Starting Velocity in Y-Direction: -1 ft/sec  
 Starting Cell Number: 1  
 Ending Cell Number: 15  
 Rock Density: 155 lb/ft<sup>3</sup>  
 Rock Shape: Spherical  
 Diameter: 4 ft

CRSP Analysis Point 1 Data - C:\Users\Yucheng\Documents\Pan\Haena State Park\CRSP\N2 new.doc

Analysis Point 1: X = 405, Y = 63

Total Rocks Passing Analysis Point: 1000

| Cumulative Probability | Velocity (ft/sec) | Energy (ft-lb) | Bounce Ht. (ft) |
|------------------------|-------------------|----------------|-----------------|
| 50%                    | 110.59            | 1137856        | 125.67          |
| 75%                    | 119.57            | 1301697        | 126.45          |
| 90%                    | 127.66            | 1449061        | 127.15          |
| 95%                    | 132.51            | 1537533        | 127.57          |
| 98%                    | 137.96            | 1636828        | 128.05          |

| Velocity (ft/sec) | Bounce Height (ft) | Kinetic Energy (ft-lb) |
|-------------------|--------------------|------------------------|
| Maximum: 144.11   | Maximum: 165.91    | Maximum: 1804274       |
| Average: 110.59   | Average: 126.98    | Average: 1137856       |
| Minimum: 78.75    | G. Mean: 125.67    | Std. Dev.: 242654      |
| Std. Dev.: 13.31  | Std. Dev.: 1.16    |                        |

Remarks:

CRSP Analysis Point 2 Data - C:\Users\Yucheng\Documents\Pan\Haena State Park\CRSP\N2 new.doc

Analysis Point 2: X = 655, Y = 7

Total Rocks Passing Analysis Point: 173

| Cumulative Probability | Velocity (ft/sec) | Energy (ft-lb) | Bounce Ht. (ft) |
|------------------------|-------------------|----------------|-----------------|
| 50%                    | 13.09             | 24987          | 0.05            |
| 75%                    | 17.82             | 43491          | 7.34            |
| 90%                    | 22.08             | 60135          | 13.91           |
| 95%                    | 24.63             | 70127          | 17.85           |
| 98%                    | 27.5              | 81341          | 22.27           |

| Velocity (ft/sec) | Bounce Height (ft) | Kinetic Energy (ft-lb) |
|-------------------|--------------------|------------------------|
| Maximum: 40.76    | Maximum: 2.34      | Maximum: 186693        |
| Average: 13.09    | Average: .23       | Average: 24987         |

Minimum: 2.88      G. Mean: .05   Std. Dev.: 27405  
 Std. Dev.: 7.01      Std. Dev.: 10.81

Remarks:

CRSP Analysis Point 3 Data - C:\Users\Yucheng\Documents\Pan\Haena State Park\CRSP\N2 new.doc

Analysis Point 3: X = 735, Y = 4

Total Rocks Passing Analysis Point: 3

| Cumulative Probability | Velocity (ft/sec) | Energy (ft-lb) | Bounce Ht. (ft) |
|------------------------|-------------------|----------------|-----------------|
| 50%                    | 11.91             | 17323          | 0.04            |
| 75%                    | 11.91             | 17323          | 0.72            |
| 90%                    | 11.91             | 17323          | 1.33            |
| 95%                    | 11.91             | 17323          | 1.69            |
| 98%                    | 11.91             | 17323          | 2.1             |

| Velocity (ft/sec) | Bounce Height (ft) | Kinetic Energy (ft-lb) |
|-------------------|--------------------|------------------------|
| Maximum: 16.49    | Maximum: .3        | Maximum: 30828         |
| Average: 11.91    | Average: .18       | Average: 17323         |
| Minimum: 8.9      | G. Mean: .04       | Std. Dev.: 0           |
| Std. Dev.: 0      | Std. Dev.: 1       |                        |

Remarks:

CRSP Data Collected at End of Each Cell - C:\Users\Yucheng\Documents\Pan\Haena State Park\CRSP\N2 new.doc

Velocity Units: ft/sec      Bounce Height Units: ft

| Cell # | Max. Vel. | Avg. Vel. | S.D. Vel. | Max. Bounce Ht. | Avg. Bounce Ht. |
|--------|-----------|-----------|-----------|-----------------|-----------------|
| 1      | 60        | 48        | 4.67      | 8               | 3               |
| 2      | 60        | 49        | 4.7       | 52              | 46              |
| 3      | 117       | 82        | 12.48     | 25              | 7               |
| 4      | 118       | 85        | 12.4      | 27              | 9               |
| 5      | 144       | 111       | 13.31     | 166             | 126             |
| 6      | 156       | 123       | 13.62     | 142             | 83              |

|    |          |                  |       |    |   |
|----|----------|------------------|-------|----|---|
| 7  | 146      | 28               | 37.71 | 52 | 1 |
| 8  | 140      | 32               | 11.72 | 22 | 1 |
| 9  | 63       | 29               | 6.95  | 5  | 0 |
| 10 | 65       | 35               | 6.99  | 11 | 1 |
| 11 | 44       | 17               | 6.54  | 4  | 0 |
| 12 | 41       | 13               | 7.01  | 2  | 0 |
| 13 | 30       | 13               | 7.27  | 2  | 0 |
| 14 | 21       | 15               | 6.02  | 1  | 0 |
| 15 | No rocks | past end of cell |       |    |   |

CRSP Rocks Stopped Data - C:\Users\Yucheng\Documents\Pan\Haena State Park\CRSP\N2 new.doc

| X Interval    | Rocks Stopped |
|---------------|---------------|
| 0 To 10 ft    | 0             |
| 10 To 20 ft   | 0             |
| 20 To 30 ft   | 0             |
| 30 To 40 ft   | 0             |
| 40 To 50 ft   | 0             |
| 50 To 60 ft   | 0             |
| 60 To 70 ft   | 0             |
| 70 To 80 ft   | 0             |
| 80 To 90 ft   | 0             |
| 90 To 100 ft  | 0             |
| 100 To 110 ft | 0             |
| 110 To 120 ft | 0             |
| 120 To 130 ft | 0             |
| 130 To 140 ft | 0             |
| 140 To 150 ft | 0             |
| 150 To 160 ft | 0             |
| 160 To 170 ft | 0             |
| 170 To 180 ft | 0             |
| 180 To 190 ft | 0             |
| 190 To 200 ft | 0             |
| 200 To 210 ft | 0             |
| 210 To 220 ft | 0             |
| 220 To 230 ft | 0             |
| 230 To 240 ft | 0             |
| 240 To 250 ft | 0             |
| 250 To 260 ft | 0             |
| 260 To 270 ft | 0             |
| 270 To 280 ft | 0             |
| 280 To 290 ft | 0             |
| 290 To 300 ft | 0             |
| 300 To 310 ft | 0             |
| 310 To 320 ft | 0             |
| 320 To 330 ft | 0             |
| 330 To 340 ft | 0             |
| 340 To 350 ft | 0             |
| 350 To 360 ft | 0             |



|               |     |
|---------------|-----|
| 360 To 370 ft | 0   |
| 370 To 380 ft | 0   |
| 380 To 390 ft | 0   |
| 390 To 400 ft | 0   |
| 400 To 410 ft | 0   |
| 410 To 420 ft | 0   |
| 420 To 430 ft | 0   |
| 430 To 440 ft | 0   |
| 440 To 450 ft | 9   |
| 450 To 460 ft | 47  |
| 460 To 470 ft | 86  |
| 470 To 480 ft | 113 |
| 480 To 490 ft | 148 |
| 490 To 500 ft | 24  |
| 500 To 510 ft | 0   |
| 510 To 520 ft | 0   |
| 520 To 530 ft | 0   |
| 530 To 540 ft | 0   |
| 540 To 550 ft | 0   |
| 550 To 560 ft | 0   |
| 560 To 570 ft | 0   |
| 570 To 580 ft | 0   |
| 580 To 590 ft | 0   |
| 590 To 600 ft | 0   |
| 600 To 610 ft | 4   |
| 610 To 620 ft | 10  |
| 620 To 630 ft | 78  |
| 630 To 640 ft | 118 |
| 640 To 650 ft | 129 |
| 650 To 660 ft | 113 |
| 660 To 670 ft | 56  |
| 670 To 680 ft | 31  |
| 680 To 690 ft | 15  |
| 690 To 700 ft | 5   |
| 700 To 710 ft | 6   |
| 710 To 720 ft | 3   |
| 720 To 730 ft | 2   |
| 730 To 740 ft | 0   |
| 740 To 750 ft | 2   |
| 750 To 760 ft | 1   |
| 760 To 770 ft | 0   |
| 770 To 780 ft | 0   |
| 780 To 790 ft | 0   |
| 790 To 800 ft | 0   |
| 800 To 810 ft | 0   |
| 810 To 817 ft | 0   |

**Rockfall simulation input and output data for profile □□**

## Input File Specifications

Units of Measure: U.S.

Total Number of Cells: 14

Analysis Point 1 X-Coordinate: 722

Analysis Point 2 X-Coordinate: 741

Analysis Point 3 X-Coordinate: 801

Initial Y-Top Starting Zone Coordinate: 1043

Initial Y-Base Starting Zone Coordinate: 1043

Remarks:

## Cell Data

Cell No. S.R. Tang. C. Norm. C. Begin X Begin Y End X End Y

|    |    |     |    |       |      |       |      |  |  |
|----|----|-----|----|-------|------|-------|------|--|--|
| 1  | .8 | .8  | .2 | 0     | 1043 | 66    | 967  |  |  |
| 2  | .8 | .8  | .2 | 66    | 967  | 181   | 727  |  |  |
| 3  | .8 | .8  | .2 | 181   | 727  | 266   | 622  |  |  |
| 4  | .8 | .8  | .2 | 266   | 622  | 286   | 542  |  |  |
| 5  | .8 | .8  | .2 | 286   | 542  | 697   | 105  |  |  |
| 6  | .8 | .8  | .2 | 697   | 105  | 697.2 | 99   |  |  |
| 7  | .8 | .8  | .2 | 697.2 | 99   | 705.9 | 86.2 |  |  |
| 8  | .8 | .8  | .2 | 705.9 | 86.2 | 707.6 | 85.2 |  |  |
| 9  | .8 | .8  | .2 | 707.6 | 85.2 | 717.8 | 12.4 |  |  |
| 10 | .8 | .8  | .2 | 717.8 | 12.4 | 721.7 | 11.6 |  |  |
| 11 | .8 | .8  | .2 | 721.7 | 11.6 | 736.7 | 11.6 |  |  |
| 12 | .8 | .8  | .2 | 736.7 | 11.6 | 740.7 | 11.3 |  |  |
| 13 | .8 | .65 | .1 | 740.7 | 11.3 | 760.2 | 0    |  |  |
| 14 | .8 | .65 | .1 | 760.2 | 0    | 900   | 0    |  |  |

CRSP Simulation Specifications: Used with C:\Users\Yucheng\Documents\Pan\Haena State Park\CRSP\N3.bmp

Total Number of Rocks Simulated: 1000

Starting Velocity in X-Direction: 1 ft/sec

Starting Velocity in Y-Direction: -1 ft/sec

Starting Cell Number: 1

Ending Cell Number: 14

Rock Density: 155 lb/ft<sup>3</sup>

Rock Shape: Spherical

Diameter: 4 ft

CRSP Analysis Point 1 Data - C:\Users\Yucheng\Documents\Pan\Haena State Park\CRSP\N3.bmp

Analysis Point 1: X = 722, Y = 12

Total Rocks Passing Analysis Point: 1000

| Cumulative Probability | Velocity (ft/sec) | Energy (ft-lb) | Bounce Ht. (ft) |
|------------------------|-------------------|----------------|-----------------|
| 50%                    | 93.38             | 861966         | 69.99           |
| 75%                    | 102.6             | 1013055        | 70.77           |
| 90%                    | 110.9             | 1148951        | 71.46           |
| 95%                    | 115.88            | 1230537        | 71.87           |
| 98%                    | 121.47            | 1322103        | 72.34           |

| Velocity (ft/sec) | Bounce Height (ft) | Kinetic Energy (ft-lb) |
|-------------------|--------------------|------------------------|
| Maximum: 135.11   | Maximum: 96.04     | Maximum: 1662134       |
| Average: 93.38    | Average: 70.59     | Average: 861966        |
| Minimum: 59.43    | G. Mean: 69.99     | Std. Dev.: 223769      |
| Std. Dev.: 13.66  | Std. Dev.: 1.14    |                        |

Remarks:

CRSP Analysis Point 2 Data - C:\Users\Yucheng\Documents\Pan\Haena State Park\CRSP\N3.bmp

Analysis Point 2: X = 741, Y = 11

Total Rocks Passing Analysis Point: 1000

| Cumulative Probability | Velocity (ft/sec) | Energy (ft-lb) | Bounce Ht. (ft) |
|------------------------|-------------------|----------------|-----------------|
| 50%                    | 102.22            | 1001926        | 41.41           |
| 75%                    | 111.58            | 1166344        | 42.4            |
| 90%                    | 119.99            | 1314227        | 43.29           |
| 95%                    | 125.04            | 1403011        | 43.83           |
| 98%                    | 130.71            | 1502655        | 44.43           |

| Velocity (ft/sec) | Bounce Height (ft) | Kinetic Energy (ft-lb) |
|-------------------|--------------------|------------------------|
| Maximum: 142.82   | Maximum: 76.61     | Maximum: 1834971       |
| Average: 102.22   | Average: 44.12     | Average: 1001926       |
| Minimum: 69.09    | G. Mean: 41.41     | Std. Dev.: 243509      |

Std. Dev.: 13.85      Std. Dev.: 1.47

Remarks:

CRSP Analysis Point 3 Data - C:\Users\Yucheng\Documents\Pan\Haena State Park\CRSP\N3.bmp

Analysis Point 3: X = 801, Y = 0

Total Rocks Passing Analysis Point: 399

| Cumulative Probability | Velocity (ft/sec) | Energy (ft-lb) | Bounce Ht. (ft) |
|------------------------|-------------------|----------------|-----------------|
| 50%                    | 22.82             | 127244         | 0.06            |
| 75%                    | 41.81             | 344474         | 9.41            |
| 90%                    | 58.88             | 539858         | 17.81           |
| 95%                    | 69.13             | 657160         | 22.86           |
| 98%                    | 80.64             | 788810         | 28.52           |

| Velocity (ft/sec) | Bounce Height (ft) | Kinetic Energy (ft-lb) |
|-------------------|--------------------|------------------------|
| Maximum: 127.68   | Maximum: 19.59     | Maximum: 1528599       |
| Average: 22.82    | Average: .69       | Average: 127244        |
| Minimum: 2.44     | G. Mean: .06       | Std. Dev.: 321726      |
| Std. Dev.: 28.12  | Std. Dev.: 13.84   |                        |

Remarks:

CRSP Data Collected at End of Each Cell - C:\Users\Yucheng\Documents\Pan\Haena State Park\CRSP\N3.bmp

Velocity Units: ft/sec      Bounce Height Units: ft

| Cell # | Max. Vel. | Avg. Vel. | S.D. Vel. | Max. Bounce Ht. | Avg. Bounce Ht. |
|--------|-----------|-----------|-----------|-----------------|-----------------|
| 1      | 61        | 49        | 4.82      | 9               | 3               |
| 2      | 133       | 93        | 16.34     | 54              | 16              |
| 3      | 113       | 82        | 11.75     | 28              | 7               |
| 4      | 122       | 92        | 12.12     | 82              | 60              |
| 5      | 125       | 83        | 13.19     | 27              | 6               |
| 6      | 125       | 83        | 13.19     | 33              | 12              |
| 7      | 129       | 86        | 13.4      | 36              | 15              |

|    |          |                  |       |    |    |
|----|----------|------------------|-------|----|----|
| 8  | 129      | 87               | 13.43 | 36 | 14 |
| 9  | 133      | 91               | 13.6  | 99 | 75 |
| 10 | 135      | 93               | 13.66 | 96 | 70 |
| 11 | 141      | 100              | 13.82 | 81 | 50 |
| 12 | 143      | 102              | 13.85 | 77 | 44 |
| 13 | 151      | 100              | 27.5  | 65 | 25 |
| 14 | No rocks | past end of cell |       |    |    |

CRSP Rocks Stopped Data - C:\Users\Yucheng\Documents\Pan\Haena State Park\CRSP\N3.bmp

| X Interval    | Rocks Stopped |
|---------------|---------------|
| 0 To 10 ft    | 0             |
| 10 To 20 ft   | 0             |
| 20 To 30 ft   | 0             |
| 30 To 40 ft   | 0             |
| 40 To 50 ft   | 0             |
| 50 To 60 ft   | 0             |
| 60 To 70 ft   | 0             |
| 70 To 80 ft   | 0             |
| 80 To 90 ft   | 0             |
| 90 To 100 ft  | 0             |
| 100 To 110 ft | 0             |
| 110 To 120 ft | 0             |
| 120 To 130 ft | 0             |
| 130 To 140 ft | 0             |
| 140 To 150 ft | 0             |
| 150 To 160 ft | 0             |
| 160 To 170 ft | 0             |
| 170 To 180 ft | 0             |
| 180 To 190 ft | 0             |
| 190 To 200 ft | 0             |
| 200 To 210 ft | 0             |
| 210 To 220 ft | 0             |
| 220 To 230 ft | 0             |
| 230 To 240 ft | 0             |
| 240 To 250 ft | 0             |
| 250 To 260 ft | 0             |
| 260 To 270 ft | 0             |
| 270 To 280 ft | 0             |
| 280 To 290 ft | 0             |
| 290 To 300 ft | 0             |
| 300 To 310 ft | 0             |
| 310 To 320 ft | 0             |
| 320 To 330 ft | 0             |
| 330 To 340 ft | 0             |
| 340 To 350 ft | 0             |
| 350 To 360 ft | 0             |
| 360 To 370 ft | 0             |
| 370 To 380 ft | 0             |

|               |     |
|---------------|-----|
| 380 To 390 ft | 0   |
| 390 To 400 ft | 0   |
| 400 To 410 ft | 0   |
| 410 To 420 ft | 0   |
| 420 To 430 ft | 0   |
| 430 To 440 ft | 0   |
| 440 To 450 ft | 0   |
| 450 To 460 ft | 0   |
| 460 To 470 ft | 0   |
| 470 To 480 ft | 0   |
| 480 To 490 ft | 0   |
| 490 To 500 ft | 0   |
| 500 To 510 ft | 0   |
| 510 To 520 ft | 0   |
| 520 To 530 ft | 0   |
| 530 To 540 ft | 0   |
| 540 To 550 ft | 0   |
| 550 To 560 ft | 0   |
| 560 To 570 ft | 0   |
| 570 To 580 ft | 0   |
| 580 To 590 ft | 0   |
| 590 To 600 ft | 0   |
| 600 To 610 ft | 0   |
| 610 To 620 ft | 0   |
| 620 To 630 ft | 0   |
| 630 To 640 ft | 0   |
| 640 To 650 ft | 0   |
| 650 To 660 ft | 0   |
| 660 To 670 ft | 0   |
| 670 To 680 ft | 0   |
| 680 To 690 ft | 0   |
| 690 To 700 ft | 0   |
| 700 To 710 ft | 0   |
| 710 To 720 ft | 0   |
| 720 To 730 ft | 0   |
| 730 To 740 ft | 0   |
| 740 To 750 ft | 0   |
| 750 To 760 ft | 0   |
| 760 To 770 ft | 19  |
| 770 To 780 ft | 105 |
| 780 To 790 ft | 213 |
| 790 To 800 ft | 247 |
| 800 To 810 ft | 166 |
| 810 To 820 ft | 133 |
| 820 To 830 ft | 60  |
| 830 To 840 ft | 34  |
| 840 To 850 ft | 12  |
| 850 To 860 ft | 7   |
| 860 To 870 ft | 4   |
| 870 To 880 ft | 0   |
| 880 To 890 ft | 0   |
| 890 To 900 ft | 0   |

**Rockfall simulation input and output data for profile □□**

CRSP Input File -C:\Users\Yucheng\Documents\Pan\Haena State Park\CRSP\N4.dat

**Input File Specifications**

Units of Measure: U.S.  
 Total Number of Cells: 12  
 Analysis Point 1 X-Coordinate: 272  
 Analysis Point 2 X-Coordinate: 314  
 Analysis Point 3 X-Coordinate: 396  
 Initial Y-Top Starting Zone Coordinate: 749  
 Initial Y-Base Starting Zone Coordinate: 749

Remarks:

**Cell Data**

Cell No. S.R. Tang. C. Norm. C. Begin X Begin Y End X End Y

|    |    |    |    |       |      |       |      |
|----|----|----|----|-------|------|-------|------|
| 1  | .8 | .8 | .2 | 0     | 749  | 66    | 673  |
| 2  | .8 | .8 | .2 | 66    | 673  | 99    | 351  |
| 3  | .8 | .8 | .2 | 99    | 351  | 183   | 266  |
| 4  | .8 | .8 | .2 | 183   | 266  | 245   | 187  |
| 5  | .8 | .8 | .2 | 245   | 187  | 255   | 160  |
| 6  | .8 | .8 | .2 | 255   | 160  | 272   | 14   |
| 7  | .8 | .8 | .2 | 272   | 14   | 296   | 14   |
| 8  | .8 | .8 | .2 | 296   | 14   | 314   | 14   |
| 9  | .8 | .8 | .2 | 314   | 14   | 336   | 12.2 |
| 10 | .8 | .8 | .2 | 336   | 12.2 | 339.4 | 12   |
| 11 | .8 | .8 | .2 | 339.4 | 12   | 360   | 0    |
| 12 | .8 | .6 | .1 | 360   | 0    | 450   | 0    |

CRSP Simulation Specifications: Used with C:\Users\Yucheng\Documents\Pan\Haena State Park\CRSP\N4.dat

Total Number of Rocks Simulated: 1000  
 Starting Velocity in X-Direction: 1 ft/sec  
 Starting Velocity in Y-Direction: -1 ft/sec  
 Starting Cell Number: 1  
 Ending Cell Number: 12  
 Rock Density: 155 lb/ft<sup>3</sup>  
 Rock Shape: Spherical  
 Diameter: 4 ft

CRSP Analysis Point 1 Data - C:\Users\Yucheng\Documents\Pan\Haena State Park\CRSP\N4.dat

Analysis Point 1: X = 272, Y = 14

Total Rocks Passing Analysis Point: 1000

| Cumulative Probability | Velocity (ft/sec) | Energy (ft-lb) | Bounce Ht. (ft) |
|------------------------|-------------------|----------------|-----------------|
| 50%                    | 81.57             | 642902         | 135.64          |
| 75%                    | 92.48             | 860812         | 136.39          |
| 90%                    | 102.29            | 1056808        | 137.07          |
| 95%                    | 108.18            | 1174476        | 137.47          |
| 98%                    | 114.79            | 1306538        | 137.93          |

| Velocity (ft/sec) | Bounce Height (ft) | Kinetic Energy (ft-lb) |
|-------------------|--------------------|------------------------|
| Maximum: 200.75   | Maximum: 159.42    | Maximum: 3305991       |
| Average: 81.57    | Average: 136.37    | Average: 642902        |
| Minimum: 55.08    | G. Mean: 135.64    | Std. Dev.: 322733      |
| Std. Dev.: 16.15  | Std. Dev.: 1.11    |                        |

Remarks:

CRSP Analysis Point 2 Data - C:\Users\Yucheng\Documents\Pan\Haena State Park\CRSP\N4.dat

Analysis Point 2: X = 314, Y = 14

Total Rocks Passing Analysis Point: 944

| Cumulative Probability | Velocity (ft/sec) | Energy (ft-lb) | Bounce Ht. (ft) |
|------------------------|-------------------|----------------|-----------------|
| 50%                    | 102.79            | 988459         | 25.87           |
| 75%                    | 120.47            | 1200648        | 30.37           |
| 90%                    | 136.38            | 1391500        | 34.41           |
| 95%                    | 145.93            | 1506080        | 36.84           |
| 98%                    | 156.65            | 1634676        | 39.57           |

| Velocity (ft/sec) | Bounce Height (ft) | Kinetic Energy (ft-lb) |
|-------------------|--------------------|------------------------|
| Maximum: 139.97   | Maximum: 105.81    | Maximum: 1882099       |
| Average: 102.79   | Average: 46.77     | Average: 988459        |
| Minimum: 5.21     | G. Mean: 25.87     | Std. Dev.: 314262      |

Std. Dev.: 26.19      Std. Dev.: 6.66

Remarks:

CRSP Analysis Point 3 Data - C:\Users\Yucheng\Documents\Pan\Haena State Park\CRSP\N4.dat

Analysis Point 3: X = 396, Y = 0

Total Rocks Passing Analysis Point: 144

| Cumulative Probability | Velocity (ft/sec) | Energy (ft-lb) | Bounce Ht. (ft) |
|------------------------|-------------------|----------------|-----------------|
| 50%                    | 11.37             | 17433          | 0.04            |
| 75%                    | 14.6              | 26902          | 6.19            |
| 90%                    | 17.51             | 35419          | 11.72           |
| 95%                    | 19.25             | 40532          | 15.05           |
| 98%                    | 21.21             | 46271          | 18.77           |

| Velocity (ft/sec) | Bounce Height (ft) | Kinetic Energy (ft-lb) |
|-------------------|--------------------|------------------------|
| Maximum: 24.97    | Maximum: .74       | Maximum: 71123         |
| Average: 11.37    | Average: .13       | Average: 17433         |
| Minimum: 2.69     | G. Mean: .04       | Std. Dev.: 14024       |
| Std. Dev.: 4.78   | Std. Dev.: 9.11    |                        |

Remarks:

CRSP Data Collected at End of Each Cell - C:\Users\Yucheng\Documents\Pan\Haena State Park\CRSP\N4.dat

Velocity Units: ft/sec      Bounce Height Units: ft

| Cell # | Max. Vel. | Avg. Vel. | S.D. Vel. | Max. Bounce Ht. | Avg. Bounce Ht. |
|--------|-----------|-----------|-----------|-----------------|-----------------|
| 1      | 60        | 49        | 4.61      | 8               | 3               |
| 2      | 94        | 76        | 8.09      | 295             | 271             |
| 3      | 172       | 132       | 43.32     | 201             | 72              |
| 4      | 183       | 65        | 23.11     | 51              | 5               |
| 5      | 186       | 70        | 15.85     | 35              | 18              |
| 6      | 201       | 82        | 16.15     | 159             | 136             |
| 7      | 151       | 98        | 12.37     | 131             | 87              |

|    |          |                  |       |     |    |
|----|----------|------------------|-------|-----|----|
| 8  | 140      | 103              | 26.19 | 106 | 46 |
| 9  | 135      | 60               | 51.1  | 72  | 12 |
| 10 | 137      | 55               | 50.74 | 66  | 9  |
| 11 | 134      | 37               | 27.17 | 38  | 1  |
| 12 | No rocks | past end of cell |       |     |    |

CRSP Rocks Stopped Data - C:\Users\Yucheng\Documents\Pan\Haena State Park\CRSP\N4.dat

| X Interval    | Rocks Stopped |
|---------------|---------------|
| 0 To 10 ft    | 0             |
| 10 To 20 ft   | 0             |
| 20 To 30 ft   | 0             |
| 30 To 40 ft   | 0             |
| 40 To 50 ft   | 0             |
| 50 To 60 ft   | 0             |
| 60 To 70 ft   | 0             |
| 70 To 80 ft   | 0             |
| 80 To 90 ft   | 0             |
| 90 To 100 ft  | 0             |
| 100 To 110 ft | 0             |
| 110 To 120 ft | 0             |
| 120 To 130 ft | 0             |
| 130 To 140 ft | 0             |
| 140 To 150 ft | 0             |
| 150 To 160 ft | 0             |
| 160 To 170 ft | 0             |
| 170 To 180 ft | 0             |
| 180 To 190 ft | 0             |
| 190 To 200 ft | 0             |
| 200 To 210 ft | 0             |
| 210 To 220 ft | 0             |
| 220 To 230 ft | 0             |
| 230 To 240 ft | 0             |
| 240 To 250 ft | 0             |
| 250 To 260 ft | 0             |
| 260 To 270 ft | 0             |
| 270 To 280 ft | 0             |
| 280 To 290 ft | 1             |
| 290 To 300 ft | 6             |
| 300 To 310 ft | 26            |
| 310 To 320 ft | 35            |
| 320 To 330 ft | 68            |
| 330 To 340 ft | 111           |
| 340 To 350 ft | 0             |
| 350 To 360 ft | 0             |
| 360 To 370 ft | 68            |
| 370 To 380 ft | 320           |
| 380 To 390 ft | 147           |
| 390 To 400 ft | 122           |



|               |    |
|---------------|----|
| 400 To 410 ft | 69 |
| 410 To 420 ft | 22 |
| 420 To 430 ft | 5  |
| 430 To 440 ft | 0  |
| 440 To 450 ft | 0  |

**Rockfall simulation input and output data for profile N5**

## Input File Specifications

Units of Measure: U.S.  
 Total Number of Cells: 27  
 Analysis Point 1 X-Coordinate: 664  
 Analysis Point 2 X-Coordinate: 694  
 Analysis Point 3 X-Coordinate: 754  
 Initial Y-Top Starting Zone Coordinate: 773  
 Initial Y-Base Starting Zone Coordinate: 773

## Remarks:

## Cell Data

| Cell No. | S.R. | Tang. C. | Norm. C. | Begin X | Begin Y | End X | End Y |
|----------|------|----------|----------|---------|---------|-------|-------|
| 1        | .8   | .8       | .2       | 0       | 773     | 66    | 697   |
| 2        | .8   | .8       | .2       | 66      | 697     | 102   | 345   |
| 3        | 1    | .8       | .2       | 102     | 345     | 168   | 292   |
| 4        | 1    | .8       | .2       | 168     | 292     | 190   | 275   |
| 5        | 1    | .8       | .2       | 190     | 275     | 220   | 253   |
| 6        | 1    | .8       | .2       | 220     | 253     | 240   | 240   |
| 7        | 1    | .8       | .2       | 240     | 240     | 254   | 223   |
| 8        | 1    | .8       | .2       | 254     | 223     | 275   | 212   |
| 9        | 1    | .8       | .2       | 275     | 212     | 332   | 182   |
| 10       | 1    | .8       | .2       | 332     | 182     | 360   | 164   |
| 11       | 1    | .8       | .2       | 360     | 164     | 365   | 145   |
| 12       | 1    | .8       | .2       | 365     | 145     | 374   | 139   |
| 13       | 1    | .8       | .2       | 374     | 139     | 383   | 121   |
| 14       | 1    | .8       | .2       | 383     | 121     | 410   | 105   |
| 15       | 1    | .8       | .2       | 410     | 105     | 432   | 94    |
| 16       | 1.5  | .8       | .2       | 432     | 94      | 448   | 90    |
| 17       | 1    | .8       | .2       | 448     | 90      | 466   | 79    |
| 18       | 1    | .8       | .2       | 466     | 79      | 540   | 58    |
| 19       | 1.5  | .8       | .2       | 540     | 58      | 571   | 46    |
| 20       | 1    | .8       | .2       | 571     | 46      | 589   | 35    |
| 21       | 1    | .8       | .2       | 589     | 35      | 601   | 35    |
| 22       | 1    | .8       | .2       | 601     | 35      | 623   | 26    |
| 23       | 1    | .8       | .2       | 623     | 26      | 654   | 16    |
| 24       | .8   | .8       | .2       | 654     | 16      | 664   | 9     |
| 25       | .8   | .8       | .2       | 664     | 9       | 694   | 9     |
| 26       | .8   | .8       | .2       | 694     | 9       | 710   | 0     |
| 27       | .8   | .8       | .2       | 710     | 0       | 790   | 0     |

CRSP Simulation Specifications: Used with C:\Users\Yucheng\Documents\Pan\Haena State Park\CRSP\N5.dat

Total Number of Rocks Simulated: 1000  
 Starting Velocity in X-Direction: 1 ft/sec  
 Starting Velocity in Y-Direction: -1 ft/sec  
 Starting Cell Number: 1  
 Ending Cell Number: 27  
 Rock Density: 155 lb/ft<sup>3</sup>  
 Rock Shape: Spherical  
 Diameter: 4 ft

CRSP Analysis Point 1 Data - C:\Users\Yucheng\Documents\Pan\Haena State Park\CRSP\N5.dat

Analysis Point 1: X = 664, Y = 9

Total Rocks Passing Analysis Point: 837

| Cumulative Probability | Velocity (ft/sec) | Energy (ft-lb) | Bounce Ht. (ft) |
|------------------------|-------------------|----------------|-----------------|
| 50%                    | 22.33             | 52945          | 0.26            |
| 75%                    | 25.21             | 66467          | 6.25            |
| 90%                    | 27.81             | 78629          | 11.64           |
| 95%                    | 29.36             | 85930          | 14.88           |
| 98%                    | 31.11             | 94125          | 18.51           |

| Velocity (ft/sec) | Bounce Height (ft) | Kinetic Energy (ft-lb) |
|-------------------|--------------------|------------------------|
| Maximum: 39.69    | Maximum: 5.73      | Maximum: 156622        |
| Average: 22.33    | Average: .75       | Average: 52945         |
| Minimum: 13.49    | G. Mean: .26       | Std. Dev.: 20026       |
| Std. Dev.: 4.27   | Std. Dev.: 8.87    |                        |

Remarks:

CRSP Analysis Point 2 Data - C:\Users\Yucheng\Documents\Pan\Haena State Park\CRSP\N5.dat

Analysis Point 2: X = 694, Y = 9

Total Rocks Passing Analysis Point: 89

| Cumulative Probability | Velocity (ft/sec) | Energy (ft-lb) | Bounce Ht. (ft) |
|------------------------|-------------------|----------------|-----------------|
|------------------------|-------------------|----------------|-----------------|

|     |       |       |       |
|-----|-------|-------|-------|
| 50% | 8.47  | 9942  | 0.02  |
| 75% | 11.12 | 16197 | 5.89  |
| 90% | 13.5  | 21824 | 11.18 |
| 95% | 14.93 | 25202 | 14.35 |
| 98% | 16.54 | 28994 | 17.91 |

| Velocity (ft/sec) | Bounce Height (ft) | Kinetic Energy (ft-lb) |
|-------------------|--------------------|------------------------|
| Maximum: 19.5     | Maximum: .65       | Maximum: 42960         |
| Average: 8.47     | Average: .08       | Average: 9942          |
| Minimum: 2.73     | G. Mean: .02       | Std. Dev.: 9265        |
| Std. Dev.: 3.92   | Std. Dev.: 8.7     |                        |

Remarks:

CRSP Analysis Point 3 Data - C:\Users\Yucheng\Documents\Pan\Haena State Park\CRSP\N5.dat

Analysis Point 3: X = 754, Y = 0

NO ROCKS PAST ANALYSIS POINT 3

CRSP Data Collected at End of Each Cell - C:\Users\Yucheng\Documents\Pan\Haena State Park\CRSP\N5.dat

Velocity Units: ft/sec Bounce Height Units: ft

| Cell # | Max. Vel. | Avg. Vel. | S.D. Vel. | Max. Bounce Ht. | Avg. Bounce Ht. |
|--------|-----------|-----------|-----------|-----------------|-----------------|
| 1      | 59        | 49        | 4.62      | 8               | 3               |
| 2      | 98        | 79        | 8.45      | 322             | 293             |
| 3      | 171       | 141       | 15.96     | 253             | 128             |
| 4      | 175       | 120       | 57.03     | 210             | 57              |
| 5      | 177       | 59        | 50.86     | 134             | 8               |
| 6      | 178       | 41        | 24        | 72              | 2               |
| 7      | 180       | 46        | 11.2      | 32              | 6               |
| 8      | 63        | 37        | 7.61      | 12              | 1               |
| 9      | 62        | 38        | 5.95      | 8               | 1               |
| 10     | 62        | 42        | 6.39      | 9               | 2               |
| 11     | 64        | 45        | 6.65      | 25              | 17              |
| 12     | 69        | 50        | 6.96      | 24              | 15              |

|    |                           |    |      |    |    |
|----|---------------------------|----|------|----|----|
| 13 | 75                        | 56 | 7.19 | 37 | 23 |
| 14 | 82                        | 50 | 17.6 | 34 | 4  |
| 15 | 83                        | 37 | 7.51 | 20 | 1  |
| 16 | 51                        | 28 | 6.97 | 6  | 1  |
| 17 | 58                        | 35 | 7.06 | 12 | 2  |
| 18 | 42                        | 22 | 6.81 | 4  | 0  |
| 19 | 46                        | 19 | 7.68 | 5  | 0  |
| 20 | 49                        | 25 | 6.25 | 9  | 0  |
| 21 | 39                        | 14 | 5.62 | 3  | 0  |
| 22 | 43                        | 17 | 4.99 | 4  | 0  |
| 23 | 34                        | 16 | 4.83 | 3  | 0  |
| 24 | 40                        | 22 | 4.27 | 6  | 0  |
| 25 | 19                        | 8  | 3.92 | 1  | 0  |
| 26 | 31                        | 17 | 2.91 | 2  | 0  |
| 27 | No rocks past end of cell |    |      |    |    |

CRSP Rocks Stopped Data - C:\Users\Yucheng\Documents\Pan\Haena State Park\CRSP\N5.dat

| X Interval    | Rocks Stopped |
|---------------|---------------|
| 0 To 10 ft    | 0             |
| 10 To 20 ft   | 0             |
| 20 To 30 ft   | 0             |
| 30 To 40 ft   | 0             |
| 40 To 50 ft   | 0             |
| 50 To 60 ft   | 0             |
| 60 To 70 ft   | 0             |
| 70 To 80 ft   | 0             |
| 80 To 90 ft   | 0             |
| 90 To 100 ft  | 0             |
| 100 To 110 ft | 0             |
| 110 To 120 ft | 0             |
| 120 To 130 ft | 0             |
| 130 To 140 ft | 0             |
| 140 To 150 ft | 0             |
| 150 To 160 ft | 0             |
| 160 To 170 ft | 0             |
| 170 To 180 ft | 0             |
| 180 To 190 ft | 0             |
| 190 To 200 ft | 0             |
| 200 To 210 ft | 0             |
| 210 To 220 ft | 0             |
| 220 To 230 ft | 0             |
| 230 To 240 ft | 0             |
| 240 To 250 ft | 0             |
| 250 To 260 ft | 0             |
| 260 To 270 ft | 0             |
| 270 To 280 ft | 0             |
| 280 To 290 ft | 0             |
| 290 To 300 ft | 0             |

|               |     |
|---------------|-----|
| 300 To 310 ft | 0   |
| 310 To 320 ft | 0   |
| 320 To 330 ft | 0   |
| 330 To 340 ft | 0   |
| 340 To 350 ft | 0   |
| 350 To 360 ft | 0   |
| 360 To 370 ft | 0   |
| 370 To 380 ft | 0   |
| 380 To 390 ft | 0   |
| 390 To 400 ft | 0   |
| 400 To 410 ft | 0   |
| 410 To 420 ft | 0   |
| 420 To 430 ft | 0   |
| 430 To 440 ft | 0   |
| 440 To 450 ft | 0   |
| 450 To 460 ft | 0   |
| 460 To 470 ft | 0   |
| 470 To 480 ft | 0   |
| 480 To 490 ft | 0   |
| 490 To 500 ft | 0   |
| 500 To 510 ft | 0   |
| 510 To 520 ft | 0   |
| 520 To 530 ft | 1   |
| 530 To 540 ft | 1   |
| 540 To 550 ft | 3   |
| 550 To 560 ft | 8   |
| 560 To 570 ft | 15  |
| 570 To 580 ft | 1   |
| 580 To 590 ft | 0   |
| 590 To 600 ft | 99  |
| 600 To 610 ft | 35  |
| 610 To 620 ft | 0   |
| 620 To 630 ft | 0   |
| 630 To 640 ft | 0   |
| 640 To 650 ft | 0   |
| 650 To 660 ft | 0   |
| 660 To 670 ft | 4   |
| 670 To 680 ft | 314 |
| 680 To 690 ft | 350 |
| 690 To 700 ft | 82  |
| 700 To 710 ft | 0   |
| 710 To 720 ft | 18  |
| 720 To 730 ft | 55  |
| 730 To 740 ft | 13  |
| 740 To 750 ft | 1   |
| 750 To 760 ft | 0   |
| 760 To 770 ft | 0   |
| 770 To 780 ft | 0   |
| 780 To 790 ft | 0   |

## Appendix B Cost Estimates

| Preliminary Cost Estimate                         |          |               |                                                            |                |                |
|---------------------------------------------------|----------|---------------|------------------------------------------------------------|----------------|----------------|
| Project:<br>Haena Park Rockfall Hazard Assessment |          |               | Alternative Design: No. 1<br><b>Wire Mesh Drape System</b> |                |                |
| Length:                                           | 3050 FT  | Covered Area: | 4843760                                                    | SF             |                |
| Item                                              | Quantity |               | Engineer's Estimate                                        |                |                |
|                                                   | Unit     | Qty           | \$/U                                                       | Total          |                |
| Mobilization/ De-mobilization                     | LS       | 1             | 100000                                                     | 100,000        |                |
| General clear and grub                            | SF       | 4843760       | 2.0                                                        | 9,687,520      |                |
| Rock Scaling (2 Crews of 3)                       | HRS      | 40            | 1,100                                                      | 44,000         |                |
| Rock Demolition                                   | DAYS     | 5             | 6,000                                                      | 30,000         |                |
| Draped Mesh System                                | SF       | 4843760       | 28                                                         | 135,625,285    |                |
| Traffic Control                                   | HRS      | 830           | 105                                                        | 87,150         |                |
| Signage                                           | LS       | 1             | 10,000                                                     | 10,000         |                |
| On Site Disposal of Debris                        | CY       | 1020          | 5                                                          | 5,100          |                |
| Erosion Control/Hydromulching                     | SF       | 4843760       | 0.8                                                        | 3,875,008      |                |
|                                                   |          |               |                                                            |                |                |
| Subtotal                                          |          |               |                                                            | 149,464,063    |                |
|                                                   |          |               |                                                            |                |                |
| Contingencies ( @ 10%)                            |          |               |                                                            | 14,946,406     |                |
| O & P ( @ 20%)                                    |          |               |                                                            | 29,892,813     |                |
| Hawaii Tax ( @ 4.712%)                            |          |               |                                                            | 9,155,571      |                |
|                                                   |          |               |                                                            |                |                |
| Bonding ( @ 1.5%)                                 |          |               |                                                            | 3,051,883      |                |
|                                                   |          |               |                                                            |                |                |
| Total Construction Cost                           |          |               |                                                            | \$ 206,510,736 |                |
|                                                   |          |               |                                                            |                |                |
|                                                   |          |               |                                                            | Rounded        | \$ 206,510,000 |
|                                                   |          |               |                                                            |                |                |
|                                                   |          |               |                                                            |                |                |

| Preliminary Cost Estimate                         |                          |                                                               |                     |                |
|---------------------------------------------------|--------------------------|---------------------------------------------------------------|---------------------|----------------|
| Project:<br>Haena Park Rockfall Hazard Assessment |                          | Alternative Design: No. 2<br><b>Anchored Wire Mesh System</b> |                     |                |
| Length: 3050 FT                                   | Covered Area: 4843760 SF |                                                               |                     |                |
| Item                                              | Quantity                 |                                                               | Engineer's Estimate |                |
|                                                   | Unit                     | Qty                                                           | \$/U                | Total          |
| Mobilization/ De-mobilization                     | LS                       | 1                                                             | 100000              | 100,000        |
| General clear and grub                            | SF                       | 4843760                                                       | 2.0                 | 9,687,520      |
| Rock Scaling (2 Crews of 3)                       | HRS                      | 40                                                            | 1,100               | 44,000         |
| Rock Demolition                                   | DAYS                     | 5                                                             | 6,000               | 30,000         |
| Draped Mesh System                                | SF                       | 4843760                                                       | 48                  | 232,500,488    |
| Traffic Control                                   | HRS                      | 830                                                           | 105                 | 87,150         |
| Signage                                           | LS                       | 1                                                             | 10,000              | 10,000         |
| On Site Disposal of Debris                        | CY                       | 1020                                                          | 5                   | 5,100          |
| Erosion Control/Hydromulching                     | SF                       | 4843760                                                       | 0.8                 | 3,875,008      |
| Subtotal                                          |                          |                                                               |                     | 246,339,267    |
| Contingencies ( @ 10%)                            |                          |                                                               |                     | 24,633,927     |
| O & P ( @ 20%)                                    |                          |                                                               |                     | 49,267,853     |
| Hawaii Tax ( @ 4.712%)                            |                          |                                                               |                     | 15,089,758     |
| Bonding ( @ 1.5%)                                 |                          |                                                               |                     | 5,029,962      |
| Total Construction Cost                           |                          |                                                               |                     | \$ 340,360,767 |
|                                                   |                          |                                                               | Rounded             | \$ 340,360,000 |

| Preliminary Cost Estimate                         |                          |                                                         |                     |              |
|---------------------------------------------------|--------------------------|---------------------------------------------------------|---------------------|--------------|
| Project:<br>Haena Park Rockfall Hazard Assessment |                          | Alternative Design: No. 3<br><b>Impact Fence System</b> |                     |              |
| Length: 3050 FT                                   | Covered Area: 4843760 SF |                                                         |                     |              |
| Item                                              | Quantity                 |                                                         | Engineer's Estimate |              |
|                                                   | Unit                     | Qty                                                     | \$/U                | Total        |
| Mobilization/ De-mobilization                     | LS                       | 1                                                       | 100000              | 100,000      |
| General clear and grub                            | SF                       | 61000                                                   | 2.0                 | 122,000      |
| Rock Scaling (2 Crews of 3)                       | HRS                      | 200                                                     | 1,100               | 220,000      |
| Rock Demolition                                   | DAYS                     | 20                                                      | 6,000               | 120,000      |
| Rockfall Impact Fence                             | LF                       | 3050                                                    | 1,800               | 5,490,000    |
| Traffic Control                                   | HRS                      | 830                                                     | 105                 | 87,150       |
| Signage                                           | LS                       | 1                                                       | 10,000              | 10,000       |
| On Site Disposal of Debris                        | CY                       | 1020                                                    | 5                   | 5,100        |
| Erosion Control/Hydromulching                     | SF                       | 61000                                                   | 0.8                 | 48,800       |
| Subtotal                                          |                          |                                                         |                     | 6,203,050    |
| Contingencies ( @ 10%)                            |                          |                                                         |                     | 620,305      |
| O & P ( @ 20%)                                    |                          |                                                         |                     | 1,240,610    |
| Hawaii Tax ( @ 4.712%)                            |                          |                                                         |                     | 379,974      |
| Bonding ( @ 1.5%)                                 |                          |                                                         |                     | 126,659      |
| Total Construction Cost                           |                          |                                                         |                     | \$ 8,570,598 |
|                                                   |                          |                                                         | Rounded             | \$ 8,570,000 |



| Preliminary Cost Estimate                        |                               |                       |                           |                     |              |
|--------------------------------------------------|-------------------------------|-----------------------|---------------------------|---------------------|--------------|
| Project<br>Haena Park Rockfall Hazard Assessment |                               |                       | Alternative Design: No. 4 |                     |              |
| Impact Fence and anchored Wire Mesh System       |                               |                       |                           |                     |              |
| Length: 3050 FT                                  |                               | Covered Area: 4843760 |                           | SF                  |              |
| Item                                             |                               | Quantity              |                           | Engineer's Estimate |              |
|                                                  |                               | Unit                  | Qty                       | \$/U                | Total        |
|                                                  | Mobilization/ De-mobilization | LS                    | 1                         | 100000              | 100,000      |
|                                                  | General clear and grub        | SF                    | 61000                     | 2.0                 | 122,000      |
|                                                  | Rock Scaling (2 Crews of 3)   | HRS                   | 200                       | 1,100               | 220,000      |
|                                                  | Rock Demolition               | DAYS                  | 20                        | 6,000               | 120,000      |
|                                                  | Rockfall Impact Fence         | LF                    | 3050                      | 1,800               | 5,490,000    |
|                                                  | Anchored Mesh System          | SF                    | 18300                     | 48                  | 878,400      |
|                                                  | Traffic Control               | HRS                   | 830                       | 105                 | 87,150       |
|                                                  | Signage                       | LS                    | 1                         | 10,000              | 10,000       |
|                                                  | On Site Disposal of Debris    | CY                    | 1020                      | 5                   | 5,100        |
|                                                  | Erosion Control/Hydromulching | SF                    | 61000                     | 0.8                 | 48,800       |
|                                                  |                               |                       |                           |                     |              |
|                                                  | Subtotal                      |                       |                           |                     | 7,081,450    |
|                                                  |                               |                       |                           |                     |              |
|                                                  | Contingencies ( @ 10%)        |                       |                           |                     | 708,145      |
|                                                  | O & P ( @ 20%)                |                       |                           |                     | 1,416,290    |
|                                                  | Hawaii Tax ( @ 4.712%)        |                       |                           |                     | 433,781      |
|                                                  |                               |                       |                           |                     |              |
|                                                  | Bonding ( @ 1.5%)             |                       |                           |                     | 144,595      |
|                                                  |                               |                       |                           |                     |              |
|                                                  | Total Construction Cost       |                       |                           |                     | \$ 9,784,261 |
|                                                  |                               |                       |                           |                     |              |
|                                                  |                               |                       |                           | Rounded             | \$ 9,780,000 |
|                                                  |                               |                       |                           |                     |              |

| Preliminary Cost Estimate                         |                               |                       |                                              |                     |              |
|---------------------------------------------------|-------------------------------|-----------------------|----------------------------------------------|---------------------|--------------|
| Project:<br>Haena Park Rockfall Hazard Assessment |                               |                       | Alternative Design: No. 5<br>Catchment Ditch |                     |              |
| Length: 3050 FT                                   |                               | Covered Area: 4843760 |                                              | SF                  |              |
| Item                                              |                               | Quantity              |                                              | Engineer's Estimate |              |
|                                                   |                               | Unit                  | Qty                                          | \$/U                | Total        |
|                                                   | Mobilization/ De-mobilization | LS                    | 1                                            | 100000              | 100,000      |
|                                                   | General clear and grub        | SF                    | 61000                                        | 2.0                 | 122,000      |
|                                                   | Rock Scaling (2 Crews of 3)   | HRS                   | 40                                           | 1,100               | 44,000       |
|                                                   | Rock Demolition               | DAYS                  | 5                                            | 6,000               | 30,000       |
|                                                   | Excavation                    | CY                    | 11861                                        | 200                 | 2,372,222    |
|                                                   | Concrete Retaining Wall       | CY                    | 791                                          | 1,500               | 1,186,111    |
|                                                   | Anchored Mesh System          | SF                    | 18300                                        | 48                  | 878,400      |
|                                                   | Traffic Control               | HRS                   | 830                                          | 105                 | 87,150       |
|                                                   | Signage                       | LS                    | 1                                            | 10,000              | 10,000       |
|                                                   | On Site Disposal of Debris    | CY                    | 1020                                         | 5                   | 5,100        |
|                                                   | Erosion Control/Hydromulching | SF                    | 61000                                        | 0.8                 | 48,800       |
|                                                   |                               |                       |                                              |                     |              |
|                                                   | Subtotal                      |                       |                                              |                     | 4,883,783    |
|                                                   |                               |                       |                                              |                     |              |
|                                                   | Contingencies ( @ 10%)        |                       |                                              |                     | 488,378      |
|                                                   | O & P ( @ 20%)                |                       |                                              |                     | 976,757      |
|                                                   | Hawaii Tax ( @ 4.712%)        |                       |                                              |                     | 299,161      |
|                                                   |                               |                       |                                              |                     |              |
|                                                   | Bonding ( @ 1.5%)             |                       |                                              |                     | 99,721       |
|                                                   |                               |                       |                                              |                     |              |
|                                                   | Total Construction Cost       |                       |                                              |                     | \$ 6,747,801 |
|                                                   |                               |                       |                                              |                     |              |
|                                                   |                               |                       |                                              | Rounded             | \$ 6,750,000 |
|                                                   |                               |                       |                                              |                     |              |

| Preliminary Cost Estimate                         |          |              |                                                     |               |  |
|---------------------------------------------------|----------|--------------|-----------------------------------------------------|---------------|--|
| Project:<br>Haena Park Rockfall Hazard Assessment |          |              | Alternative Design: No. 6<br><b>Realign Roadway</b> |               |  |
| Length:                                           | 3050 FT  | Covered Area | 4843760                                             | SF            |  |
| Item                                              | Quantity |              | Engineer's Estimate                                 |               |  |
|                                                   | Unit     | Qty          | \$/U                                                | Total         |  |
| Mobilization/ De-mobilization                     | LS       | 1            | 250000                                              | 250,000       |  |
| General clear and grub                            | SF       | 100000       | 2.0                                                 | 200,000       |  |
| Rock Scaling (2 Crews of 3)                       | HRS      | 500          | 1,100                                               | 550,000       |  |
| Roadway Realignment                               | LF       | 1200         | 6,000                                               | 7,200,000     |  |
| Rockfall Impact Fence                             | LF       | 1500         | 1,800                                               | 2,700,000     |  |
| Traffic Control                                   | HRS      | 2050         | 105                                                 | 215,250       |  |
| Signage                                           | LS       | 1            | 10,000                                              | 10,000        |  |
| On Site Disposal of Debris                        | LS       | 1            | 40,000                                              | 40,000        |  |
| Erosion Control/Hydromulching                     | SF       | 61000        | 0.8                                                 | 48,800        |  |
| Subtotal                                          |          |              |                                                     | 11,214,050    |  |
| Contingencies ( @ 10%)                            |          |              |                                                     | 1,121,405     |  |
| O & P ( @ 20%)                                    |          |              |                                                     | 2,242,810     |  |
| Hawaii Tax ( @ 4.712%)                            |          |              |                                                     | 686,928       |  |
| Bonding ( @ 1.5%)                                 |          |              |                                                     | 228,978       |  |
| Total Construction Cost                           |          |              |                                                     | \$ 15,494,171 |  |
|                                                   |          |              | Rounded                                             | \$ 15,490,000 |  |





## Appendix C





By Ron Terry, Ph.D. and Patrick Hart, Ph.D.  
Geometrician Associates, LLC  
February 2009

## 1. INTRODUCTION

This report describes the results of a biological survey of approximately 64 acres within the boundaries of Hā'ena State Park on the Island of Kaua'i (Figs. 1-2). The objectives of the survey were to provide:

- A one-time physical survey of the flora and fauna of the 64-acre Ha'ena State Park (including the portion of Limahuli Stream below Kūhio Highway) documenting all plants, birds, reptiles, amphibians, mammals, freshwater fish, and marine reptiles or mammals fauna observed on the beach strand, with a complete species list. The survey was not intended to include invertebrates or marine flora, or marine fauna other than those listed above.
- A review of previous surveys or articles related to the flora, fauna, and habitats of Ha'ena State Park and Limahuli Stream.
- A comprehensive report of survey results, observations, and findings pertaining to the areas and biota specified above, with narrative describing each major plant community, stream habitats, sensitive habitats, unusual or significant species, occurrences, and the value of the area for conservation of native biota.
- A discussion of potential effects from increased recreation activities on wildland resources including invasive species, soil erosion, native plant and animal populations, endangered species, native plant communities, and sensitive habitats.
- A GIS map of existing plant communities, significant species occurrences, and demarcated cultivated and wetland areas.

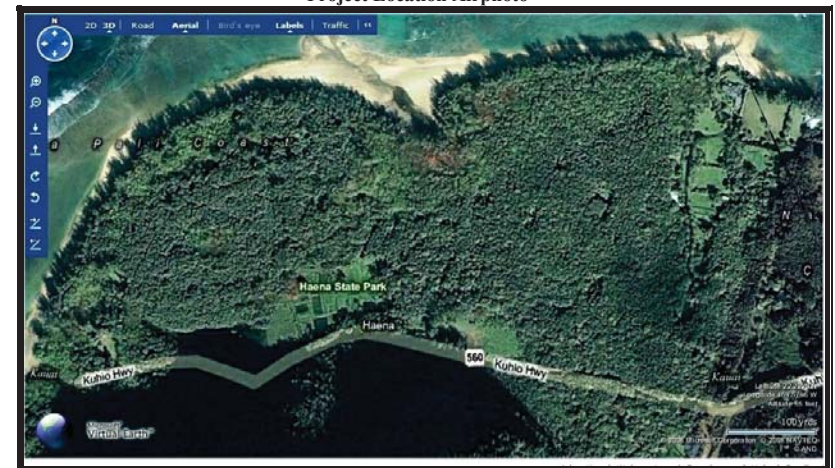
The area was surveyed on foot by biologists Ron Terry and Pat Hart on January 17-19, 2009. This survey also relies heavily on the botanical report conducted by Bishop Museum botanist Kenneth M. Nagata in 1991 as part of earlier planning efforts at Hā'ena State Park.

The project site is located on the north coast of Kaua'i in the district of Hanalei. It is bordered by Limahuli Stream on the east, the *pali* (cliff) separating Ha'ena and Hanakapi'ai on the south and the ocean on the north and west. The elevation ranges from sea level to approximately 200 feet above sea level on the *pali*. The property is mostly fairly flat, with substantial slopes restricted to the mauka side of Kūhio Highway, where talus slopes eventually give way to *pali*. The biologists walked irregular but densely spaced transects in order to get a full picture of the vegetation on the site. Although vegetation was dense, the limited size of Ha'ena State Park and numerous orientation features allowed the area to be reasonably fully covered and surveyed. Several looping excursions into the cliffs above the property were made where safety permitted. As the property boundary on the *pali* side was not known and it was not safe to survey in most areas of the cliffs, some areas

**Figure 1**  
**Project Location USGS Map**



**Figure 2**  
**Project Location Airphoto**



within the boundaries of the park were likely not surveyed. Plant species were identified in the field and, as necessary, collected and keyed out in the laboratory. Special attention was given to the possible presence of any federally (USFWS 2009) listed threatened or endangered plant species. Bird, reptile, amphibian and fish species were identified by sight and/or sound. In this report, on the first instance of the mention of a species, the common and scientific names are both given. Thereafter, only the common name is used, with occasional repetitions of the scientific name for clarity.

#### Limitations

No biological survey of areas such as this can claim to have detected every species present. Some plant species are cryptic in juvenile or even mature stages of their life cycle. Dry conditions can render almost undetectable plants that extended rainfall may later invigorate and make obvious. Thick brush can obscure even large, healthy specimens. Only a fraction of birds that might be present in an area over the course of a year will be detected during a survey because of season, time of day, or other factors. Reptiles and amphibians can also be cryptic and may not be in evidence despite a thorough survey. Marine species that make only occasional use of the site may not be present on the days of the survey. The findings of this survey must therefore be interpreted with proper caution; in particular, there is no warranty as to the absence of any particular species. Furthermore, during the time of the survey, access was not possible into the Allerton Estate heiau area, and the general descriptions provided herein are based on previous work, with no attempt to list the species that might be present there. As this area has been completely cultivated, it is unlikely that any significant native species were omitted.

## 2. FLORA AND VEGETATION

#### Vegetational Influences

The geologic substrate in this area is alluvial beach and dune sand on the flats, behind which is the *pali*, which is formed from lavas of the Napali member of the Waimea Canyon Basalt formation (MacDonald et al 1986; UH-Hilo 1998). A distinct volcanic dike is visible making a vertical scar on the *pali*, evidence that the Hā'ena area is on a rift zone of the volcano that formed the island. Elevation varies from sea level to 200 feet above sea level. Annual rainfall in this area of Kaua'i is about 40 inches, according to the *Atlas of Hawai'i*, 3<sup>rd</sup> ed.

Given the rainfall, elevation, geologic substrate, and existing vegetation, prior to human disturbance, the general area probably supported a Coastal Mesic Forest dominated by hala (*Pandanus odoratissimus*) and 'ohi'a lehua (*Metrosideros polymorpha*) (Gagne and Cuddihy 1990). Nagata (1991) believed that alaha'e (*Psydrax odorata*), papala-kepau (*Pisonia* spp.), and hau (*Hibiscus tiliaceus*) may also have been prominent components. The herb layer was likely made up of various ferns and herbs that are still present as elements of today's vegetation.

This broad vegetation type was a matrix in which local conditions produced variants. Most obvious is the strand community on the shoreline, which today is represented mostly by pohuehue (*Ipomoea pes-caprae*) and naupaka (*Scaevola taccada*). This community probably contained a wide diversity of species such as nanea (*Vigna marina*), pohinahina (*Vitex rotundifolia*), nehe (*Lipochaeta integrifolia*), akiaki grass (*Sporobolus virginicus*) and pa'u-o-Hi'iaka (*Jacquemontia ovalifolia*). Native trees such as hau, hala, milo (*Thespesia populnea*) and kou (*Cordia subcordata*) were also

probably present. This strand community was probably much wider than today and extended back into the dunes. It is also possible that marsh ecosystems dominated by sedges such as *Cyperus javanicus* and *C. polystachyos* were also present.

Centuries of disturbance by agricultural and settlement completely changed the vegetation. The forests were cleared and the natural hydrology rearranged to support terraced wet taro (*Colocasia esculenta*) agriculture, with diverse gardens of a variety of Polynesian crops including breadfruit (*Artocarpus altilis*), ti (*Cordyline fruticosa*) sugarcane (*Saccharum officinarum*), 'ohi'a ai (*Syzygium malaccense*) and many others. Useful native plants such hala and hau were allowed to flourish in appropriate environments. In the 19<sup>th</sup> century, Western crops such as mango (*Mangifera indica*), various types of citrus (*Citrus* spp.), papaya (*Carica papaya*) and guava were added to the agricultural mix.

The area now within Hā'ena State Park experienced a gradual abandonment later in the 19<sup>th</sup> and early 20<sup>th</sup> century, and parts of it were incorporated in various estates, an informal countercultural camping area, and then a State Park. Over time, some of the existing species disappeared, others simply persisted in place (e.g., breadfruit), and others became feral (e.g., guava). New, aggressive invasive species such as Java plum (*Syzygium cumini*) began to become dominant.

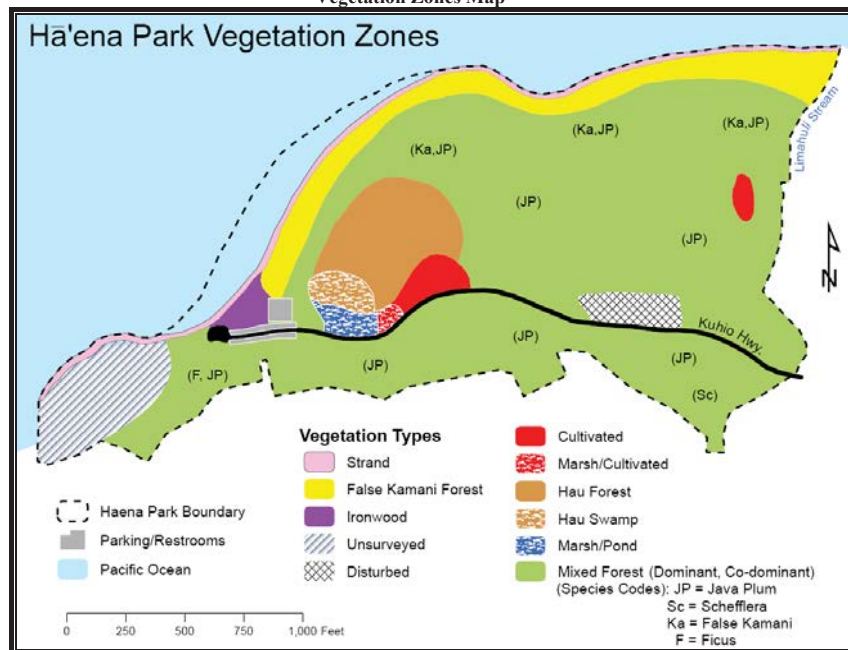
Ripperton and Hosaka described the vegetation of the general region in 1942 as shrubs and closed forest (Zone D, low phase) dominated largely by guava (*Psidium guajava*). Other characteristic species in this zone included sensitive plant (*Mimosa pudica*), Spanish clover (*Desmodium incanum*), ni'ani'au fern (*Nephrolepis exaltata hawaiiensis*) and such grasses as Hilo grass (*Paspalum conjugatum*), carpet grass (*Axonopus compressus*) and basket grass (*Oplismenus hirtellus*). 'Ohi'a lehua, most common in the upper portions of this zone, extended down to sea level in certain areas. Hala and kukui (*Aleurites moluccana*) are abundant in certain localities.

By the time of the 1991 Nagata survey, the vegetation was very similar to what it is today, with exceptions that are noted below in the section entitled "Vegetation Change." Our strong presumptions beginning the survey were that few if any rare, threatened or endangered species would be expected. Nevertheless, favorable micro-habitats such as rock outcrops and the *pali* mauka of Kūhio Highway might harbor more natives and thus merited as close an inspection as safely feasible. In general, the altered vegetation represents a degradation of habitat for native animal species, but environments such as the strand, Limahuli Stream, and the *pali* might offer good if not pristine habitat.

#### Current Vegetation

A number of basic vegetation types, all heavily influenced by human activity, are present at Hā'ena State Park (Figure 3). These vegetation types are not true "communities" because they have not co-evolved. Instead, they are haphazard collections of a few hardy natives, remnant cultivated plants, and various alien plants that are constantly in flux. Very little of the vegetation is in even temporary equilibrium, and both species composition and vegetational structure appear to be constantly changing. Figure 3 is therefore presented with the caution that it is an approximate snapshot of an area that has undergone drastic change and will continue to do so, whether or not the future brings purposeful human intervention. The map is diagrammatic and the boundaries between zones are approximate. The eleven zones are described below.

Figure 3  
Vegetation Zones Map



Source: Fieldwork by R. Terry and P. Hart, January 2009

#### Strand Zone

The strand, here defined as the zone seaward of the tree line, is poorly developed (Figures 3 and 4). When present it consists mostly of the indigenous pohuehue (*Ipomoea pes-caprae*), the possibly indigenous grass kukaipua'a (*Digitaria setigera*), and seedlings of such alien trees as ironwood (*Casuarina equisetifolia*), tree heliotrope (*Tournefortia argentea*) and false kamani (*Terminalia catappa*). Few other species are found in this community. Beach naupaka (*Scaevola taccada*), generally regarded as a typical strand species, occurs uncommonly. As discussed above, a typical healthy strand ecosystem in a climatic and geological setting such as this would be much more diverse. The density of ironwood and particularly false kamani shading out the strand from the land side and heavy wave action scouring strand vegetation away from the ocean side has depauperized the strand. The section below on management recommendations values discusses opportunities for restoration of this area.

Figure 4  
Strand Zone Vegetation



#### False Kamani Forest Zone

This zone dominates the areas a variable distance of 75 to 150 feet mauka of the strand and consists of false kamani trees 30 to 40 feet tall, with a few remnant ironwoods and the occasional emergent Java plum (Figures 3 and 5). The canopy cover is typically closed and the resulting dense shade precludes the development of any significant ground cover. The shrub and herb layers, when present, consist mostly of false kamani seedlings. According to the 1991 Nagata report, ironwood was once co-dominant here. Although the fringe of the strand exhibits a row of ironwoods, most of the old ironwood trees have died (many stumps and treefalls are present), perhaps as result of damage from Hurricane Iniki, and false kamani has taken over. The False Kamani Forest grades into a variant of the Mixed Forest zone that is dominated by Java plum and false kamani.

#### Ironwood Zone

There is only a small remnant of area outside the strand fringe that is truly dominated or co-dominated by ironwood (Figures 3 and 6). In this area the understory consists of a thick carpet of ironwood "needles" and a poorly developed shrub and herb layer of wedelia (*Wedelia trilobata*) and pothos (*Epipremnum pinnatum*). This is found near the end of the road, lifeguard stand and new restroom, and may be the result of managing the forest here. According to a posted sign at the park, this area is being restored with native species.



**Figure 5**  
**False Kamani Zone Vegetation**



**Figure 6**  
**Ironwood Zone Vegetation**



### Mixed Forest Zone

The Mixed Forest zone is the largest vegetation zone in the park. This zone consists of most of the areas classified by Nagata (1991) as either Java Plum Forest or Mixed Forest (Figures 3 and 7). In our classification, these two zones have been lumped, but the vegetation zone map (Figure 3) includes a number of point symbols indicating which species are dominant or co-dominant. These two zones have been combined because the characteristics that apparently distinguished them in 1991 do not appear today to be nearly as distinct. Areas that had once been dominated almost completely by Java plum now host a number of other species, including false kamani, hau, Chinese banyan (*Ficus microcarpa*), octopus tree (*Schefflera actinophylla*), kukui, African tulip (*Spathodea campanulata*), guava, waiawi (*Psidium cattleianum*), Christmas berry (*Schinus terebinthifolius*), cinnamon (*Cinnamomum zeylanicum*) and Madagascar olive (*Noronhia emarginata*). There are still limited areas in which Java plum is completely dominant, and the forest matches the description given by Nagata:

Typically the forest consists of Java plum trees at least 30 feet tall with 50-100% canopy cover. In some areas false kamani is co-dominant in the upper canopy and occasionally forms a secondary canopy as well. The density and composition of the understory varies considerably. In some areas the understory is open with a sparse shrub layer of Java plum saplings and a well-developed herb layer of awapuhi [note: in 2009 this species was not observed] ... laua'e...basketgrass, or pothos. In other areas the understory is dense and consists of a well-developed shrub layer of mostly Java plum saplings and guava. In certain areas the indigenous...*Nephrolepis exaltata* is the dominant species in the herb layer.

The Mixed Forest, as the name implies, is highly variable. As noted in Nagata (1991), there are many small sunny patches in which shrubs such as guava and sourbush (*Pluchea symphytifolia*) replace Java plum and other trees and the understory consists of Hilo grass (*Paspalum conjugatum*), laua'e (*Phymatosorus grossus*), honohono (*Commelina diffusa*), and Job's tears (*Coix lachryma-jobi*), among others. Two native trees, hau and hala, appear to be holding their own. Vines such as morning glory (*Ipomoea indica*) and water lemon (*Passiflora laurifolia*) are still present, but moon flower (*Ipomoea alba*), noted as present by Nagata, was not observed.

In the Mixed Forest mauka of Kūhio Highway, the soils are better drained than the flats and the landscape is covered with talus from the *pali*. Christmas berry is more abundant along the talus mauka of Kūhio Highway. The ground cover here is dominated by basketgrass, pothos, and several ferns. In shady, steep areas there are a few of the indigenous 'ala'alawainui (*Peperomia leptostachya*), and the endemic ko'oko'olau (*Bidens forbesii*) and akoko (*Chamaesyce celastroides* var. *lorifolia*) are present in sunny patches.

As detailed by Nagata (1991), the Mixed Forest (and indeed the entire park) contains numerous ornamental species that are either remnant and in decline or are invasive and spreading. Firmly established species that are remnants of old plantings include Turk's cap, solitaire palm (*Ptychosperma elegans*), small shell ginger (*Alpinia mutica*), red ginger (*A. purpurata*), shell ginger (*Zingiber zerumbet*), spiral flag (*Costus speciosus*), and five fingers (*Syngonium auritum*).

Figure 7  
Mixed Forest Zone Vegetation



#### Cultivated Areas Zone

Nagata (1991) called three portions of the project site Cultivated Areas: the Allerton Estate, including Ka Ulu a Paoa Heiau and Lohi'au's Hula Platform (the numerous no-trespassing signs and a lack of arranged access prevented us from surveying this area in 2009); a small cabin within the Mixed Forest near Limahuli Stream (which is no longer actively cultivated and which the forest is steadily overtaking); and an informal, overflow parking area along Kūhio Highway. In this survey, we reclassified the overflow parking area as Disturbed Vegetation but added the taro farming area in the center of the park (Figures 3 and 8) near the wetlands as a third cultivated area. The Cultivated Area zone is a miscellaneous category that completely lacks any vegetation community characteristics. A large number of species are present. Although not surveyed by us in 2009, Nagata found the Allerton Estate to have a great number of ornamental and food species, many of which are presumably still present. Nagata described the vegetation here thus:

The Allerton Estate, Ka Ulu a Paoa Heiau and Lohi'au's Hula Platform... contain the majority of the species. The lawns consist of a mixture of Nib grass, goosegrass (*Eleusine indica*), kyllinga (*Cyperus kyllinga*), Asiatic pennywort (*Centella asiatica*), synedrella (*Synedrella nodiflora*) and *Hemigraphis repens*. Among the numerous ornamentals are hybrid roses (*Rosa* x), colored ti (*Cordyline* x), allamanda (*Allamanda cathartica*), crape myrtle (*Lagerstroemia indica*) and oleander (*Nerium oleander*). Several such as pothos, taro vine, mango, king palm (*Archontophoenix alexandrae*) and tithonia (*Tithonia diversifolia*) have become naturalized and are spreading into the adjacent Mixed Forest.

As in the Nagata survey, a number of food plants and ornamentals are still found around the cabin near Limahuli Stream. Notable are *Citrus* spp., Otaheiti apple or vi (*Spondias dulcis*), coconuts (*Cocos nucifera*), small shell ginger, spiral flag, hybrid roses, common heliconia (*Heliconia humilis*), and banana (*Musa x paradisiaca*).

In addition to taro, the taro farming area includes in its vegetation a number of weeds typical of farms, similar to those listed below for the overflow parking area. Towards the pond end of the cultivated area, plants tolerant of saturated soils such as honohono and Job's tear's begin to predominate.

#### Disturbed Vegetation Zone

Nagata's "cultivated" area near Kūhio Highway continues to be used as an overflow parking area. Here, a large variety of weeds are present, including goosegrass (*Eleusine indica*), wedelia, finger grass (*Chloris* spp.), partridge pea (*Chamaecrista nictitans*), *Desmodium* spp., sensitive plant, Jamaican vervain (*Stachytarpheta jamaicensis*), and plantain (*Plantago* spp.). Koa haole (*Leucaena leucocephala*) and Guinea grass (*Panicum maximum*) are common at the periphery.



Figure 8  
Cultivated Area Zone Vegetation



Figure 9  
View of Pond, Marsh and Swamp



#### Marsh/Pond and Marsh/Cultivated Zones

One area classified by Nagata (1991) as "Grassland" appears to have changed markedly. The area roughly delineated in his 1991 map is now occupied by a combination of small areas that we have designated Cultivated Area (the taro farm discussed above), Marshland/Pond, and a transitional vegetation type called Marshland/Cultivated. In 1991, according to Nagata:

The Grassland occupies a series of low-lying taro terraces which is irrigated by a single auwai and although the substrate was dry during the time of the survey it probably becomes rather marshy during the wet season.

There were no permanent areas of standing water noted in the 1991 report. In January of 2009, after a month of heavy rains, a pond and marshy wetlands occupying perhaps an acre were apparent (Figures 3 and 9). Native Koloa or Hawaiian Ducks (*Anas wyvilliana*) were utilizing the ponds daily, and the singing of bullfrogs (*Rana catesbeiana*) was evident. Fringing the ponds were wetlands marshes, which extended back east towards the cultivated area. Several soil pits dug during the survey revealed the presence of mucky, sulfidic soils indicating frequent saturation and reducing conditions, meaning that the inundated condition is not unusual. The eastern edge of the marsh can be, and probably is at times, cultivated for taro, and is thus distinguished as its own, transitional Marsh/Cultivated Zone, grading into the taro farm in the Cultivated Area. Additional investigation is required to delineate the boundaries of the wetlands per definitions of Section 404 of the Clean Water Act (U.S. Department of the Army 1987), but the soil, hydrological, and vegetation indicators all appear to be present at least in the core area around the pond.

Species present in the marshy area included Job's tears, honohono, 'ape (*Alocasia macrorrhiza*), Hilo grass (*Paspalum conjugatum*) and California grass (*Urochloa mutica*), among others.

#### Hau Swamp and Hau Forest Zones

The marsh wetlands are bordered on the shoreline side by the Hau Swamp zone (Figures 3 and 9). This closed canopy, low-lying area is almost 100 percent tangled hau branches. Further investigation of inundation and soil conditions would be required to determine if this zone qualifies as a jurisdictional wetlands under Section 404 of the Clean Water Act and to delineate the wetlands boundaries, but initial indications are that it should be so classified. As the terrain steps up in elevation slightly, the Hau Swamp grades into the Hau Forest and Mixed Forest zones.

#### Other Areas

Not classified within their own zones are the *pali* (the extent to which the *pali* lies within the park was not known during our survey) and miscellaneous areas such as the restroom, roadsides and parking areas. The vegetation of the latter types is typical of the weeds found in the Cultivated and Disturbed zones. A portion of the park appears to include the *pali*. One ascent of the *pali* near the former Lohiau's House was made, but it was mostly surveyed with binoculars during a number of excursions to the base and from the road. Similar to Nagata's 1991 observations, the vegetation along the cliff face consist mostly of scrub ironwood, Java plum, Christmas berry, waiawi, octopus tree, with a shrub and herb layer of Jamaican vervain, Pluchea, air plant (*Kalanchoe pinnata*), and scarlet orchid (*Epidendrum x obrienianum*). This area included the highest density of native plants, including ahinahina, ko'oko'olau, akoko, 'ala'alawainui, moa, 'ohi'a lehua, and the sedge *Carex meyenii*.

## Flora

Appendix 1 contains a full list of plant species found at the park, which is not included in the main body of this report because of its length. We recorded a total of 117 flowering plants and 9 ferns or fern allies. Most of the plant species found were alien; 15 were indigenous and six were Hawai'i endemics. The remaining plants are alien, including several species considered invasive. No listed or proposed threatened or endangered plant species (USFWS 2009) were found.

The Nagata survey, which accessed the Allerton Estate and probably recorded there a number of alien species not found anywhere in our 2009 survey, found a total of 218 flowering plants and 9 ferns or fern allies.

### Significant Species

#### Native Species

As was true when Nagata surveyed the park in 1991, native species are of minor importance in the floristic composition. They comprise approximately 17 percent of the total number of species but account for very little of the total cover and are not abundant except in restricted areas near the cliff, on the strand, and in the hau forest and swamp. None are classified as threatened or endangered or considered rare. Most are common throughout the major Hawaiian Islands. Two of the six endemics are restricted to Kaua'i: *Bidens forbesii* is a common lowland species on the north shore and *Artemisia kauaiensis* is found throughout the sea cliffs of Kaua'i.

Most of the native species are widely scattered in small numbers. Of the 15 native species, only Koali (morning glory) and the ni'ani'au fern are widely common, with hala and hau scattered but locally abundant. Pohuehue is considered abundant in the Strand zone. Except in the *pali* area, all of the endemic species are uncommon in the park.

#### Species of Cultural Significance

Ten species of early Polynesian introduction are found in the surveyed area: mountain apple, sugar cane, banana, noni, ti, coconut, breadfruit, 'ape, taro, and kukui. Of these, all but breadfruit, which is only sparingly naturalized but persists after cultivation, have spread in various vegetation types throughout Hawai'i. Although all are culturally significant, their distribution in the project site cannot easily be correlated with historical Hawaiian land uses in the park, as Nagata pointed out in 1991. Most of the species are found in small numbers in the Mixed Forest both within and outside the system of taro lo'i. Many of the plants are growing inside the terraces indicating naturalization after the abandonment of the terraces. Nagata found that ti was the only Polynesian alien species recorded from Ka Ulu a Paoa Heiau and Lohi'aus Hula Platform. The planting of ti in sites of such religious and cultural significance can be considered traditional but it was not known whether they resulted from ancient, or more modern, plantings. Several large specimens of kukui and breadfruit are present in the site, indicating rather old plantings. In general, the distributions of these Polynesian plants do not appear to be useful in interpretation of traditional land use.

## Invasive Species

The Hawai'i-Pacific Weed Risk Assessment (HP-WRA) is a research project by scientists from the University of Hawai'i and the USDA Forest Service to identify plants that pose a high weed risk in Hawai'i and other Pacific Islands. ([http://www.botany.hawaii.edu/faculty/daehler/wra/full\\_table.asp](http://www.botany.hawaii.edu/faculty/daehler/wra/full_table.asp)). The HP-WRA score is a prediction on how invasive a species will become, and does not attempt to balance the costs and benefits of introduced species in terms of potential economic, ecological, public health, medicinal, historic, community, cultural, tourism, and esthetic values. The HP-WRA ratings have no regulatory authority and the HP-WRA list is not an official State list of invasive plants.

In the status column of Appendix 1, species listed as posing a high weed risk are identified, either as species likely to be invasive (INV, which included 7 species) or already determined to be invasive (INV-H, which included 6 species) based on published information on the species' current impacts in Hawai'i. The species already determined to be invasive are strawberry guava (*Psidium cattleianum*), guava (*Psidium guajava*), octopus tree (*Schefflera actinophylla*), Christmas berry (*Schinus terebinthifolius*), Guinea grass (*Panicum maximum*), and Hilo grass (*Paspalum conjugatum*). Although not listed among the 13 species, Java plum (*Syzygium cumini*) should probably be considered highly invasive, and based on its rapid initial inroads into the forest in no more than 17 years, the Madagascar olive (*Noronhia emarginata*), which is currently on the HP-WRA list as a species to evaluate, may soon merit classification as invasive in Hawai'i. With the exception of Madagascar olive (which we observed scattered in other locations along the North Shore of Kaua'i), the other invasive plants are long established. We did not observe any indication that they are notably expanding their range or densities or pose a threat to adjacent, unfested areas.

### Vegetational Change

The vegetation of Hā'ena State Park has been undergoing disturbance and transformation since human settlement over a millennium ago. As Nagata pointed out in 1991, major alteration began with the construction of the terrace system. Some areas may have been left intact but eventually the native forests were probably transformed utterly by centuries of use. Human use since the early 19<sup>th</sup> century has also been periodically intensive, as evidenced by ornamental species, ruins of structures, and trash piles. In the end, no original plant communities of the type discussed at the beginning of the report remain.

Even in the short interval between the last vegetation survey in 1991 and the current one in 2009, vegetation change has been occurring. A subtle change has been the convergence of the Java Plum and Mixed Forest into a diverse, if alien-dominated, Mixed Forest. It is likely that the relatively importance of various species in terms of abundance and cover has changed, but this is difficult to characterize. An obvious change is the appearance of *Noronhia emarginata* or Madagascar olive, which was not present in the 1991 survey and is now a prominent component, at least in terms of abundance. The large number of juveniles trees of this species portend that it will be a major component of the forest in the near future. The most striking change was the decline of ironwood in the area mauka of the shoreline, where it was recently described as co-dominant. As observed earlier in this report, many, if not most, of the old ironwood trees have died, perhaps as result of damage from Hurricane Iniki, and false kamani has taken over. Perhaps because of the increasing shade from the kamani trees (along with heavy wave action), the strand vegetation, described by Nagata as already sparse, appears to have declined in size and diversity even further.

### 3. FAUNA

#### Birds

Thirteen species of birds were detected during the survey (Table 1), including the federally endangered Hawaiian Duck (Koloa Maoli; *Anas wyvilliana*), two indigenous shorebirds (Kolea; *Pluvialis fulva* and ‘Ulili; *Heteroscelus incanus*), and an indigenous seabird (Koa’e Kea; *Phaethon lepturus dorotheae*). All other birds were non-native introductions. Japanese White-eyes (*Zosterops japonicus*) were particularly abundant in the mixed forest, as were White-rumped Shammas (*Copsychus malabaricus*) and Red Jungle Fowl (*Gallus gallus*). No native land birds were observed on the project site, nor would they be expected to be found in the area due to the low elevation, lack of native forest habitat and the abundance of disease-carrying mosquitoes. A large number of native species, some endangered, are known from areas mauka, and it is possible that occasional sightings of native forest birds are made at the park. Many species of shorebirds, waterbirds, and seabirds, some of which are federally listed endangered species, might be expected to make occasional use of the project site.

In addition to the Pacific Golden Plovers and Wandering Tattlers that were observed, other shorebirds that likely make occasional use of the project site but were not seen during the surveys include the Ruddy Turnstone (*Arenaria interpres*), Bristle-thighed Curlew (*Numenius tahitiensis*), Sanderling (*Calidris alba*), and various other Sandpipers. The Black-crowned Night-heron (‘Auku‘u; *Nycticorax nycticorax hoactli*), an indigenous wetland bird, would also be expected to make use of the area. Other native water birds that may make use of the wetland areas include the federally endangered Black-necked Stilt (Ae‘o; *Himantopus mexicanus knudseni*), the federally endangered Hawaiian Coot (‘Alae ke‘oke‘o; *Fulica alae*), the federally endangered Hawaiian Moorhen (‘Alae ‘ula; *Gallinula chloropus sandvicensis*) and the federally endangered Nene (*Branta sandvicensis*).

Many species of seabirds would be expected to make use of the airspace over the park. Species that were not seen in our limited surveys include Noddies (*Anous sp.*), Terns (*Sterna sp.*), Frigate Birds (‘Iwa; *Fregata minor palmerstoni*), Shearwaters (*Puffinus sp.*), Albatross (*Phoebastria sp.*), Boobies (*Sula sp.*), Petrels (*Pterodroma sp.*) and Red-tailed Tropicbirds (*Phaethon rubricauda melanorhynchos*). Most notably, three species of rare seabirds undoubtedly fly over the park on their way to nests in mountains of Kaua‘i: the federally endangered Hawaiian Petrel (‘Ua‘u; *Pterodroma phaeopygia sandwichensis*), the federally threatened Newell’s Shearwater (‘A‘o; *Puffinus auricularis newelli*), and the Band-rumped Storm-Petrel (*Oceanodroma castro*), which is listed as endangered by the State of Hawai‘i. Radar surveys indicate that the north shore of Kaua‘i has large populations of these latter three species (N. Holmes *per. comm.*).

Although these threatened and endangered seabirds are not likely to utilize the park’s resources for feeding, resting or nesting, developments that involve structures or lighting can affect these birds. The principal potential impact is the increased threat that birds will be downed after becoming disoriented by exterior lighting, if this is provided at the park.

**Table 1**  
**Bird Species Identified On/Near Ha‘ena State Park**

| Scientific Name                    | Common Name             | Status             |
|------------------------------------|-------------------------|--------------------|
| <i>Acridotheres tristis</i>        | Common Myna             | Alien Resident     |
| <i>Copsychus malabaricus</i>       | White-rumped shama      | Alien Resident     |
| <i>Pluvialis fulva</i>             | Pacific Golden-Plover   | Indigenous Visitor |
| <i>Cardinalis cardinalis</i>       | Northern Cardinal       | Alien Resident     |
| <i>Paroaria coronata</i>           | Red Crested Cardinal    | Alien Resident     |
| <i>Streptopelia chinensis</i>      | Spotted Dove            | Alien Resident     |
| <i>Phaethon lepturus dorotheae</i> | White tailed Tropicbird | Indigenous         |
| <i>Heteroscelus incanus</i>        | Wandering Tattler       | Indigenous Visitor |
| <i>Gallus gallus</i>               | Red Junglefowl          | Alien Resident     |
| <i>Anas wyvilliana</i>             | Koloa                   | Endemic            |
| <i>Geopelia striata</i>            | Zebra Dove              | Alien Resident     |
| <i>Carpodacus mexicanus</i>        | House Finch             | Alien Resident     |
| <i>Zosterops japonicus</i>         | Japanese White-Eye      | Alien Resident     |

#### Mammals, Reptiles and Amphibians

Aside from feral cats (*Felis catus*), no wild mammal species were detected during the course of this survey. It is highly likely that mice (*Mus spp.*) and rats (*Rattus spp.*) are present. The biologists encountered various pet domestic dogs (*Canis f. familiaris*) but no indication that wild dogs are present in the area. Although the biologists did not see wild pigs (*Sus s. scrofa*) or goats (*Capra h. hircus*), they are known to be present in this part of Kaua‘i. None of these alien mammals have conservation value and all are deleterious to native flora and fauna.

As with all of Kaua‘i, Hā‘ena State Park may also be used by the State’s only endemic mammal, the Hawaiian Hoary Bat (*Lasiurus cinereus semotus*), which is listed as an endangered species. Hawaiian hoary bats are cryptic and little is known of their habits or habitat in Kaua‘i, but they often seen in the Hanalei area. They can be regularly observed foraging on insects attracted by the lights of a gas station on the highway in Princeville (R. David, 2008, pers. comm. to R. Terry).

Endangered Hawaiian monk seals (*Monachus schauinslandi*) primarily inhabit the remote Northwestern Hawaiian Islands, which because of the relative lack of disturbance are excellent habitat for the seals to swim and dive for fish, spiny lobsters, octopuses, and eels. Monk seals spend most of their time in the ocean, but come ashore to rest on beaches and even utilize fringe vegetation as shelter from storms. They are increasingly being seen in the main Hawaiian Islands, and are frequently observed (and have been observed by our team at different times) at Hā‘ena State Park. Monk seals can become agitated and sometimes aggressive if people approach too closely or are too loud. Disturbing them may also interrupt resting periods and may even cause a mother seals to abandon their pups. Feeding monk seals may adversely change their natural foraging instincts. Hawaiian monk seals are also susceptible to diseases spread by the feral mammals sometimes present in parks, such as leptospirosis (transmitted mainly through feral mammal urine in water) and toxoplasmosis (associated with feral cats).

Table 2

**Mammal, Reptile and Amphibian Species Identified in/Near Ha'ena State Park**

| Scientific Name                                        | Common Name        | Status |
|--------------------------------------------------------|--------------------|--------|
| All species in January 2009 survey                     |                    |        |
| <i>Rana catesbeiana</i>                                | Bullfrog           | A      |
| UnID'd (Family: <i>Scincidae</i> )                     | Skink              | A      |
| <i>Anolis carolinensis</i>                             | Green Anole        | A      |
| UnID'd (Family: <i>Gekkonidae</i> )                    | Gecko              | A      |
| <i>Felis catus</i>                                     | Cat                | A      |
| Native species detected in previous documented surveys |                    |        |
| <i>Lasiurus cinereus semotus</i>                       | Hawaiian Hoary Bat | E, End |
| <i>Monachus schauinslandi</i>                          | Hawaiian Monk Seal | I, End |
| <i>Chelonia mydas</i>                                  | Green Sea Turtle   | I, Th  |
| <i>Eretmochelys imbricata</i> *                        | Hawksbill Turtle   | I, End |

Notes: Alien (A), Indigenous (I), Endemic (I), Endangered (End), Threatened (Th); \* not confirmed

Three species of reptile, a skink not identified to the species level, a green anole (*Anolis carolinensis*), and a gecko not identified to the species level, as well as one species of amphibian, the bullfrog (*Rana catesbeiana*), were detected during the survey. These species are all common on Kaua'i. There are undoubtedly other species of lizard and frog present in or near the park. The infamously noisy coqui frog (*Eleutherodactylus coqui*) is not yet present on Kaua'i.

*Limahuli Stream Fishes*

A number of stream surveys have been conducted for Limahuli Stream in its lower, middle and upper reaches. The Hawai'i Stream Research Center (UH-HSRC) was established in 1996 through a partnership between Limahuli Garden (The National Tropical Botanical Garden) and the Hawai'i Division of Aquatic Resources (DAR) to develop and implement a Long Term Ecological Research (LTER) Program monitoring biological structure and function in Limahuli Stream at the ahupua'a-watershed scale. An unpublished report from 2001 by Mike Kido of DAR supplied as part of background material for this survey discussed the findings to date on Limahuli Stream. It appears to be a continuous, perennial system, with an average flow from 1994 to 1999 measured at 6.3 million gallons per day, stabilized by substantial groundwater flow at times when drought limits surface runoff. It drops from an elevation of about 2,000 feet over a distance of less than four miles. The riparian zones adjacent to Limahuli Stream are dominated by invasive tree species that provide heavy shade and contribute substantial organic material in the form of plant litter, which flows to ocean during floods. Ha'ena State Park includes only the very lowest 1,000-foot stretch of Limahuli Stream. This portion is critical, however, because it provides the connection between the stream and the ocean for a number of fish species that are diadromous, meaning they must spend part of their life cycle in the sea and part in a stream.

Five species of endemic and indigenous Hawaiian gobies (o'opu) may inhabit this stream, including the o'opu alamo (*Lentipes concolor*), o'opu nopili (*Sicyopterus stimpsoni*), o'opu naniha (*Stenogobius hawaiiensis*), o'opu akupa (*Eleotris sandwicensis*) and o'opu nakea (*Awaous guamensis*). These o'opu live their adult lives and lay their eggs in the streams, but upon hatching, the larvae drift out to sea where they develop as plankton for a number of months before returning to fresh water. The alamo'o, nopili, and nakea may be found furthest up Limahuli Stream because their sucker-like pectoral fins allow them to climb waterfalls, whereas naniha and akupa lack this ability and would only inhabit the sections of the stream nearest the ocean.

According to the Kido report referenced above, several years of population monitoring studies showed

...a relatively fixed species distribution pattern over time along the "mauka to makai" stream continuum despite variation in species population densities and ranges of species overlap. This is the first documented evidence for a stable population distribution pattern for native fish and invertebrates along the continuum of a Hawaiian stream. Native 'o'opu populations in Limahuli Stream are relatively robust overall; however, densities of the herbivorous 'o'opu-nopili (*Sicyopterus stimpsoni*) are significantly lower than that in neighboring Hanakapiai Stream at similar elevations. A plausible cause is the light limitation induced by the aggressive alien riparian canopy which lowers primary production levels and regulates algal diversity.

According to Kido, although a number of alien invertebrates are present in Limahuli Stream, alien fish species had been limited, at least until 2001, to periodic invasions near the stream mouth by the alien poeciliid fishes swordtails (*Xiphophorus helleri*) and guppies (*Poecilia reticulata*). The source of these intrusions are poeciliid populations in the *auwai* system that withdraws water from Limahuli Stream just mauka of Kūhio Highway and empties into the stream near its mouth after passing through old taro lands. Poeciliids were also found to in the ponds and marshes near the cultivated areas. As these poeciliid fishes are known vectors of pathogenic parasites that infect native 'o'opu species, DAR has researched chemical control.

For the current inventory, our limited survey of Limahuli Stream below Kūhio Highway over the course of two hours on January 18 identified only one species of juvenile fish, which appeared to be aholehole (*Kuhlia sandwicensis*)<sup>1</sup>. No o'opu were apparent. During January, alamo'o and nopili hatchlings, which have hatched far upstream and traveled downstream as larvae, are developing within the ocean, in preparation for swimming upstream during February to May. Nakea breed in areas just above the stream mouth from August to November and may create swarms, but by January the hatchlings are also in the ocean. It is therefore unsurprising that these three species of o'opu were not observed. As discussed above, naniha and akupa cannot climb waterfalls and might be more likely to be found near the mouth of Limahuli Stream year-round (Yamamoto and Tagawa 2000).

<sup>1</sup> The number of aholehole species in Hawai'i and their proper names are currently the subject of discussion. This report will utilize the traditional common and scientific names, and because only fry were observed, does not attempt to determine the precise species. See Randall, J.E. and Randall, H.A., 2001. "Review of the Fishes of the Genus *Kuhlia* (Perciformes: Kuhlidae) of the Central Pacific." *Pacific Science* 55(3) [http://www.hawaiifishes.com/fish\\_of\\_month/past\\_fom/fom\\_05\\_05.htm](http://www.hawaiifishes.com/fish_of_month/past_fom/fom_05_05.htm) for discussion and



**Table 3**  
**Fish Species Identified in Limahuli Stream**

| Scientific Name                 | Common Name  | Status |
|---------------------------------|--------------|--------|
| IN January 2009 Survey          |              |        |
| <i>Kuhlia sandvicensis</i>      | Aholehole    | I      |
| IN previous documented surveys* |              |        |
| <i>Lentipes concolor</i>        | O'opu alamoo | E      |
| <i>Senogobius hawaiiensis</i>   | O'opu naniha | E      |
| <i>Awaous guamensis</i>         | O'opu nakea  | I      |
| <i>Sicyopterus stimpsoni</i>    | O'opu nopili | E      |
| <i>Eleotris sandwicensis</i>    | O'opu akupa  | E      |
| <i>Xiphophorus helleri</i>      | Swordtails   | A      |
| <i>Poecilia reticulata</i>      | Guppies      | A      |

Notes: Alien (A), Indigenous (I), Endemic (I)

\*Records from Division of Aquatic Resources, and unpublished report by Mike Kido of DAR supplied to Geometric Associates by PBR Hawaii Inc.

#### 4. MANAGEMENT RECOMMENDATIONS

##### *Sensitive Resources and Areas*

As discussed above, no listed or proposed threatened or endangered plant species (USFWS 2009) were found at Hā'ena State Park, and none are likely to be found. Several endangered seabird species fly over the park on their way to nesting sites in the mountains. The endangered Hawaiian hoary bat probably utilizes the area for foraging and may roost in trees or large shrubs.

Other than perhaps portions of the cliff, which while not dominated by native species, contain a diverse assemblage of natives, no areas of botanically significant vegetation are present at the park. As Nagata (1991) noted, although some native species are present, they are widely scattered and do not present ecologically meaningful patterns. Because of the relatively scarcity of native plants, the habitat value for native animals is not significant. The vegetation does perform other ecological functions, such as helping to absorb rainfall and thus avoid erosion and sedimentation, as well as retarding the rate of coastal erosion. This report does not evaluate the cultural significance of the vegetation, but it is important to note the general persistence of at least some of the culturally important native or Polynesian-introduced plants, despite being largely overwhelmed by invasive alien species. Limahuli Stream is an important resource for the conservation of native fishes (and other organisms) and merits protection.

##### *Effects of Recreation Activities on Biological Resources*

As Hā'ena State Park develops and visitor use grows there will be more pressure on its reef, shoreline, stream and botanical resources. In general, because the biological value of most of property aside from the shoreline and Limahuli Stream is modest, such threats are limited. However, the stream and the shoreline will continue to require protection, and if parts of the park are restored, the areas needing protection will expand.

Another impact faced by all parks is that they act as concentrated points for dropping off unwanted pet animals and releasing pests such as rats, coqui frogs, and non-native plant species. The public nature of parks and their general lack of security may make members of the public less reluctant to engage in these inappropriate activities deliberately and also make it likely that occasional accidental acts may occur. Hā'ena State Park is the gateway to the Na Pali trail and Kalalau Valley, and a large proportion of its visitors come from North America, Europe, Asia and Australia. Their hiking boots and camping gear may contain seeds, spores, and even live alien organisms.

##### *Potential Restoration Opportunities*

Although the current vegetation may not currently have great conservation value, there is potential to improve the species structure of the vegetation by removing aliens and planting native species, at least in selected environments. While some of the alien species detected in the survey are invasive at least to some degree, none are currently restricted to Hā'ena State Park and thus pose a risk of spreading regionally outward from the park. Therefore, the considerations related to removing invasives center on its utility towards restoring native vegetation and the cost and difficulty of maintenance.

Probably the most important opportunity is in the coastal areas occupied by the Strand, Ironwood and False Kamani Forest zones. According to research by PBR Hawaii Inc., historical photos indicate that the false kamani trees invaded since the tsunami of 1946 and 1960, prior to which the entire area was open coastal dunes. Restoration of a native dune ecosystem consisting of plants such as pohuehue, naupaka, nanea, pohinahina, nehe, pa'u-o-Hi'iaka, akiaki grass, milo, hala and kou, would provide an improved and more authentic vegetation. Nagata (1991) pointed out that ironwood and false kamani have been widely used for erosion control and are currently performing this function at least to some degree, and seem well-suited for the task. However, native species are also adapted to coastal environments and such an effort, if carefully conducted, would likely not increase and might in fact reduce coastal erosion. Restoration of these dunes would also improve habitat for common native shorebirds, including Kolea, 'Ulili, Ruddy Turnstone, Bristle-thighed Curlew, Sanderling, and Sandpiper.

Another area with potential for beneficial impact is restoration of the riparian areas around Limahuli Stream. A large proportion of the lands below 2,000 feet in elevation in Hawai'i is agricultural. Where streams flow through these areas, the surrounding riparian forest is becoming highly invaded by a number of alien tree species, particularly rose-apple (*Syzygium jambos*), waiawi, and to a lesser degree, Java plum (*Syzygium cumuni*), as at Hā'ena State Park. These trees are especially problematic in lowland riparian areas where they form a dense, closed canopy forest that effectively prevents sunlight from reaching the ground (Smith 1985). The deep shade produced by these trees likely prevents the establishment of a mid-canopy and ground cover layer in the forest. Because of this, much of the land beneath these forests consists of bare soil that erodes easily and likely produces large amounts of sedimentation into streams during rains. Dense shade may also prevent the growth and establishment of native riparian plant species. In streams, reduced sunlight limits the growth of benthic algae (Larned and Santos 2000), which are a major food source for many rare and federally endangered native fish (Fitzsimons et al. 2003) and invertebrates (Brasher 1997). A reduction in this important food source, coupled with increased sediment loading, could ultimately result in decreased habitat quality of streams.

Less critical but perhaps still of interest in the long run would be a program to restore selected areas of the talus slopes and cliff faces. As discussed above, these areas already offer the most pristine



native habitat and diversity of native species. The difficulty and hazard of working or visiting this environment, however, may dictate against a project such as this being implemented.

The restoration of threatened and endangered (T&E) plants species provides the opportunity to not only assist directly in native plant conservation but also to educate the public. State and private landowners may utilize T&E species as long as they obtain these plants from licensed nurseries and keep records that demonstrate this.

Restoring habitat that encourages repopulation by endangered *animal* species is another matter. It brings with it the responsibility to protect these animals once they are established. In order to provide for maximum compliance with State and federal endangered species laws, the State must enter into a “Safe Harbor Agreement” prior to undertaking the habitat improvement. This is a voluntary arrangement between the U.S. Fish and Wildlife Service and a cooperating non-federal landowner under the authority of Section 10(a)(1) of the Endangered Species Act of 1973, 16 U.S.C. 1536(b)(4), 1539(a)(1). Under the Safe Harbor Agreement and an associated enhancement of survival permit, the non-federal property owner implements actions that will result in a net conservation benefit for species listed under the Act without the risk of further restrictions pursuant to section 9 of the Act, which prohibits take of listed species. The property owner also receives assurances related to modifications of the SHA or termination of the permit. Such agreements allow a landowner to promote threatened and endangered species on their property without liability for incidental takes that may occur. It might be possible to restore the small wetlands on the property with the purpose of creating native bird habitat that encourages native endangered waterbirds such as Nene, Koloa (which already utilize the pond), or Black-necked Stilts. However, the wetlands area is so small that it would be of limited value. Furthermore it is located directly adjacent to the road, where endangered birds might be harassed, injured or killed directly or indirectly by people or their pets. For both practical and legal reasons, we advise against modifying this small wetlands to attract endangered birds.

Landscape design including plantings, signage and trails can be designed to not only access, beautify, and interpret places within the park, but also to protect certain environments. If the park undertakes restoration of the strand, convenient trails should be established to direct foot traffic along paths that minimize trampling of vegetation. Signage can educate visitors and help protect plants. Limahuli Stream should be protected from use as a trash can or toilet through signage. If restored, the wetlands should be protected through fringing vegetation that encourages viewing but discourages direct entry. Although it is unlikely that many visitors will clamber up the steep, slippery and vegetation-tangled talus areas to access the cliffs (aside from the established trail accessing the Wai-a-ka-pala'e Wet Cave and the Rock Shelter features), any new trails in this area should consider both visitor hazard and native plant preservation.

#### *Specific Management Recommendations*

The following management measures are recommended to minimize impacts to biological resources:

- Park planning, particularly the location of trails and destinations, warning signage, and security personnel training and duties, must take into account balancing recreation and ecosystem protection.
- Signage and other educational material should be developed and distributed to advise the visiting public about the value of native species and not to drop off pests or unwanted pets.
- Park personnel, DLNR experts, and volunteers should monitor the park periodically for invasive species.

- Landscaping should avoid invasive species, as well as employ native species to the greatest degree consistent with project goals. Given the alien character of the vegetation and the presence of many invasive species, landscaping with natives could substantially improve on the existing botanical environment and bird habitat.
- When restoring with threatened and endangered plant species, ensure that all plant material is obtained from licensed nurseries and that records are kept to demonstrate this.
- Landscape design including plantings, signage and trails should be designed to protect the strand, stream and wetlands environments.
- In order to prevent impacts to Hawaiian hoary bats, State Parks should restrict any cutting of large shrubs or trees to periods outside the April to August pupping period for Hawaiian hoary bats.
- To reduce the potential for interactions between nocturnally flying threatened or endangered seabirds, any external lighting planned to be used during construction or within the completed project must be shielded so that light shines only downward.
- The park should continue cooperation with federal, State of Hawai'i, and non-profit organizations that help protect Hawaiian monk seals from natural and human threats.
- The park should continue to cooperate with the Division of Aquatic Resources to keep new alien fish out of *auwai* and stream and in ridding stream of periodic invasions of swordtails, guppies, and other alien fish.

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**Appendix 1**  
**Plant Species Identified in/Near Ha'ena State Park**

| Scientific Name                   | Family           | Common Name          | Life Form | Status* |
|-----------------------------------|------------------|----------------------|-----------|---------|
| <i>Adiantum raddianum</i>         | Pteridaceae      | Maidenhair fern      | Fern      | A       |
| <i>Ageratum conyzoides</i>        | Asteraceae       | Maile honohono       | Grass     | A       |
| <i>Aleurites moluccana</i>        | Euphorbiaceae    | Kukui                | Tree      | P       |
| <i>Alocasia</i> 'sp.'             | Araceae          | 'Ape                 | Herb      | P       |
| <i>Alpinia mutica</i>             | Zingiberaceae    | Small shell ginger   | Herb      | A       |
| <i>Alpinia purpurata</i>          | Zingiberaceae    | Red ginger           | Herb      | A       |
| <i>Alpinia zerumbet</i>           | Zingiberaceae    | Shell ginger         | Herb      | A, INV  |
| <i>Archontophoenix alexandrae</i> | Arecaceae        | King palm            | Tree      | A, INV  |
| <i>Artemisia kauaiensis</i>       | Asteraceae       | 'Ahinahina           | Shrub     | E       |
| <i>Artocarpus altilis</i>         | Moraceae         | Breadfruit           | Tree      | P       |
| <i>Artocarpus heterophyllus</i>   | Moraceae         | Jack fruit           | Tree      | A       |
| <i>Bidens forbsii</i>             | Asteraceae       | Ko'oko'olau          | Shrub     | E       |
| <i>Blechnum appendiculatum</i>    | Blechnaceae      | Blechnum             | Fern      | A       |
| <i>Bougainvillea</i> 'sp.'        | Nyctaginaceae    | Bougainvillea        | Shrub     | A       |
| <i>Canavalia cathartica</i>       | Fabaceae         | Mauna Loa            | Vine      | A       |
| <i>Carex meyenii</i>              | Cyperaceae       | Carex                | Sedge     | I       |
| <i>Carica papaya</i>              | Cariaceae        | Papaya               | Tree      | A, INV  |
| <i>Casuarina equisetifolia</i>    | Casuarinaceae    | Ironwood             | Tree      | A       |
| <i>Cenchrus echinatus</i>         | Poaceae          | Common sandbur       | Grass     | A       |
| <i>Chamaecrista nictitans</i>     | Fabaceae         | Partridge Pea        | Herb      | A       |
| <i>Chamaesyce celastroides</i>    | Euphorbiaceae    | Akoko                | Shrub     | E       |
| <i>Chloris barbata</i>            | Poaceae          | Swollen finger grass | Grass     | A       |
| <i>Chloris radiatae</i>           | Poaceae          | Radiate finger grass | Grass     | A       |
| <i>Christella dentata</i>         | Thelypteridaceae | Pai'i'iha            | Fern      | A       |
| <i>Cinnamomum verum</i>           | Lauraceae        | Cinnamon tree        | Tree      | A, INV  |
| <i>Citrus</i> 'sp.'               | Rutaceae         | Citrus               | Tree      | A       |
| <i>Clidemia hirta</i>             | Melastomataceae  | Coster's curse       | Shrub     | A, INV  |
| <i>Clusia rosea</i>               | Clusiaceae       | Autograph tree       | Tree      | A       |
| <i>Cocos nucifera</i>             | Arecaceae        | Niu                  | Tree      | P       |
| <i>Colocasia esculenta</i>        | Araceae          | Taro                 | Herb      | P       |
| <i>Coffea arabica</i>             | Rubiaceae        | Coffee               | Shrub     | A       |
| <i>Coix lachrymal-jobi</i>        | Poaceae          | Job's tears          | Grass     | A       |
| <i>Commelina diffusa</i>          | Commelinaceae    | Honohono             | Herb      | A       |
| <i>Cordia subcordata</i>          | Boraginaceae     | Kou                  | Tree      | I       |
| <i>Cordyline fruticosa</i>        | Agavaceae        | Ki                   | Shrub     | P       |
| <i>Costus speciosus</i>           | Costaceae        | Spiral flag          | Herb      | A       |
| <i>Crinum asiaticum</i>           | Amaryllidaceae   | Spider lily          | Herb      | A       |
| <i>Cynodon dactylon</i>           | Poaceae          | Bermuda grass        | Grass     | A       |
| <i>Cyperus papyrus</i>            | Cyperaceae       | Papyrus              | Sedge     | A       |
| <i>Cyperus polystachyus</i>       | Cyperaceae       | None                 | Sedge     | I       |
| <i>Desmodium incanum</i>          | Fabaceae         | Desmodium            | Herb      | A       |
| <i>Desmodium sandwicense</i>      | Fabaceae         | Spanish clover       | Vine      | A       |
| <i>Desmodium tortuosum</i>        | Fabaceae         | Florida beggarweed   | Herb      | A       |
| <i>Dieffenbachia</i> 'sp.'        | Araceae          | Dumb cane            | Shrub     | A       |

**Appendix 1, continued**  
**Plant Species Identified in/Near Ha'ena State Park**

| Scientific Name                         | Family           | Common Name            | Life Form | Status*  |
|-----------------------------------------|------------------|------------------------|-----------|----------|
| <i>Digitaria setigera</i>               | Poaceae          | Kukaipua'a             | Grass     | I?       |
| <i>Doryopteris decipiens</i>            | Pteridaceae      | Kumuniu                | Fern      | E        |
| <i>Elephantopus mollis</i>              | Asteraceae       | Elephant's foot        | Shrub     | A        |
| <i>Eleusine indica</i>                  | Poaceae          | Wire grass             | Grass     | A        |
| <i>Emilia fosbergii</i>                 | Asteraceae       | Pualele                | Herb      | A        |
| <i>Epidendrum x obrienianum</i>         | Orchidaceae      | Scarlet orchid         | Herb      | A        |
| <i>Epipremnum pinnatum</i>              | Araceae          | Pothos                 | Vine      | A        |
| <i>Ficus microcarpa</i>                 | Moraceae         | Chinese banyan         | Tree      | A        |
| <i>Gladiolus x hortulanus</i>           | Iridaceae        | Gladiolus              | Herb      | A        |
| <i>Heliconia humilis</i>                | Musaceae         | Common heliconia       | Shrub     | A        |
| <i>Hibiscus</i> 'sp.'                   | Malvaceae        | Hibiscus               | Shrub     | A        |
| <i>Hibiscus tiliaceus</i>               | Malvaceae        | Hau                    | Tree      | I        |
| <i>Ipomoea indica</i>                   | Convolvulaceae   | Koali                  | Vine      | I        |
| <i>Ipomoea pes-caprae</i>               | Convolvulaceae   | Pohuehue               | Vine      | I        |
| <i>Ipomoea triloba</i>                  | Convolvulaceae   | Little bell            | Vine      | A        |
| <i>Kalanchoe pinnata</i>                | Crassulaceae     | Air plant              | Shrub     | A        |
| <i>Lepisorus thunbergianus</i>          | Polypodiaceae    | pakahakaha             | Fern      | I        |
| <i>Leucaena leucocephala</i>            | Fabaceae         | Koa haole              | Tree      | A        |
| <i>Livistona chinensis</i>              | Arecaceae        | Chinese fan palm       | Tree      | A        |
| <i>Macadamia ternifolia</i>             | Proteaceae       | Macadamia              | Tree      | A        |
| <i>Macroptilium lathyroides</i>         | Fabaceae         | Cowpea                 | Vine      | A        |
| <i>Malvaviscus penduliflorus</i>        | Malvaceae        | Turk's cap             | Shrub     | A        |
| <i>Mangifera indica</i>                 | Anacardiaceae    | Mango                  | Tree      | A        |
| <i>Melinis minutiflora</i>              | Poaceae          | Molasses grass         | Grass     | A        |
| <i>Metrosideros polymorpha</i>          | Myrtaceae        | 'Ohi'a lehua           | Tree      | E        |
| <i>Mimosa pudica</i>                    | Fabaceae         | Sensitive plant        | Herb      | A        |
| <i>Morinda citrifolia</i>               | Rubiaceae        | Noni                   | Tree      | P, INV   |
| <i>Musa x paradisiaca</i>               | Musaceae         | Banana                 | Shrub     | P        |
| <i>Nephrolepis exaltata hawaiiensis</i> | Nephrolepidaceae | Ni'ani'au              | Fern      | E        |
| <i>Noronhia emarginata</i>              | Oleaceae         | Madagascar olive       | Tree      | A        |
| <i>Oplismenus hirtellus</i>             | Poaceae          | Basket grass           | Grass     | A        |
| <i>Pandanus tectorius</i>               | Pandanaceae      | Hala                   | Tree      | I        |
| <i>Panicum maximum</i>                  | Poaceae          | Guinea grass           | Herb      | A, INV-H |
| <i>Paspalum conjugatum</i>              | Poaceae          | Hilo grass             | Grass     | A, INV-H |
| <i>Paspalum vaginatum</i>               | Poaceae          | Seashore paspalum      | Grass     | A, INV   |
| <i>Passiflora edulis</i>                | Passifloraceae   | Lilikoi                | Vine      | A        |
| <i>Passiflora laurifolia</i>            | Passifloraceae   | Yellow water lemon     | Vine      | A        |
| <i>Peperomia leptostachya</i>           | Piperaceae       | 'Ala'alawainui         | Herb      | I        |
| <i>Persea americana</i>                 | Lauraceae        | Avocado                | Tree      | A        |
| <i>Phlebodium aureum</i>                | Polypodiaceae    | Rabbit's foot fern     | Fern      | A        |
| <i>Phymatosorus grossus</i>             | Polypodiaceae    | Laua'e                 | Fern      | A        |
| <i>Plantago lanceolata</i>              | Plantaginaceae   | Narrow leaved plantain | Herb      | A        |
| <i>Plantago major</i>                   | Plantaginaceae   | Common plantain        | Herb      | A        |
| <i>Plectranthus parviflorus</i>         | Lamiaceae        | 'Ala'alawainui         | Herb      | I        |

**Appendix 1, continued**  
**Plant Species Identified in/Near Ha'ena State Park**

| Scientific Name                   | Family         | Common Name              | Life Form | Status*  |
|-----------------------------------|----------------|--------------------------|-----------|----------|
| <i>Pluchea symphytifolia</i>      | Asteraceae     | Sourbush                 | Shrub     | A        |
| <i>Plumeria sp.</i>               | Apocynaceae    | Plumeria                 | Tree      | A        |
| <i>Polyscias sp.</i>              | Araliaceae     | Panax                    | Tree      | A        |
| <i>Psidium cattleianum</i>        | Myrtaceae      | Strawberry guava         | Tree      | A, INV-H |
| <i>Psidium guajava</i>            | Myrtaceae      | Guava                    | Tree      | A, INV-H |
| <i>Psilotum nudum</i>             | Psilotaceae    | Moa                      | Fern ally | I        |
| <i>Ptychosperma elegans</i>       | Arecaceae      | Solitaire palm           | Tree      | A        |
| <i>Rhapis excelsa</i>             | Arecaceae      | Bamboo palm              | Tree      | A        |
| <i>Ricinus communis</i>           | Euphorbiaceae  | Castor bean              | Tree      | A        |
| <i>Rivina humilis</i>             | Phytolaccaceae | Coral berry              | Shrub     | A        |
| <i>Rosa sp.</i>                   | Rosaceae       | Rose                     | Shrub     | A        |
| <i>Saccharum officinarum</i>      | Poaceae        | Sugar cane               | Grass     | P        |
| <i>Sacciolepis indica</i>         | Poaceae        | Glenwood grass           | Grass     | A        |
| <i>Samanea saman</i>              | Fabaceae       | Monkeypod                | Tree      | A        |
| <i>Scaevola taccada</i>           | Goodeniaceae   | Naupaka                  | Shrub     | I        |
| <i>Schefflera actinophylla</i>    | Araliaceae     | Octopus tree             | Tree      | A, INV-H |
| <i>Schinus terebinthifolius</i>   | Anacardiaceae  | Christmas berry          | Tree      | A, INV-H |
| <i>Senna pendula</i>              | Fabaceae       | Senna                    | Shrub     | A        |
| <i>Setaria gracilis</i>           | Poaceae        | Yellow foxtail           | Grass     | A        |
| <i>Sida acuta</i>                 | Malvaceae      | Sida                     | Shrub     | A        |
| <i>Solanum americanum</i>         | Solanaceae     | Popolo                   | Shrub     | I        |
| <i>Spathodea campanulata</i>      | Bignoniaceae   | African Tulip tree       | Tree      | A        |
| <i>Spathoglottis plicata</i>      | Orchidaceae    | Philippine ground orchid | Herb      | A        |
| <i>Sphenomeris chinensis</i>      | Lindsaeaceae   | Pala'a                   | Fern      | I        |
| <i>Spodias dulcis</i>             | Anacardiaceae  | Otaheite apple           | Tree      | A        |
| <i>Sporobolus indicus</i>         | Poaceae        | West Indian dropseed     | Grass     | A        |
| <i>Stachytarpheta jamaicensis</i> | Verbenaceae    | Jamaica vervain          | Shrub     | A        |
| <i>Synedrella nodiflora</i>       | Asteraceae     | Nodeweed                 | Herb      | A        |
| <i>Syngonium auritum</i>          | Araceae        | Five fingers             | Vine      | A        |
| <i>Syzygium cumini</i>            | Myrtaceae      | Java plum                | Tree      | A        |
| <i>Syzygium jambos</i>            | Myrtaceae      | Rose apple               | Tree      | A        |
| <i>Syzygium malaccense</i>        | Myrtaceae      | Mountain apple           | Tree      | P        |
| <i>Terminalia catappa</i>         | Combretaceae   | False kamani             | Tree      | A        |
| <i>Thespesia populnea</i>         | Malvaceae      | Milo                     | Tree      | I        |
| <i>Tournefortia argentea</i>      | Boraginaceae   | Tree heliotrope          | Tree      | A        |
| <i>Urochloa mutica</i>            | Poaceae        | California grass         | Grass     | A        |
| <i>Verbena litoralis</i>          | Verbenaceae    | Owi                      | Herb      | A        |
| <i>Wedelia trilobata</i>          | Asteraceae     | Wedelia                  | Herb      | A        |

Notes: Non-Polynesian-introduced Alien (A), (P) Polynesian-introduced, Indigenous (I), Endemic (I), Endangered (End)

INV, Likely to be invasive in Hawai'i and on other Pacific Islands as determined by the Hawai'i-Pacific Weed Risk Assessment of the USDA Forest Service, based on published sources describing species biology and behavior in Hawaii and/or other parts of the world.

INV-H Documented to cause significant ecological or economic harm in Hawai'i, as determined from published information on the species' current impacts in Hawai'i.



## Appendix D







# Marine Natural Resources and Recreation Assessment, Hā'ena State Park, Kaua'i, Hawai'i

Prepared for  
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February 2010

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## 1.0 Background

In March 2008, PBR Hawai'i tasked SWCA Environmental Consultants with the description of the marine resources of the Hā'ena State Park. The project encompasses 64 acres within the park boundaries and the adjacent nearshore waters and Kē'e Beach. Information to be provided includes a description of the physical characteristics including shoreline erosion; inventory of biological resources, and an assessment of recreational resources and current visitor impacts. Included in these tasks is a discussion of special design considerations, resource management concepts, and interpretive concepts for marine recreation use.

The overall goal of the project is to plan for a public park that accommodates recreational opportunities, preserves the significant natural, cultural, and scenic resources, and enhances the natural park setting. The objectives of this project include refinement of the draft Community Preferred Master Plan prepared in 1999 by The Keith Companies, Inc., and providing information to support preparation of an EIS for the future development of Hā'ena State Park. The intent is to balance public usage of the park's recreational resources with the protection and preservation of the natural and scenic features and significant cultural resources within, and associated with, the park area.

SWCA conducted extensive literature reviews, and performed brief reconnaissance surveys of marine resources at the park, and compiled geospatial data to prepare resource maps. The report was prepared by Tiffany Thair, B.A., John Ford, M.S., Robert A. Kinzie III, Ph.D., and Ryan Taira, B.A.

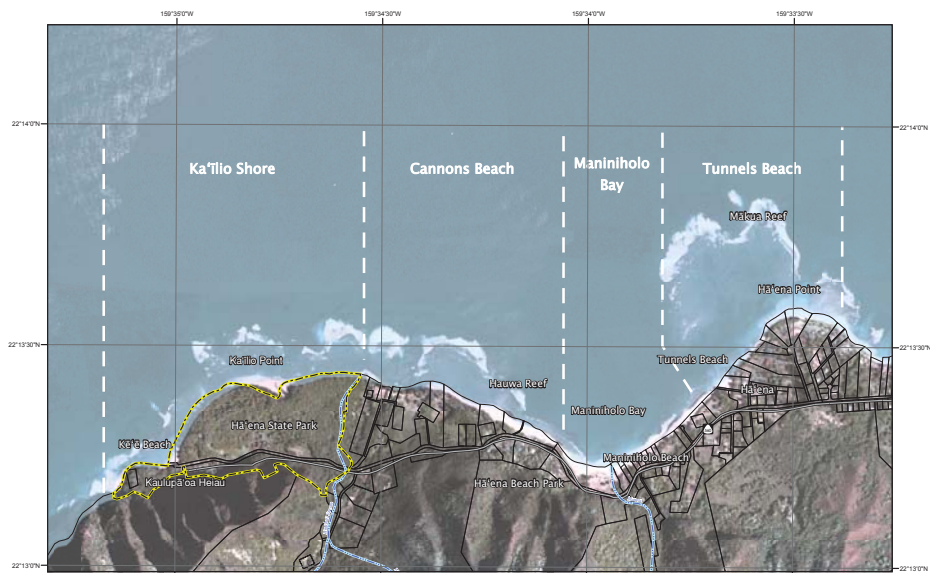
## 2.0 Introduction and Setting of the Coastal Environmental at Hā'ena State Park

Hā'ena State Park is located within Ka'ilio Shore sub-area of Hā'ena (Clark 1992). Four coastal sub-areas are recognized between Kē'e and Hā'ena Point (Figure 1). The beaches of these areas are fringed with scattered beachrock slabs along the water line. The mouth of Limahuli Stream, a small intermittent stream, and freshwater seeps bisect the beach within the Park boundaries. The backbeach area consists of low sand dunes roughly 4 to 8 ft high that are overgrown with ironwood and false kamani trees. The roots of ironwood in many areas are exposed due to erosion by the action of storm waves. Immediately seaward of Kē'e Beach, located within the Ka'ilio Shore, is a shallow lagoon that provides one of the most popular swimming areas in Hawai'i (Clark 1999). The lagoon is formed by a shallow fringing reef platform that joins the shore roughly 200 feet to the east of highway's end at Kē'e Beach.

Clark (1992) provided a comprehensive description of the reef structure within the Park boundaries which remains accurate today. In 2003 and 2007, the Center for Coastal Monitoring and Assessment (CCMA), National Ocean Service, Biogeography Branch, in cooperation with Analytical Laboratories of Hawai'i, published detailed maps of the reef and benthic marine habitat at Hā'ena State Park (Figures 2-4). Sand and reef pavement comprise the dominant marine geomorphologic structures between Kē'e Beach and Maniniholo Bay to the east. From Maniniholo Beach west to Hā'ena Point the reef consists of aggregate reef, scattered coral and rock, and rubble with small patches of reef pavement. The reef pavement is covered with macro-algae, coralline algae, and corals; however, the sandy lagoon floors and channels are uncolonized.

Ocean conditions at the Park are typical of exposed northern coasts in Hawai'i. Between October and May, North Pacific storm swells bring dangerously high surf in excess of 10 feet to the area (Clark 1992). When trade wind swells are prevalent between June and September, surf heights and swells at Hā'ena generally reduced (Clark 1992). North east trade winds are present between 90-95 percent of the year and almost always generate some surf activity on the outer reef margins. Predominant long shore currents run east to west outside the reef. Dangerous rip currents are created in reef channels by storm waves and tidal conditions. Haraguchi (1979) suggested tidal currents ranging from 0.1 to 1.0 knots, and Clark (1992) suggested that such current velocities were not usually a concern for nearshore ocean recreation

activities. Nevertheless, life guards at Kē'e Beach strongly objected to SWCA biologists' plan to conduct snorkel surveys of the outer reef during a day with unusually calm conditions in November 2008.



**Legend**

Ha'ena State Park

Streams

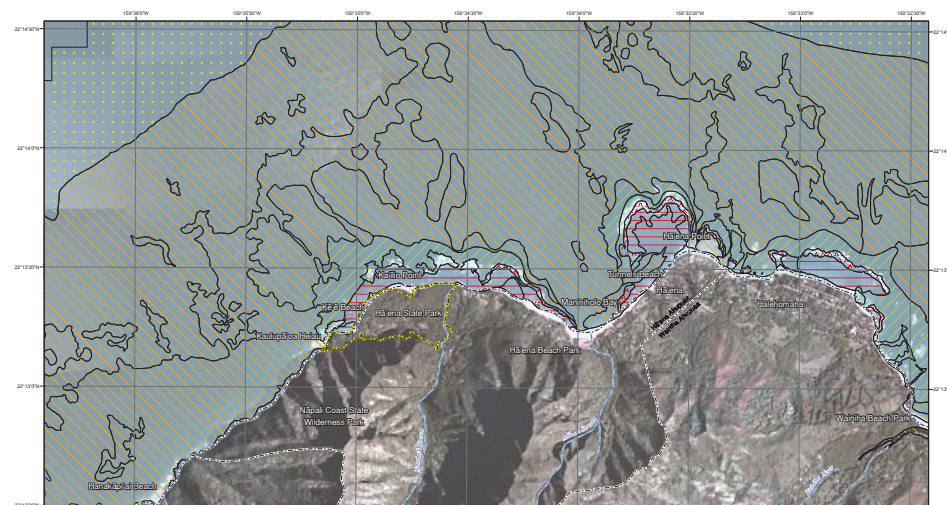
**Figure 1**  
Ha'ena State Park and Shoreline Sub-Areas

Source: State of Hawaii GIS, NOAA, FOG, Clark, I. 1999. Beach and ocean recreation study, Ha'ena, Kauai'. Contract report prepared for Division of State Parks, Department of Land and Natural Resources, State of Hawaii, Honolulu. 49pp.



0 350 500 1,000  
0 50 100 200  
ft  
mi

**SWCA**  
ENVIRONMENTAL CONSULTANTS



**Legend**

Ha'ena State Park

Streams

**Benthic Habitat - Zone**

Algae/Seagrass

Bank/Shelf

Fore Reef

Land

Reef Crest

Reef Flat

Unknown

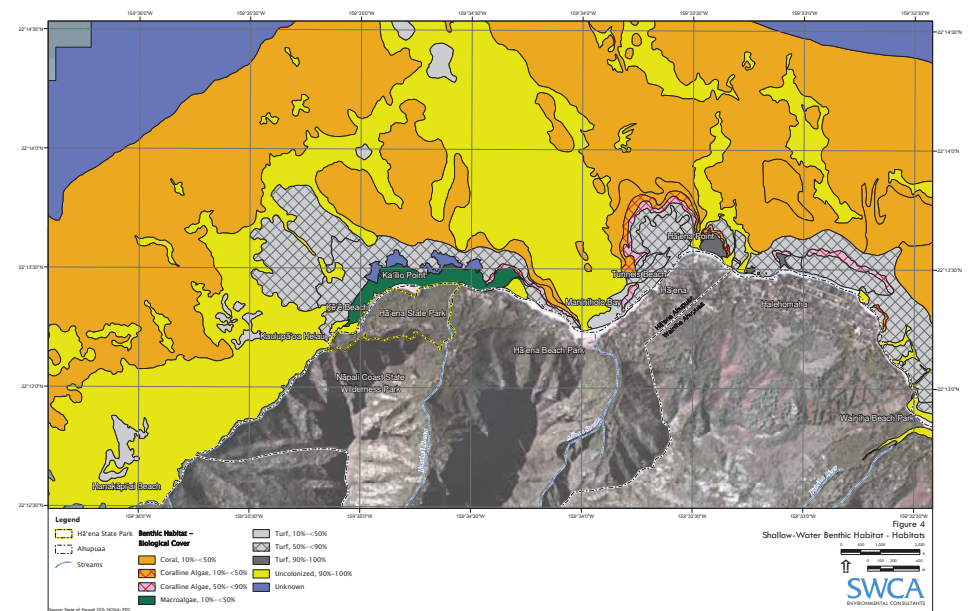
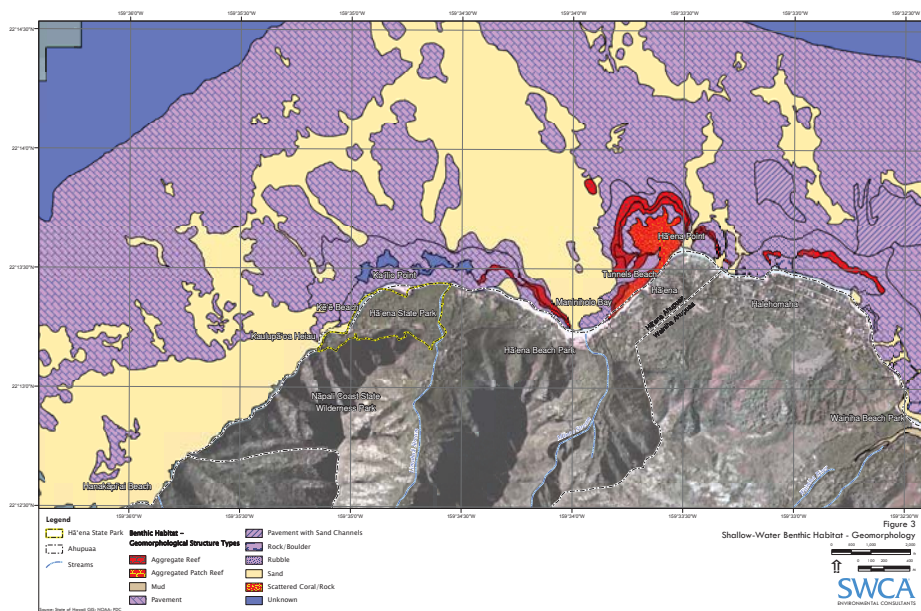
**Figure 2**  
Shallow-Water Benthic Habitat - Zone

Source: State of Hawaii GIS, NOAA, FOG, Clark, I. 1999. Beach and ocean recreation study, Ha'ena, Kauai'. Contract report prepared for Division of State Parks, Department of Land and Natural Resources, State of Hawaii, Honolulu. 49pp.

0 350 500 1,000  
0 50 100 200  
ft  
mi

**SWCA**  
ENVIRONMENTAL CONSULTANTS







### 3.0 Beach Erosion

Kē'e Beach and shoreline of Hā'ena State Park are exposed to high surf during the winter months and occasionally during the summer months. Storm waves are responsible for erosion of sand dunes behind the beach. Waves sweeping across the beach undermine ironwood trees, exposing their roots and occasionally toppling them onto the beach. High surf also generates a powerful rip current that runs out the narrow channel at the west end of the lagoon to the open ocean creating a hazard for swimmers and divers.

To determine the extent of erosion and beach loss, the Hawai'i Shoreline Study, an initiative of the University of Hawai'i (UH) Coastal Geology Group (<http://www.soest.hawaii.edu/coasts/>), provides information on shoreline change data to assist in decision-making for actions affecting the coastal zone. The Surfrider Foundation maintains valuable links to beach erosion resources on its website (<http://www.surfrider.org/>).

The shoreline at Hā'ena State Park is subject to a number of natural hazards including tsunami, storm surge, high winds, coastal erosion, sea-level rise, and high waves. Evaluating changes to the configuration of shorelines helps define zones of avoidance for conservation of sensitive areas, and identify appropriate means to mitigation and control beach loss.

The UH erosion study area, bounded by Nāpali coast on the west and Hā'ena Point on the east, encompasses a total of 166 transects. Here the shoreline consists of carbonate sand, exposed beach rock, and basalt boulders deposited by stream discharge. The fringing reefs at Kē'e, Limahuli, and Hā'ena cause waves to break in various directions along the shore. Figure 5 illustrates the draft results of beach loss studies conducted by the UH Coastal Geology Group in the vicinity of Kē'e Beach and Hā'ena State Park. The UH Coastal Geology Group estimated that the overall rate of beach erosion between Kē'e Beach and Hā'ena State Park is -0.9 ft/yr. Along the eastern-most portion of Hā'ena State Park sand is eroding at an average rate of -1.2 ft/yr, while the central area around Limahuli Stream mouth is eroding at an average rate of -1.0 ft/yr.

The western-most area by Kē'e Beach is eroding at an average rate of -0.6 ft/yr. Figure 5 also illustrates the location of historic beach configurations mapped from previous aerial imagery and registered to a common coordinate system through the use of geographic information systems (GIS) technology.

### 4.0 Water Quality

The marine waters of the Hā'ena State Park are considered Class AA coastal waters by the State Department of Health (DOH) (HAR 11-54). Class AA waters possess high ecological and recreational value. It is the objective of Class AA waters that these remain in their natural pristine state as nearly as possible with an absolute minimum of pollution or alteration of water quality from any human-caused source or actions. To the extent possible, the wilderness character of these areas is to be protected.

Within the defined reef at Hā'ena, Class AA waters are bounded by areas less than 18 meters (60 feet) in depth. Uses to be protected in the class of waters include oceanographic research, the support and propagation of shellfish and other marine life, conservation of coral reefs and wilderness areas, compatible recreation, and aesthetic enjoyment. Until recently, the coastal waters of Hā'ena State Park were not actively monitored by DOH. However, in late 2005, the DOH Clean Water Branch (CWB) and the Hanalei Watershed Hui (HWH) joined in the protection of Kaua'i beaches through a partnership between DOH and the community based organization. Hanalei Watershed Hui's involvement allowed DOH to increase the number of beaches that it monitors on Kaua'i, and the frequency at which they are sampled. Hā'ena Beach Park is one of the beaches covered under this agreement.

Table 1 illustrates the results of initial water quality sampling at Hā'ena State Park. DOH (2008) noted that state standards for enterococci were attained at Hā'ena. The reported parameters for temperature, salinity, dissolved oxygen, pH, and turbidity reflect clean coastal waters within Hawai'i DOH water quality

standards for Class AA waters. Coliform and enterococci levels are not reported here, but were found to be within state standards for Class AA waters.

**Table 1. State of Hawai'i Department of Health water quality monitoring data collected at Kē'e Lagoon within Hā'ena State Park.**

| Date       | Time       | Temp (C) | Salinity (PPT) | DO (mg/l) | DO ( ) | pH   | Turbidity (NTU) |
|------------|------------|----------|----------------|-----------|--------|------|-----------------|
| 1/18/2005  | 8:29:00 AM | 24.09    | 34.52          | 6.13      | 93.2   | 8.17 | 5.47            |
| 8/4/2005   | 8:41:00 AM | 24.84    | 34.41          | 5.06      | 78     | 7.92 | 0.7             |
| 8/10/2005  | 8:46:00 AM | 26.16    | 34.4           | 5.38      | 85.1   | 7.97 | 0.84            |
| 8/17/2005  | 8:50:00 AM | 25.73    | 34.53          | 4.58      | 71.9   | 7.95 | 0.69            |
| 8/31/2005  | 8:59:00 AM | 26.82    | 34.44          | 5.26      | 83.9   | 8    | 0.79            |
| 9/8/2005   | 8:53:00 AM | 25.95    | 34.39          | 5.8       | 91.1   | 8.12 | 1.61            |
| 9/14/2005  | 8:52:00 AM | 26.02    | 34.17          | 5.99      | 94     | 8.12 | 3.27            |
| 9/21/2005  | 8:52:00 AM | 26.13    | 33.66          | 5.59      | 87.9   | 8.07 | 2.47            |
| 9/28/2005  | 8:34:00 AM | 25.61    | 33.78          | 5.74      | 89.3   | 8.16 | 1.08            |
| 12/12/2006 | 8:03:00 AM | 24.78    | 35             | 6.12      | 91.2   | 8.03 | 2.37            |

### 5.0 Marine Biological Resources

Clark (1992) presented a general description of marine resources within the Park boundaries. The results of five previous marine studies of Kē'e Beach and reef (The Keith Companies 2001; Stepath 1999); Limahuli Beach and reef (Jokiel and Brown 2000); and nearby Hanalei Bay (Friedlander and Parrish 1998) were cited to prepare a description of the nearshore marine environment. These studies were supplemented with a brief snorkel reconnaissance of the Kē'e Lagoon and inner reef flat conducted on November 3, 2008 by SWCA biologists Dr. Robert Kinzie and John Ford. Additional anecdotal information on species observed by others was obtained from oral histories recorded by Maly and Maly (2003), and related records of interviews with area residents and fishermen (PBR database).

Eighty (80) fish species representing 26 families have been reported from nearshore waters along the north shore of Kaua'i by the four previous surveys referenced above (Table 2). Species abundance and diversity within the Kē'e Lagoon and reef flat is lower than that found at the outer reef/offshore sites (Jokiel and Brown 2000, Stepath 1999, this study), with only 46 species of fishes occurring here. Kē'e Lagoon and reef flat provide an excellent habitat for juvenile reef fishes. Fish assemblages in the Limahuli offshore study site had the greatest number of individuals and highest biomass observed on fish transects around Kaua'i in 1999 (Friedlander 2000). Wrasses, surgeonfishes, and damselfishes comprised the majority of the species observed in the lagoon and along the reef flat at Kē'e. Small schools of weke'ula (*Mulloidichthys vanicolensis*), hinalae lau-wili (*Thalassoma duperrey*), ma'i'i'i (*Acanthurus nigrofasciatus*), omaka (*Stethojulis balteata*), and manini (*Acanthurus triostegus sandvicensis*) were commonly observed within the lagoon and reef flat. For many species, juveniles appeared to be very common along the reef flat.

Fish diversity is much greater on the seaward side of the reef crest and studies conducted nearby, off Limahuli Stream and in Hanalei Bay, recorded over 160 species of fishes in these areas (Jokiel and Brown 2000, Friedlander and Parrish 1998). Friedlander (2000) found that fish biomass at the Limahuli offshore site to be more than twice that observed at the site with the second largest biomass (Ho'ai Bay near Po'ipu offshore) and an order of magnitude greater than the inshore habitat at Limahuli. Among 60 reefs

monitored by the Hawai'i Coral Reef Assessment & Monitoring Program (CRAMP), the shallow reef station (1m) at Limahuli ranked 58 in species richness, 51 in density, 57 in biomass, and 57 in diversity. Limahuli 10m ranked 5 in species richness, 24 in density, 8 in biomass, and 21 in diversity. The most abundant species were the hinalea lauili (*Thalassoma duperrey*) and the kole (*Ctenochaetus strigosus*) at the 3m and 10m reefs respectively. The species with the highest biomass were the manini (*Acanthurus triostegus*) and the māikoiko (*Acanthurus leucopareius*) at the 3m and 10m reefs respectively (Jokiel and Brown 2000).



TABLE 2. List of marine shore fishes observed within and adjacent to Kē'ē Lagoon and Reef Flat, Hā'ena State Park

| Fish Species                           | Hawaiian or Common Name    | SWCA                                 | Stepath (1999)                       | The Keith Companies (2001)        |                                 | CRAMP Data (1998-2004) |                         | Friedlander et al 2003 |
|----------------------------------------|----------------------------|--------------------------------------|--------------------------------------|-----------------------------------|---------------------------------|------------------------|-------------------------|------------------------|
|                                        |                            | Present/Absent<br>A=adult/U=juvenile | Index of Relative<br>Dominance (IRD) | Present/Absent<br>Shallow Inshore | Present/Absent<br>Seaward Slope | #125 sq m<br>1m depth  | #125 sq m<br>10 m depth |                        |
| <i>Abudefduf abdominalis</i>           | mamo                       | A                                    | 2                                    |                                   |                                 |                        |                         | 60.13 (14)             |
| <i>Abudefduf sordidus</i>              | kupipi                     | A                                    | 2                                    | ✓                                 |                                 |                        |                         |                        |
| <i>Acanthurus achilles</i>             | paku/ku'i                  | A                                    | 2                                    |                                   |                                 |                        |                         |                        |
| <i>Acanthurus blochii</i>              | pualu                      | A                                    |                                      |                                   |                                 | 1.5                    |                         |                        |
| <i>Acanthurus dussumieri</i>           | palani                     |                                      |                                      | ✓                                 |                                 | 1.0                    |                         |                        |
| <i>Acanthurus leucopareus</i>          | maikoko                    | A                                    | 5                                    |                                   | ✓                               | 147.27 (7)             |                         |                        |
| <i>Acanthurus nigrotulatus</i>         | ma'i'i                     |                                      | 168                                  | ✓                                 |                                 | 512.07 (1)             |                         |                        |
| <i>Acanthurus nigrorus</i>             | maiko                      |                                      |                                      | ✓                                 | ✓                               |                        |                         |                        |
| <i>Acanthurus olivaceus</i>            | n'ena'e                    |                                      |                                      | ✓                                 |                                 | 0.5                    | 10.0                    | 85.23 (11)             |
| <i>Acanthurus triostegus</i>           | marini                     | A                                    | 757                                  | ✓                                 | ✓                               | 18.5                   | 2.5                     | 88.87 (10)             |
| <i>Anampses cuvier</i>                 | opule                      |                                      |                                      | ✓                                 |                                 | 1.5                    |                         |                        |
| <i>Aulostomus chinensis</i>            | nunu                       |                                      |                                      | ✓                                 |                                 | 0.5                    |                         |                        |
| <i>Bodianus bilunulatus</i>            | at'awa                     |                                      |                                      | ✓                                 |                                 | 0.5                    | 1.0                     |                        |
| <i>Calotomus carolinus</i>             | ponuhunuhu                 | A, J                                 |                                      | ✓                                 |                                 | 0.5                    |                         |                        |
| <i>Cathartes dumerilii</i>             | o'i'i                      |                                      |                                      | ✓                                 |                                 | 1.0                    |                         |                        |
| <i>Canthigaster amboinensis</i>        | Ambon toby                 |                                      |                                      | ✓                                 |                                 | 2.5                    |                         |                        |
| <i>Canthigaster jactator</i>           | Hawaiian whitespotted toby | A                                    |                                      |                                   |                                 | 1.0                    | 6.0                     |                        |
| <i>Centropyge potteri</i>              | Potter's angelfish         |                                      |                                      |                                   |                                 | 1.5                    |                         |                        |
| <i>Cephalophis argus</i>               | roi                        |                                      |                                      |                                   |                                 | 1.0                    | 40.99 (17)              |                        |
| <i>Caranx melampygus</i>               | omlu                       | J                                    |                                      | ✓                                 | ✓                               |                        |                         |                        |
| <i>Chaetodon auriga</i>                | kikakapu                   |                                      |                                      |                                   |                                 | 1.0                    |                         |                        |
| <i>Chaetodon fremblii</i>              | kikakapu                   | A                                    |                                      |                                   |                                 | 0.5                    |                         |                        |
| <i>Chaetodon miliaris</i>              | lauilauili                 |                                      |                                      | ✓                                 |                                 |                        |                         |                        |
| <i>Chaetodon multicinctus</i>          | kikakapu                   |                                      |                                      |                                   |                                 | 3.0                    |                         |                        |
| <i>Chaetodon quadrimaculatus</i>       | lauhau                     | A                                    |                                      |                                   |                                 | 0.5                    |                         |                        |
| <i>Chaetodon unimaculatus</i>          | lauhau                     |                                      |                                      |                                   |                                 | 1.0                    |                         |                        |
| <i>Chlorurus perspicillatus</i>        | uhu ululi                  | A, J                                 |                                      | ✓                                 | ✓                               |                        |                         | 66.40 (13)             |
| <i>Chlorurus sordidus</i>              | uhu                        | A, J                                 |                                      |                                   |                                 |                        |                         | 155.29 (6)             |
| <i>Chromis hanui</i>                   | chocolate-dipped chromis   |                                      |                                      |                                   |                                 | 0.5                    |                         |                        |
| <i>Chromis ovalis</i>                  | oval chromis               |                                      |                                      | ✓                                 |                                 | 8.0                    |                         |                        |
| <i>Chromis vanderbilti</i>             | blackfin chromis           |                                      |                                      | ✓                                 |                                 |                        |                         | 28.29 (20)             |
| <i>Cirrhitops fasciatus</i>            | pinkie                     |                                      | 2                                    | ✓                                 |                                 |                        |                         |                        |
| <i>Cirrhitus pinnulatus</i>            | po'po'a                    |                                      |                                      | ✓                                 |                                 | 0.5                    |                         |                        |
| <i>Conger cinereus</i>                 | puihi uha                  | Dead on beach                        |                                      |                                   |                                 |                        |                         |                        |
| <i>Coris flavovittata</i>              | hihi                       |                                      | 2                                    |                                   |                                 |                        |                         |                        |
| <i>Coris venusta</i>                   | hinalea                    |                                      | 28                                   | ✓                                 |                                 | 4.0                    |                         |                        |
| <i>Ctenochaetus strigosus</i>          | kole                       |                                      |                                      | ✓                                 |                                 | 46.5                   | 408.95 (3)              |                        |
| <i>Entomacrodus marmoratus</i>         | pao'o                      | A                                    |                                      |                                   |                                 |                        |                         |                        |
| <i>Fistularia commersoni</i>           | nunu peke                  | J                                    | 35                                   |                                   |                                 |                        |                         |                        |
| <i>Gomphosus varius</i>                | hinalea tiwi               | J                                    | 9                                    |                                   |                                 |                        |                         |                        |
| <i>Halichoeres omatissimus</i>         | ohua                       | A                                    |                                      |                                   |                                 | 0.5                    | 3.0                     |                        |
| <i>Kuhlia xenura</i>                   | aholehole                  |                                      |                                      | ✓                                 |                                 |                        |                         |                        |
| <i>Kyphosus sp</i>                     | nenu                       | A                                    | 2                                    | ✓                                 |                                 | 26.0                   |                         |                        |
| <i>Labroides phyllorhynchus</i>        | Hawaiian cleaner wrasse    | A                                    |                                      |                                   |                                 | 4.5                    |                         |                        |
| <i>Lutjanus kasmira</i>                | la'ape                     |                                      |                                      |                                   |                                 | 1.0                    |                         |                        |
| <i>Melichthys niger</i>                | humuhumu 'ele 'ele         |                                      |                                      |                                   |                                 | 10.5                   | 487.72 (2)              |                        |
| <i>Monotaxis grandoculis</i>           | mu                         |                                      |                                      | ✓                                 |                                 | 0.5                    |                         |                        |
| <i>Multididichthys vancouverensis</i>  | weke 'ula                  |                                      |                                      | ✓                                 |                                 | 5.0                    |                         |                        |
| <i>Multididichthys flavolineatus</i>   | weke 'a'a                  | A, J                                 | 5                                    | ✓                                 |                                 |                        |                         |                        |
| <i>Myripristis sp.</i>                 | mempachi                   |                                      |                                      | ✓                                 |                                 |                        |                         |                        |
| <i>Naso literatus</i>                  | umaumalei                  | A                                    |                                      | ✓                                 |                                 |                        |                         |                        |
| <i>Naso unicornis</i>                  | kala                       | A                                    |                                      | ✓                                 |                                 | 1.5                    | 216.65 (5)              |                        |
| <i>Paracirrhites arcatus</i>           | pinkie                     |                                      |                                      | ✓                                 |                                 | 3.0                    | 34.42 (18)              |                        |
| <i>Paracirrhites forsteri</i>          | hihi piliko'a              |                                      |                                      | ✓                                 |                                 | 1.0                    |                         |                        |
| <i>Parupeneus bifasciatus</i>          | munu                       |                                      |                                      | ✓                                 |                                 | 0.5                    |                         |                        |
| <i>Parupeneus cyclostomus</i>          | moano kea                  |                                      |                                      | ✓                                 |                                 | 2.0                    |                         |                        |
| <i>Parupeneus multifasciatus</i>       | moano                      | A                                    |                                      | ✓                                 |                                 | 11.5                   | 42.38 (16)              |                        |
| <i>Parupeneus pleurostigma</i>         | malu                       |                                      |                                      |                                   |                                 | 1.0                    |                         |                        |
| <i>Parupeneus porphyreus</i>           | kumu                       | A                                    | 2                                    | ✓                                 | ✓                               |                        |                         |                        |
| <i>Pervagor spilosoma</i>              | o'i'i uwi/uwi              |                                      |                                      |                                   |                                 |                        |                         |                        |
| <i>Plagiotremus goslinei</i>           | Gosline's tangblenny       | A                                    | 2                                    | ✓                                 |                                 |                        | 1.0                     |                        |
| <i>Platybelone argalus</i>             | aha                        |                                      |                                      | ✓                                 |                                 |                        |                         |                        |
| <i>Plectrogyphidodon imparipennis</i>  | bright-eyed damselfish     | A                                    | 354                                  | ✓                                 |                                 | 1.5                    |                         |                        |
| <i>Plectrogyphidodon johnstonianus</i> | blue-eyed damselfish       |                                      |                                      | ✓                                 |                                 | 0.5                    |                         |                        |
| <i>Placanthus meeki</i>                | awewe                      |                                      |                                      |                                   |                                 |                        |                         |                        |
| <i>Pseudochelinus octotaenia</i>       | eightstripe wrasse         |                                      |                                      |                                   |                                 | 1.0                    |                         |                        |
| <i>Rhinecanthus rectangulus</i>        | humuhumu nukunuku a pua'a  | A                                    | 21                                   | ✓                                 |                                 | 3.0                    | 33.28 (19)              |                        |
| <i>Scarus psittacus</i>                | uhu                        |                                      |                                      |                                   |                                 |                        | 67.86 (12)              |                        |
| <i>Scarus rubrivittatus</i>            | palakakaka                 | A, J                                 |                                      |                                   |                                 | 0.5                    | 101.68 (8)              |                        |
| <i>Scorpaenopsis sp.</i>               | scorpionfish               |                                      |                                      | ✓                                 |                                 |                        |                         |                        |
| <i>Spratelloides delicatulus</i>       | piha                       | A                                    |                                      | ✓                                 |                                 |                        |                         |                        |
| <i>Stegastes fasciatus</i>             | Pacific Gregory            |                                      | 209                                  | ✓                                 | ✓                               | 9.0                    | 52.83 (15)              |                        |
| <i>Stethojulis ballata</i>             | omaka                      | A                                    | 168                                  | ✓                                 |                                 | 28.0                   | 1.5                     |                        |
| <i>Sufflamen bursa</i>                 | humuhumu lei               |                                      |                                      |                                   |                                 | 3.5                    |                         |                        |
| <i>Thalassoma ballieu</i>              | hinalea luahine            |                                      |                                      | ✓                                 |                                 | 2.5                    |                         |                        |
| <i>Thalassoma duperney</i>             | hinalea lauili             | A, J                                 | 412                                  | ✓                                 | ✓                               | 46.0                   | 21.5                    | 338.27 (4)             |
| <i>Thalassoma purpuraceum</i>          | hou                        |                                      | 2                                    | ✓                                 | ✓                               |                        |                         |                        |
| <i>Thalassoma triebatum</i>            | awela                      | A, J                                 | 442                                  | ✓                                 |                                 | 1.0                    |                         |                        |
| <i>Zanclus cornutus</i>                | kikihiki                   | A                                    |                                      | ✓                                 |                                 |                        | 1.0                     |                        |
| <i>Zebrafascia flavescens</i>          | lau'ipala                  |                                      |                                      |                                   |                                 |                        | 92.10 (9)               |                        |

Fish biomass at the Limahuli offshore site was dominated by large mobile herbivores, mainly surgeonfishes, triggerfishes, and parrotfishes. On the shallow Limahuli reef flat, small wrasses and surgeonfishes made up most of the fish biomass. Friedlander (2000) attributed the high standing stock of fishes observed at this site to the high spatial complexity of the habitat and the relatively light fishing pressure. During winter when high waves pound the exposed north shore of Kaua'i, fishing pressure is further reduced. This situation creates a de facto marine preserve along the north shore for nearly six months each year by excluding fishers from access to nearshore waters within the Park. Little comparable information on the marine invertebrates of Kē'ē Lagoon and reef is available from previous studies; however, the CRAMP studies have monitored benthic invertebrates at Limahuli (Jokiel and Brown 2000) (Table 3). Coral cover rank is 36 among 60 reefs studied statewide. Coral cover was found to be very similar between the 2 sampling periods. Coverage by macro-algae was found to be relatively low; however, there was a high percentage of crustose coralline algae and turf algae present. Despite the proximity to the mouth of Limahuli Stream, a low percentage of fine sediments with low content of terrigenous material was found in this high wave energy environment. No rare or unusual species were observed.

The CRAMP coral cover rank for mid-water (10m or 33 ft) habitat at Limahuli is 31 among the 60 reefs studied statewide (Table 4). As with the shallow station, coral cover was very similar between the 2 sampling periods, and macro-algae coverage was found to be relatively low. As with the shallow reef station, there was a high percentage of crustose coralline algae and turf algae.

Table 3. CRAMP shallow water (1m) video-transect data of coral cover for Limahuli Reef of percent cover over between 1999 and 2004. Source: Paul Jokiel, HIMB.

| Video Transect data (1m): Cover: Coral Species |             | 6 7 1999   |             | 7 15 2000  |             | 6 3 2002    |             | 9 7 2004   |    |
|------------------------------------------------|-------------|------------|-------------|------------|-------------|-------------|-------------|------------|----|
| Mean                                           | SD          | Mean       | SD          | Mean       | SD          | Mean        | SD          | Mean       | SD |
| <i>Cyphastrea ocellina</i>                     | 0           | 0          | 0           | 0          | 0           | 0           | 0           | 0          | 0  |
| <i>Fungia scutaria</i>                         | 0           | 0          | 0           | 0          | 0           | 0           | 0           | 0          | 0  |
| <i>Lepastrea purpurea</i>                      | 0           | 0          | 0           | 0          | 0           | 0           | 0           | 0          | 0  |
| <i>Montipora flabellata</i>                    | 2.2         | 1.5        | 2.0         | 1.4        | 3.2         | 1.8         | 1.9         | 1.4        |    |
| <i>Montipora patula</i>                        | 0.8         | 0.8        | 0.9         | 1.1        | 0.1         | 0.2         | 0.3         | 0.7        |    |
| <i>Montipora studeri</i>                       | 0           | 0          | 0           | 0          | 0           | 0           | 0           | 0          |    |
| <i>Montipora capitata</i>                      | 0.0         | 0.1        | 0           | 0          | 0.1         | 0.3         | 0.0         | 0.1        |    |
| <i>Pavona duerdeni</i>                         | 0           | 0          | 0           | 0          | 0           | 0           | 0.0         | 0.1        |    |
| <i>Pavona maldivensis</i>                      | 0           | 0          | 0           | 0          | 0           | 0           | 0           | 0          |    |
| <i>Pavona varians</i>                          | 0           | 0          | 0           | 0          | 0           | 0           | 0           | 0          |    |
| <i>Pocillopora damicornis</i>                  | 0           | 0          | 0           | 0          | 0           | 0           | 0           | 0          |    |
| <i>Pocillopora eydouxi</i>                     | 0           | 0          | 0           | 0          | 0           | 0           | 0           | 0          |    |
| <i>Pocillopora ligulata</i>                    | 0           | 0          | 0           | 0          | 0           | 0           | 0           | 0          |    |
| <i>Pocillopora meandrina</i>                   | 0.1         | 0.2        | 0.5         | 0.6        | 0.9         | 1.6         | 0.1         | 0.1        |    |
| <i>Porites brighami</i>                        | 0.7         | 1.0        | 1.1         | 0.6        | 1.4         | 1.5         | 0.1         | 0.1        |    |
| <i>Porites compressa</i>                       | 0           | 0          | 0.3         | 1.1        | 0.2         | 0.6         | 0           | 0          |    |
| <i>Porites evermanni</i>                       | 0           | 0          | 0           | 0          | 0           | 0           | 0           | 0          |    |
| <i>Porites lichen</i>                          | 0           | 0          | 0           | 0          | 0           | 0           | 0           | 0          |    |
| <i>Porites lobata</i>                          | 11.1        | 7.2        | 9.7         | 3.7        | 16.8        | 10.6        | 14.8        | 8.1        |    |
| <i>Porites rus</i>                             | 0           | 0          | 0           | 0          | 0           | 0           | 0           | 0          |    |
| <i>Psammodora nierstraszi</i>                  | 0           | 0          | 0           | 0          | 0           | 0           | 0           | 0          |    |
| <b>Total Coral</b>                             | <b>14.9</b> | <b>7.5</b> | <b>14.5</b> | <b>5.1</b> | <b>22.8</b> | <b>11.4</b> | <b>17.2</b> | <b>8.5</b> |    |
| <b>Species Richness</b>                        | <b>7</b>    |            | <b>6</b>    |            | <b>8</b>    |             | <b>9</b>    |            |    |
| Macro-algae                                    | 1.0         | 1.3        | 0.3         | 0.5        | 0.4         | 0.5         | 0.2         | 0.1        |    |

Abbott and Hunter (2000) conducted a statewide study to document the location, abundance, and distribution of alien and invasive algae species. A primary objective of their research was to map the distribution of the most prominent alien and invasive species of algae in the state to enable managers to track rates of expansion and invasion of new sites in the future. One of their field research sites included Ka'ilio Point at Hā'ena. No invasive species of marine algae were found on the reef during their studies.

A complete list of algae observed by Abbott and Hunter (2000) within 0 – 5 m (0 – 16 ft) depth in 2000 and 2002 surveys appears in Table 5.

**Table 4. CRAMP mid-water (10m) video-transect data of coral cover for Limahuli Reef of percent cover over between 1999 and 2004. Source: Paul Jokiel, HIMB.**

| Video Transect data<br>(10 m): Cover:<br>Coral Species | 8 4 1999    |            | 7 11 2000   |            | 6 3 2002    |            | 9 7 2004    |            |
|--------------------------------------------------------|-------------|------------|-------------|------------|-------------|------------|-------------|------------|
|                                                        | Mean        | SD         | Mean        | SD         | Mean        | SD         | Mean        | SD         |
| <i>Cyphastrea ocellina</i>                             | 0           | 0          | 0           | 0          | 0           | 0          | 0           | 0          |
| <i>Fungia scutaria</i>                                 | 0           | 0          | 0           | 0          | 0           | 0          | 0           | 0          |
| <i>Leptastrea purpurea</i>                             | 0           | 0          | 0           | 0          | 0.20        | 0.63       | 0           | 0          |
| <i>Montipora flabellata</i>                            | 1.8         | 2.4        | 1.1         | 1.2        | 0.7         | 1.3        | 0.4         | 0.6        |
| <i>Montipora patula</i>                                | 14.5        | 7.4        | 17.5        | 8.8        | 22.2        | 8.4        | 20.6        | 9.1        |
| <i>Montipora studeri</i>                               | 0           | 0          | 0           | 0          | 0.2         | 0.7        | 0           | 0          |
| <i>Montipora capitata</i>                              | 0.1         | 0.1        | 0.5         | 0.8        | 0.1         | 0.1        | 0.2         | 0.2        |
| <i>Pavona duerdeni</i>                                 | 0           | 0          | 0.0         | 0.1        | 0.1         | 0.1        | 0.0         | 0.1        |
| <i>Pavona maldivensis</i>                              | 0           | 0          | 0           | 0          | 0           | 0          | 0           | 0          |
| <i>Pavona varians</i>                                  | 0.0         | 0.1        | 0.2         | 0.3        | 0.0         | 0.1        | 0.3         | 0.5        |
| <i>Pocillopora damicornis</i>                          | 0           | 0          | 0           | 0          | 0           | 0          | 0           | 0          |
| <i>Pocillopora eydouxi</i>                             | 0           | 0          | 0.2         | 0.7        | 0.6         | 1.9        | 0           | 0          |
| <i>Pocillopora ligulata</i>                            | 0           | 0          | 0           | 0          | 0           | 0          | 0           | 0          |
| <i>Pocillopora meandrina</i>                           | 0.6         | 0.7        | 0.6         | 0.8        | 0.6         | 0.9        | 0.9         | 0.9        |
| <i>Porites brighami</i>                                | 0.0         | 0.1        | 0.0         | 0.0        | 0           | 0          | 0           | 0          |
| <i>Porites compressa</i>                               | 0.1         | 0.3        | 0.0         | 0.1        | 0           | 0          | 0           | 0          |
| <i>Porites evermanni</i>                               | 0           | 0          | 0           | 0          | 0           | 0          | 0           | 0          |
| <i>Porites lichen</i>                                  | 0           | 0          | 0           | 0          | 0           | 0          | 0.1         | 0.1        |
| <i>Porites lobata</i>                                  | 2.4         | 6.3        | 0.1         | 0.3        | 0.3         | 0.6        | 0.3         | 0.5        |
| <i>Porites rus</i>                                     | 0           | 0          | 0           | 0          | 0           | 0          | 0           | 0          |
| <i>Psammocora nierstraszi</i>                          | 0           | 0          | 0           | 0          | 0           | 0          | 0           | 0          |
| <b>Total Coral</b>                                     | <b>19.5</b> | <b>6.7</b> | <b>20.4</b> | <b>8.9</b> | <b>25.1</b> | <b>8.2</b> | <b>22.7</b> | <b>8.7</b> |
| <b>Species Richness:</b>                               | <b>8</b>    |            | <b>9</b>    |            | <b>10</b>   |            | <b>9</b>    |            |
| Macro-algae                                            | 0.3         | 0.8        | 0.2         | 0.3        | 0           | 0          | 0.1         | 0.1        |

## 6.0 Endangered Marine Species and Habitats

Endangered humpback whales (*Megaptera novaeangliae*) are found seasonally in the offshore waters of Kaua'i's north shore. The marine waters at Hā'ena State Park lie within the Hawaiian Humpback Whale National Marine Sanctuary established under Subtitle C of Public Law 102-587, as amended by Pub. L. 104-283. The sanctuary boundaries of the Kaua'i unit consist of the submerged lands and waters seaward from the shoreline, cutting across the mouths of rivers and streams to the 100-fathom (183 meter) isobath from Ka'ilio Point eastward to Mōkōlea Point (Figure 6).

Among the goals and objectives of the National Marine Sanctuaries Program are to support and coordinate long-term scientific research on the resources on these marine areas; to enhance public awareness and wise use of the areas; and to give particular attention to the protection of the area's natural resource and ecosystem values.

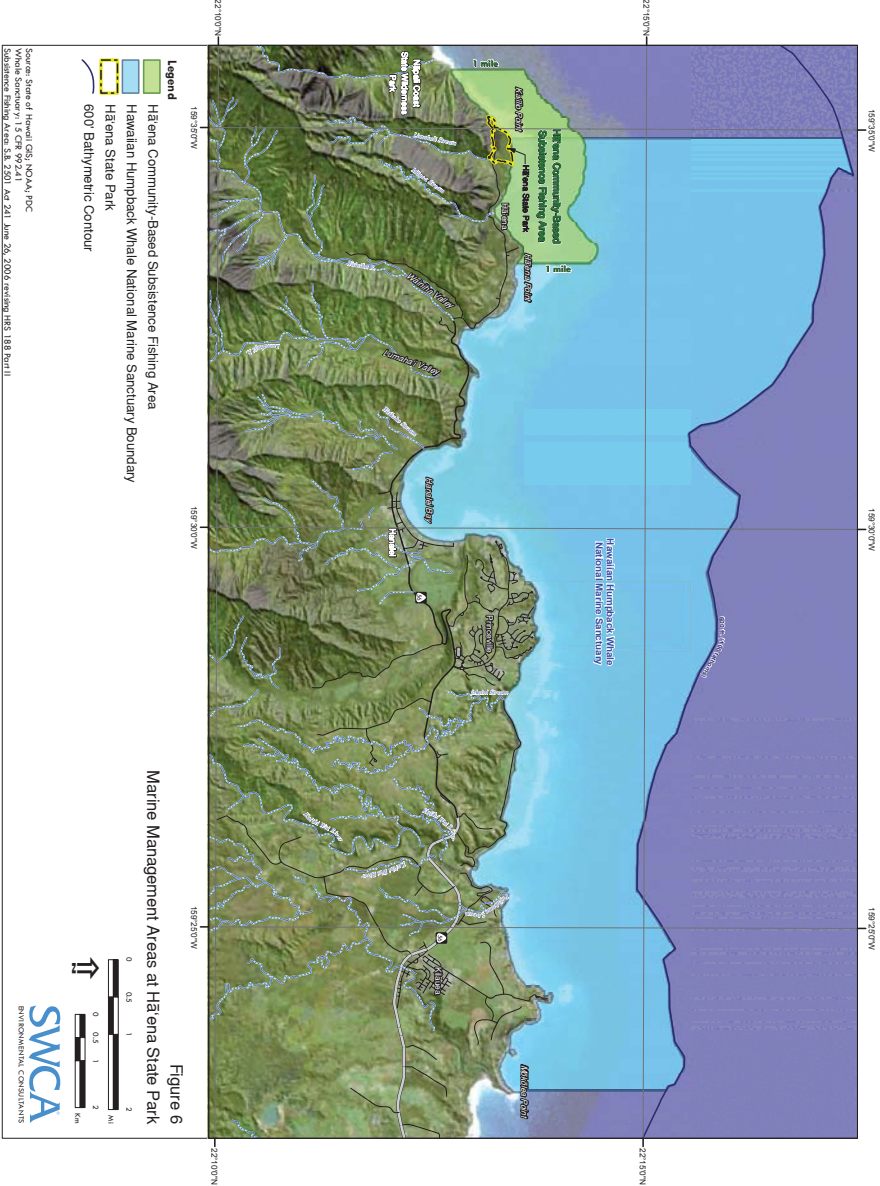
The Hawaiian monk seal (*Monachus schauinslandi*), was listed as an endangered species pursuant to the Endangered Species Act (ESA) on November 23, 1976 (41 FR 51612) and remains listed as endangered. Hawaiian monk seals, regular residents of the Northwest Hawaiian Islands, began appearing more frequently on Kaua'i and Ni'ihau beaches in the 1960's. The National Marine Fisheries Service (NMFS) believes that the total Hawaiian monk seal population is at its lowest level in recorded history and it is estimated that about 1,200 individuals are alive today. They are distributed predominantly in six Northwestern Hawaiian Islands (NWHI), with subpopulations at French Frigate Shoals, Laysan and Lisianski Islands, Pearl and Hermes Reef, and Midway and Kure Atoll. Small numbers also occur at Necker, Nihoa, and in the Main Hawaiian Islands (MHI). In 2005, the total number of individual monk seals in the MHI was estimated to be 77.

The number of monk seals born in the MHI has increased since the mid-1990 (<http://www.fpir.noaa.gov/>). In 2006 and 2007 there were 12 and 13 pups born, respectively, within the MHI. Scientists believe that Hawaiian monk seals are beginning to repopulate the MHI. Only a few females are actually known to have given birth on popular public beaches.



Table 5. Macroalgae observed at Ka'ilio Point, Hā'ena (Abbott and Hunter 2000).

| REEF FLAT   |                                   | 0 5 m (0 16 ft) DEPTH |                                  |
|-------------|-----------------------------------|-----------------------|----------------------------------|
| GREEN ALGAE | <i>Bornetella sphaerica</i>       | GREEN ALGAE           | <i>Boodlea composita</i>         |
|             | <i>Bryopsis pennata</i>           |                       | <i>Caulerpa racemosa</i>         |
|             | <i>Caulerpa taxifolia</i>         |                       | <i>Caulerpa taxifolia</i>        |
|             | <i>Cladophoropsis herpestica</i>  |                       | <i>Chaetomorpha antennia</i>     |
|             | <i>Codium arabicum</i>            |                       | <i>Codium edule</i>              |
|             | <i>Dictyosphaeria cavernosa</i>   |                       | <i>Dictyosphaeria cavernosa</i>  |
|             | <i>Dictyosphaeria versluysii</i>  |                       | <i>Dictyosphaeria versluysii</i> |
|             | <i>Enteromorpha</i> sp.           |                       | <i>Enteromorpha flexuosa</i>     |
|             | <i>Halimeda discoidea</i>         |                       | <i>Halimeda discoidea</i>        |
|             | <i>Microdictyon setchellianum</i> |                       | <i>Neomeris annulata</i>         |
|             | <i>Neomeris vanbosseae</i>        |                       | <i>Ulva fasciata</i>             |
|             | <i>Siphonocladus tropicus</i>     |                       | <i>Valonia aggregophila</i>      |
|             | <i>Dictyota acutiloba</i>         | BROWN ALGAE           | <i>Colpomenia sinuosa</i>        |
|             | <i>Dictyota ceylanica</i>         |                       | <i>Dictyota friabilis</i>        |
| BROWN ALGAE | <i>Dictyota friabilis</i>         |                       | <i>Lobophora variegata</i>       |
|             | <i>Padina</i> sp.                 |                       | <i>Padina japonica</i>           |
|             | <i>Turbinaria ornata</i>          |                       | <i>Rosenvingea intricata</i>     |
|             | <i>Vaughaniella stage</i>         |                       | <i>Sargassum echinocarpum</i>    |
|             | <i>Dictyota acutiloba</i>         |                       | <i>Sargassum polyphyllum</i>     |
|             | <i>Dictyota ceylanica</i>         |                       | <i>Stypodium hawaiiensis</i>     |
|             | <i>Dictyota friabilis</i>         |                       | <i>Turbinaria ornata</i>         |
|             | <i>Padina</i> sp.                 | RED ALGAE             | <i>Asparagopsis taxiformis</i>   |
|             | <i>Turbinaria ornata</i>          |                       | <i>Botryocladia skottsbergii</i> |
|             | <i>Vaughaniella stage</i>         |                       | <i>Dasya iridescens</i>          |
|             | <i>Acanthophora spicifera</i>     |                       | <i>Falkenbergia</i>              |
|             | <i>Actinotrichia fragilis</i>     |                       | <i>Galaxaura marginata</i>       |
|             | <i>Amansia glomerata</i>          |                       | <i>Galaxaura rugosa</i>          |
|             | <i>Amphiroa valonioides</i>       |                       | <i>Gracilaria</i> sp.            |
|             | <i>Centroceras clavulatum</i>     |                       | <i>Gracilaria</i> sp.            |
|             | <i>Ceramium flaccidum</i>         |                       | <i>Haliltilon subulatum</i>      |
|             | <i>Galaxaura marginata</i>        |                       | <i>Laurencia modernidae</i>      |
|             | <i>Gelidiella acerosa</i>         |                       | <i>Martensia fragilis</i>        |
|             | <i>Griffithsia heteromorpha</i>   |                       | <i>Melanamansia glomerata</i>    |
|             | <i>Herposiphonia crassa</i>       |                       | <i>Polysiphonia</i> sp.          |
|             | <i>Herposiphonia delicatula</i>   |                       | <i>Potieria homemanii</i>        |
| RED ALGAE   | <i>Herposiphonia nuda</i>         |                       | <i>Pterocladia capillacea</i>    |
|             | <i>Hypnea spinella</i>            |                       | <i>Rhodymenia leptophylla</i>    |
|             | <i>Jania adhaerens</i>            |                       | <i>Spyridia filamentosa</i>      |
|             | <i>Jania pumila</i>               |                       |                                  |
|             | <i>Laurencia crustiformans</i>    |                       |                                  |
|             | <i>Laurencia</i> sp.              |                       |                                  |
|             | <i>Pterocladia capillacea</i>     |                       |                                  |
|             | <i>Stenopeltis setchelliae</i>    |                       |                                  |
|             | <i>Tolypocladia glomerulata</i>   |                       |                                  |
|             | <i>Womersleyella pacifica</i>     |                       |                                  |





In 1995, 21 male monk seals, and no females, were relocated from the NWHI and released off of the Big Island of Hawai'i. Since their release, only six of these seals have been recently observed and reported. Research has also shown that the monk seals rarely migrate from the NWHI to the MHI. NMFS estimates that there are 31-40 monk seals on Kaua'i today. It is not unusual to find a monk seal resting on any north shore Kaua'i beach. Signs are posted along the beaches at various locations on the shore at Hā'ena State Park warning visitors not to harass resting seals.

The nearshore marine waters and beaches of Hā'ena State Park are not designated as critical habitat for any marine species. However, in July of 2008, the National Marine Fisheries Service (NMFS) received a petition from conservation groups to review and establish revised "critical habitat" for the monk seal.

The Endangered Species Act (ESA) in turn prohibits any changes or "destruction or adverse modification" by Federal activities (those that are federally funded or permitted) to these areas that will diminish its value as important habitat for the survival and recovery of the species. It is important to note that critical habitat designation does not turn an area into a reserve, refuge, Marine Protected Area (MPA) or a park. Public access and usage in areas that are designated as critical habitat are not affected. NMFS is currently reviewing and evaluating the recommendations contained in the petition.

Although threatened Green sea turtle (*Chelonia mydas*) nesting in the Hawaiian Archipelago is mostly limited to French Frigate Shoals (FFS) in the NWHI, they are common around all eight of the main Hawaiian Islands (MHI) (NMFS & USFWS 2007). Green sea turtles are frequently seen grazing upon algae in shallow nearshore reef waters around the north shore of Kaua'i, including the waters of Hā'ena State Park. Although there have been no recent reports of sea turtles nesting on the beach at Hā'ena, there have been 17 reported sea turtle nests on Kaua'i in the past year alone (Heacock, pers. comm.). The sandy beaches within the Hā'ena State Park are suitable for sea turtle nesting, and the possibility of a future turtle nesting there cannot be dismissed.

## 7.0 Recreational Resources and Assessment

### 7.1 Principal Existing Recreational Uses

The beautiful beaches, reef formations, cultural features, and verdant landscape of Kaua'i offer various recreation activities to locals and visitors on the island. The Hā'ena State Park, from Kē'ē Beach to the mouth of Limahuli Stream attracts a large number of visitors each year. The area is a popular spot for scenic shoreline sightseeing and ocean-related recreation. Selected recreation sites and reefs within the Hā'ena State Park boundaries are depicted in Figure 7.

The popularity of this region for recreation has increased dramatically over the past several decades. It has been estimated that Hā'ena State Park receives roughly 1,500 visitors during low periods (February) and approximately 10,600 visitors during high peak periods (August) (TKC and Earthplan 2001). Stepath (1999) counted approximately 1,250 people visiting the Kē'ē area for recreation daily during his study in June and July 1999. He found that people use the lagoon and reef flat area is highest between 10 a.m. and 6 p.m. with a peak usage at 4 p.m.

Other popular recreation areas adjacent to Hā'ena State Park include Cannons Beach, Maninihola Beach, and Tunnels Beach. Use of the beach and nearshore waters at Hā'ena State Park are regulated by the Hawai'i Administrative Rules (HAR) for Shore Waters and Shores, Chapter 2: North Shore Kaua'i Ocean Recreation Management Area.

#### 7.1.1 Shoreline Sightseeing

The scenic shoreline resources at Hā'ena State Park make the area an important sightseeing spot for visitors to the island. The shoreline offers views of tropical vegetation, steep mountains, sandy beaches,

ocean waters, colorful sunsets, and the Nāpali coastline. These features make it a destination point for many tourists (TKC and Earthplan 2001, Sprout and Sprout 2004, Klein 2007).

#### 7.1.2 Beachcombing

Due to the frequency and severity of heavy surf on the northern portion of Kaua'i, shells and other marine debris are often dislodged from the reefs and carried to shore. As a result, many of the beaches in the area are popular beachcombing spots for collecting driftwood, beach glass, micro-mollusks, cats' eyes, and puka shells. Ka'ilio Shore at the east end of the beach adjacent to Limahuli Stream is one of the best shell collecting sites (Clark 1992).

#### 7.1.3 Sunbathing

Sunbathing is a popular activity throughout the Hawaiian Islands. Sunbathing occurs at many beaches along Hā'ena State Park. The most level and widest beach section within the park is at Ka'ilio Point near Limahuli Stream. From this point, the beach narrows and becomes steeper before widening again at the lagoon. Kē'ē Beach is popular with tourists for sunbathing. Stepath (1999) found that sunbathing was the most common activity at Kē'ē Beach in June and July of 1999. Sunbathing is difficult at some areas on this part of the island during periods of heavy trade winds (Clark 1992). Clark (1992, 1999) found that visitors preferred Kē'ē Beach over Ka'ilio Point due to the convenience of showers, restrooms, and paved parking.

#### 7.1.4 Hiking

Although there are no maintained hiking trails within the Hā'ena State Park, the trailhead to the famous 11-mile Kalalau Trail is located in the project area at the end of Kūhiō Highway. This trail provides access to the Nāpali Coast State Wilderness Park, which had 423,100 recreation visits in 2007 (DBEDT 2008). Kalalau Trail traverses five steep valleys before terminating at Kalalau Beach. The first two miles of the trail, from Hā'ena State Park to Hanakāpī'ai Beach is a popular day hike for visitors. Day-use hiking permits are required for users hiking beyond Hanakāpī'ai valley and camping permits are required for overnight hikers (Division of State Parks 2008).

#### 7.1.5 Swimming

There are two ocean swimming areas in the vicinity of the project area located at Pōhōlokeiki and Kē'ē Beach. Pōhōlokeiki Channel is located where Limahuli Stream meets the shoreline. It was formed by the freshwater discharge of Limahuli Stream, which created a narrow waterway through the reef offshore. The channel offers a protected swimming area under calm ocean conditions. The water is slightly colder and less saline in the channel due to the freshwater discharge from Limahuli Stream. The suggested swimmer level for this site is "intermediate and advanced swimmers eight year of age and older" (Clark 1992). Some visitors or residents occasionally use the lower reaches of Limahuli Stream as a freshwater dipping and wading area. The level of use of Limahuli Stream for this activity is not known (TKC and Earthplan 2001).

Kē'ē Lagoon is located at the west end of Kē'ē Beach and is considered to be of statewide importance for recreational swimming. The lagoon's sandy bottom slopes gradually toward the sea to a depth of roughly 10 ft. It is connected to the open ocean by a deep, narrow channel through the reef (referred to as Puka Ulua). This swimming area is protected by the west end of Ka'ilio Reef making it suitable for all ages and swimming levels. Because of the calm, protected conditions, it is very popular with tourists and families with children. However, during periods of high surf, there is a powerful rip current that runs out the narrow channel (Clark 1999). As of 2008, there are at least two lifeguards on duty at this beach from 9A.M. to 5P.M. everyday of the year, including holidays (Yuen, PBR, pers. comm.)

### 7.1.6 Picnicking

Visitors and local residents use the beach at Hā'ena State Park for picnicking. Currently, there are no tables or barbecue areas;

### 7.1.7 Shorefishing

Although no statistics on shorefishing could be found for the Park, Hamnett et al (2004) noted that approximately 109,055 households in the state, or 31 percent of all households, enjoyed recreational fishing in 2004. Twenty-six percent of this total used pole and line fishing. The shoreline along Hā'ena State Park is an important recreational fishing area. Pole fishing is popular off the point at Kē'e. At low tide, pole fishing also occurs off the west end of Kē'e Lagoon. Throw-net fishing is conducted on the reef margins of the lagoon. Free dive spear fishing (without the use of SCUBA) is also popular in the area. The frequency of shoreline fishing activity increases during spring and summer when the ocean is calm more often. Fishers typically arrive at the Hā'ena State Park very early in the morning or after dark (Clark 1992).

The most valuable information on traditional fishing in the vicinity of the comes from the personal interviews of local fishermen and kupuna (Maly and Maly 2003). Several prominent local fishers from Hā'ena related stories to Maly and Maly (2003) of their fishing experience in the nearshore waters for honu (sea turtle), akule (bigeye scad), moi (Pacific threadfin), 'ama 'ama (mullet), 'ōio (bonefish), nenu (rudderfish), aholehole (flagtail), 'āweoweo (Hawaiian bigeye), manini (convict tang), kala (bluespine unicornfish), 'oama (juvenile goatfish), kumu (whitesaddle goatfish), pāpio and ulua (various species of jacks), he'e (octopus), ula (lobsters), 'a'ama (crab), and several kinds of limu (seaweed). Kahala (amberjack) and 'ōpelu (mackerel scad), 'Ahi (yellowfin tuna), ono (wahoo), aku (skipjack tuna), mahi-mahi (Dorado) were commonly caught offshore from Hā'ena.

A simple Google query of "fishing" + "Hā'ena" returns 52 pages of travel guides, vacation rentals, and real estate advertisements that entice visitors to the north shore of the Garden Isle, but with little substantive information about fishing and fisheries of the North Shore. Concern about the impact of visitors on reef resources of Hā'ena led to the enactment of a new law creating a community-based subsistence fishery area. On June 26, 2006, Hawai'i Governor Linda Lingle signed into law Act 241 to help protect the fish stocks and coral reef habitats within the ahupua'a of Hā'ena. The Act took effect on June 30, 2007. The act states that the waters of Hā'ena have been an important subsistence fishery resource for native Hawaiians and local families of the ahupua'a, and that the area's natural beauty attracts thousands of visitors each year to the 'end of the road' at Hā'ena State Park. It is believed that the influx of visitors has resulted in adverse impacts to fish stocks and the integrity of the coral reef habitats in the area. The purpose of the Act is to allow inhabitants of the ahupua'a to develop and enforce traditional regulations for the maintenance of the fishery within the Hā'ena ahupua'a. The approximate boundaries of the new subsistence fishing area are shown in Figure 6. Commercial activities, issuance of a commercial marine license, aquarium fishing permits, gill net fishing, spear fishing with SCUBA, must still be considered for approval by DLNR in consultation with the inhabitants of the ahupua'a.

In 2002, DOH statistics reported a single case of ciguatera poisoning from consumption of a knifejaw (*Oplegnathus* sp.) caught at Hā'ena.

### 7.1.8 Snorkeling and SCUBA Diving

Kē'e Beach is a primary snorkeling and diving area for Kaua'i. Snorkeling and diving occur in the protected Kē'e Lagoon and back reef, and less often outside the reef. This activity includes organized groups of divers from clubs and classes as well as individual divers. The overhangs, tunnels, and unique reef features attract many divers. These features, in combination with excellent water visibility and protection from heavy surf, make the lagoon a popular snorkeling and diving spot (Clark 1992). Outside

of the reef, intermediate and advanced snorkeling and diving also occur during calm conditions. Reef features in this area are similar to those in the lagoon, but fish diversity and abundance is higher (Clark 1992). The quality of diving decreases in the winter due to high surf and turbidity (Nielsen 2005).

Cannon's Reef is a popular shore diving site just east of Hā'ena State Park. Water depths at this site range from 5 to 70 ft (1.5-21 m). This diving spot is suitable for beginner to intermediate divers and is considered a good snorkeling location (Nielsen 2005).



### 7.1.13 Off the Road Vehicle (ORV) Use

The 2001 draft park plan noted that ORVs were known to drive through the sand dunes and across the sandy beaches at Ka'ilio Point flattening dunes and impacting strand species (Clark 1992, DLNR 1999). However, this activity has essentially ceased since 2007 when a gate blocking vehicular access to the dunes was installed. Four-wheel ATVs are also used by lifeguards and can be driven along the sandy beaches as necessary in the pursuit of their duties.

### 7.1.14 Visiting Historical/Cultural Sites

Historical and cultural sites have the potential to be recreational and educational areas for both local residents and tourists. The cultural resources at the Hā'ena State Park are considered to be some of the most complete and well preserved features throughout the Hawaiian Islands. The Hā'ena Archaeological Complex is listed on the State and National Registers of Historic Sites. The Complex is bounded by the Pacific Ocean on the north and west, Limahuli Stream on the east, and the pali (cliff) base on the south. Feature types found within the Hā'ena Archaeological Complex include heiau, house platforms, rock shelters, agricultural complexes, enclosures, subsurface cultural deposits, cemeteries, wet caves, and source areas for volcanic glass (TKC and Earthplan 2001).

Tourists and residents can visit Keahualaka, a flat hula platform, and Kauluapā'oa Heiau, a temple dedicated to Laka, the goddess of the hula. These cultural sites are located southwest of Kē'e Beach and are managed by the State Historic Preservation Division (SHPD) on land owned by the County. Both sites are presently used by hula halau from across the state for various ceremonies (Clark 1999).

Two wet caves situated in the Hā'ena State Park are also premier designations for visitors and residents. These ancient sea caves were formed during a higher stand of sea. Waiakanaloa Wet Cave is located mauka of Kuhio Highway in the face of the pali and Waikapala'e Wet Cave is located slightly to the east within the pali face. These deep, dark caves contain pools of cold water (Yamamoto 2006). "Spiritual" cave visits, using incense and other paraphernalia, are popular visitor activities within the caves (TKC and Earthplan 2001).

### 7.1.15 Wildlife Observation

Whale watching and bird watching also takes place occasionally within the park boundaries. The peak time to see endangered North Pacific Humpback whales in Hawaiian waters is late November through early May (Yamamoto 2007). Several tour operators offer whale watching tours within the boundaries of the Hawaiian Humpback Whale National Marine Sanctuary (Figure 6).

## 7.2 Visitor Impacts

### 7.2.1 Traffic Congestion and Parking Issues

Two of the most popular visitor destination areas on Kaua'i are located within the boundaries of Hā'ena State Park. Both the Kalalau Trail head and Kē'e Beach are located at the end of the highway. The end of the highway serves as a turnaround point for all vehicles reaching this point. There are only three parking areas within the Park, one is located adjacent to the sea caves at Hā'ena Point, another was recently created near the taro ponds west of the sea caves, and the third is located at the end of the highway at Kē'e Beach. On the lot at the end of the highway is paved. As these fill, many visitors parallel park along the seaward side of the highway margin. A high density of visitors to the area decreases the amount of available parking for local residents, and reduces the quality of user experiences (Needham et al. 2008).

### 7.2.2 Non-point and Point-Source Pollution

Point-source pollution is pollution from any confined or discrete conveyance such as pipes, ditches, channels, wells, or vessels. This type of pollution is also referred to as "end-of-pipe discharge" because it is often discharged from sewage treatment plants and factories close to nearshore waters (DBEDT and DOH 2000). At the Hā'ena State Park, recreational and commercial boats can create point source pollution in the offshore waters. The amount of point source pollution from these sources is unknown and likely varies during the year depending on the number of boats.

*Hawai'i's Implementation Plan for Polluted Runoff Control* (2001) defines non-point source pollution as "water pollution that comes from many diffuse sources rather than from a specific point, such as an outfall pipe, and is often the result of human activities." Pollutants are carried by rainwater on the surface or through the ground to the stream and oceans. These pollutants can include fertilizers, herbicides, insecticides, oil, grease, sediment, and pathogens (DBEDT and DOH 2000). Non-point source pollution is related to the amount of impervious surfaces in an area. Impervious surfaces (including roads, parking lots, sidewalks, and roofs) prevent water and pollutants from passing through the ground and percolating into the soil, expressing them into nearby aquatic environments (Schueler 1994).

At the Hā'ena State Park, pollutants from motor vehicles, trash, and other debris not properly disposed of can be carried to nearshore and freshwater areas in storm, flood, or wash water across impervious surfaces. Sewage seepage from the restroom facilities could also enter these aquatic environments (Stepath 1999). Dipping or wading in the Limahuli Stream may contribute to soil erosion, sedimentation, and temporary impacts to water quality (TKC and Earthplan 2001).

According to the *Hawai'i Coastal Nonpoint Pollution Control Management Plan* (1996), non-point source pollution has a greater impact on nearshore waters than point-source pollution. Non-point source pollution can result in increased turbidity, sediment accumulation on coral reefs, fish kills, and destruction of aquatic habitats. Excess nutrients can also lead to eutrophication or algae blooms in coastal waters (DBEDT and DOH 2000). Toxic chemicals and pollutants can pose a risk to marine plants and animals (County of Kaua'i Planning Department 2000) and increase the risk of human diseases during aquatic recreation (DBEDT and DOH 2000).

Clean coastal water is an important component of the tourism industry in Hawai'i. More than 80% of visitors to the Islands engage in recreation activities in coastal and marine areas (Needham et al. 2008). Coastal leisure and recreation activities (swimming, diving, surfing, etc) are also vital to native Hawaiian cultural practices and local resident recreation (DBEDT and DOH 2000). Most local residents engage in ocean recreation on a regular basis (Friedlander et al. 2008). One intent of Class AA marine water quality designation at Hā'ena State Park is to protect the area in as pristine condition as possible to help insure the protection of the coral reef ecosystem offshore as well as the visitor experience to the Park.

### 7.2.3 Sunscreens

Some chemicals contained in commercial sunscreens can adversely impact coral reefs by promoting viral infections of endosymbiotic zooxanthellae, which are essential for the survival of coral species. The chemical compounds in sunscreen can cause dormant viruses present in zooxanthellae to continually replicate until the zooxanthellae are expelled and the coral is bleached (Buddemeier et al. 2004, Danovaro et al. 2008, and Than 2008). Sunscreens may also decrease the penetration of UV radiation, impacting marine organisms that depend on light for various functions (Eichenseher 2006, Blitz and Norton 2008). Furthermore, sunscreen agents have been shown to bioconcentrate in freshwater or brackish aquatic species (Daughton and Ternes 1999). The impact of sunscreen on the coral reef environment at the Hā'ena State Park is not known; however, according to scientific interviews by Juran (2007), the impact of sunscreen at the park is believed to be minimal compared to other sites around the state.



### 7.2.4 Fishing

The impact of recreational and subsistence fishing in Hawai'i has been difficult to quantify because neither recreational and subsistence fishers are required to have licenses or report their catch to the Hawai'i Division of Aquatic Resources (Friedlander et al. 2008, Zeller et al. 2008). Recently, however, there is a growing body of scientific evidence to suggest that fishing may have the greatest overall effect on the diversity and abundance of nearshore fishes on coral reefs in Hawai'i and the Pacific (Grigg 1994, Stepath 1999, Birkeland and Friedlander 2001, Williams et al 2008, Singh et al 2008).

Fishers of all kinds tend to target specific species, many of which are top carnivores. Today, these resources are scarce. In studies of shore fish populations throughout the main Hawaiian Islands, Friedlander et al (2003) found that fish standing stock and diversity were higher in areas protected from fishing pressure and in areas of greater substrate complexity. In a similar island-wide study of 89 coral reef survey sites, Williams et al (2008) found 'clear and consistent negative associations between human population density and biomass of fishes in a range of functional and taxonomic groupings'.

Declines were evident among fishes targeted by fishers, but not among non-target groups of fishes in hard bottom and mid-depth habitats. Standing stock of highly desired target species (e.g. surgeonfishes, wrasses, parrotfishes, snappers, goatfishes, big-eyes, jacks, squirrelfishes, barracuda, moi, milkfish, and hawkfish) in accessible and populous locations were significantly lower than in areas where public access was prevented and also in lightly populated or remote areas. Williams et al (2008) concluded that a number of lines of evidence point to fishing pressure as the prime driver for these negative trends.

Indiscriminant use and discard of inexpensive monofilament gillnets has had a major effect on reef fish throughout the state of Hawai'i (Endreson et al, undated). Lay gillnets take unwanted as well as target species and can lead to habitat destruction and fatal entanglement of endangered species. Objections to this controversial method of fishing have raised an emotional debate in Hawai'i (e.g. <http://www.ulua-ishing.com/forum>; <http://gillnetkill.blogspot.com/>). A general consensus to outlaw the indiscriminate use of lay gillnets (Fair Catch 2006) resulted in the enactment of new DLNR Administration Rules signed by Governor Linda Lingle in March 2007 which severely restrict the use of lay gillnets in Hawai'i.

Night spear fishing, particularly with SCUBA, has also been implicated as being detrimental to fish populations (e.g. Stepath 1999). No studies could be found that quantify the catch by free dive and SCUBA spearfishers at Hā'ena State Park or elsewhere in the state. In May 1981, a visitor disappeared while spearfishing with SCUBA at the Park, presumably the victim of shark attack.

Fishing can also adversely affect endangered marine species. During the period 1982-2007, there have been 49 documented cases of interactions between fishers and monk seals in the Main Hawaiian Islands (MHI) (Katekaru 2008). Twenty-seven of these cases were reported from Kaua'i, two of which were from Hā'ena State Park. These cases usually involved the accidental hooking by ulua fishers using slide-bait tackle.

Chaloupka et al (2008) investigated cause-specific temporal and spatial trends in sea turtle strandings in the Hawaiian Archipelago. The most common known cause of the green turtle strandings was tumor-forming disease (28%) followed by hook-and-line fishing gear-induced trauma (7%), gillnet fishing gear-induced trauma (5%), boat strike (2.5%), and shark attack (2.7%). Miscellaneous causes comprised 5.4 percent of strandings whereas 49 percent of green turtle strandings could not be attributed to any known cause (Chaloupka et al 2008). They concluded that the Hawaiian green turtle stock continues to recover following protection since the late 1970s despite exposure to disease, nets, and hook-and-line fishing gear.

### 7.2.5 Diving

Damage to coral reef as a result of diving has been documented worldwide (Rouphael and Inglis 1995, Tratalos and Austin 2001, and Tabata 1992). Divers and snorkelers can physically damage reef corals, invertebrates, and algae by standing on the reef, accidentally kicking coral with their fins, or stirring up silt that suffocates coral. Contact with corals can facilitate disease transmission. Physical damage to coral species can be long lasting since due to generally slow tissue regeneration (Davenport and Davenport 2006).

### 7.2.6 Fish Feeding

Some divers and snorkelers feed fish at Kē'e Lagoon in order to attract large schools of fish. Feeding fish can disrupt normal distribution and abundance patterns (DLNR 1999, SPC Fisheries 2004) and alter normal reproductive output of marine species (Sweatman 1996). Fish feeding may modify natural feeding cycles of fish (Roberts 2006), and have negative effects on prey populations by minimizing feeding on algae (Milazzo et al. 2005, Hollier 2009).

Feeding large fish can attract predators that scare off smaller fish, thereby reducing local biodiversity (Davenport and Davenport 2006). This activity has been shown to interfere with natural instincts and behaviors essential for fish survival (Roberts 2006). Studies conclude that feeding fish alters fish behavior towards humans; fish become conditioned to associate humans with food, often causing fish to become aggressive to humans and inducing attacks (DLNR 1999, SPC Fisheries 2004, Roberts 2006, Hollier 2009).

### 7.2.7 Reef Walking

During periods of low tide and calm waters, it is possible to walk on the exposed and shallow reef flats at the Hā'ena State Park. Visitors walk on the reef to view tide pools (Yamamoto 2006) and some divers transverse the coral reef to dive off the outer portion of the reef at Kē'e Beach (Stepath 1999), resulting in the same impacts discussed in Section 7.2.5 above. Walking on the reef has the potential to degrade areas of the reef flat by trampling corals. This can result in mortality and an overall reduction in coral cover (Woodland and Hooper 1977, Stepath 1999, Juran 2007, Rodgers and Jokiel 2007). Trampling can directly or indirectly affect coral tissue, growth rates, reproductive success, and community structure (Liddle and Kay 1987, Rodgers and Jokiel 2007).

A decrease in coral cover can also impact fish populations, which are dependent on coral for shelter (Rodgers and Cox 2003), as well as algal populations (Davenport and Davenport 2006). Impacts to coral reefs can be severe, even with relatively low levels of trampling (Brown and Taylor 1999, Rodgers and Jokiel 2007). The ability of corals to withstand trampling depends on coral morphology, branch geometry, and mechanical properties (Rodgers and Jokiel 2007).

In Hawai'i, studies have found a clear pattern of decreasing coral cover with increased visitor use (Rodgers 2001, Rodgers and Cox 2003, Rodgers et al. 2003). Stepath (1999) conducted a study at Hā'ena State Park which studied the impact of humans walking on the reef flat. The peak time of reef walking was at 1:30PM. Stepath (1999) concluded that trampling may be decreasing coral cover in the nearshore waters of the Park.

### 7.2.8 Sand Dunes

Within the vicinity of Hā'ena State Park, the shoreline is backed by low coastal sand dunes. These ridges or mounds of sand are formed by an accumulation of wind blown sand that is trapped by strand plants at the Park. Sand dunes are dynamic features that erode during periods of high waves (usually October to May) and accrete when heavy wave action subsides (usually May to October). Sand dunes function as



natural, elevated buffers that protect marine shorelines against erosion, flooding, high waves, storms, tsunamis, and other coastal hazards (Clark 1992, University of Hawai'i Sea Grant Extension Service and County of Maui Planning Department 1997, University of Hawai'i 2006).

Some recreational activities are known to affect coastal dunes in Hawai'i. The continuous trampling by vehicles and pedestrians on the dunes causes erosion and sand movement. Vogt (1979) found that fewer than 10,000 pedestrians walking over sand dunes during a single season can eliminate dune vegetation and result in erosion (Tabata 1980). Dune vegetation has little resistance to trampling due to the extremely low soil penetration and is slow to recover (Davenport and Davenport 2006).

ORVs also flatten dunes and impact strand species (DLNR 1999). ORVs drive through the sand dunes and across the sandy beaches at Ka'ilio Point (Clark 1992). Both motor vehicles and pedestrian traffic can lead to sediment disruption and erosion. ORVs destroy sand coastal vegetation that helps to stabilize the dunes. ORVs can also disturb sand dune and shore ecosystems for use by wildlife including birds, turtles, worms, and crustaceans (Schlachter et al. 2008).

#### 7.2.9 Invasive Species

An invasive species is defined as "an alien species whose introduction does or is likely to cause economic or environmental harm or harm to human health" (Executive Order 13112). Isolated island ecosystems, such as Hawai'i, are vulnerable to the establishment of alien or non-native species due to a variety of factors. Islands typically have high habitat diversity, favorable climate, high resource availability, low biotic resistance, small populations, and limited social capital (Denslow et al. 2008). It is estimated that over 5,000 alien species have established in the Hawaiian Islands. Of this total, roughly 343 are marine species (Belt Collins Hawai'i LTD 2008).

Invasive species affect island ecosystems in a variety of ways. They compete with native flora and fauna, carry diseases, affect trophic structure, change fire regimes, alter nutrient cycling patterns, modify surface runoff of water, and alter biodiversity (Vitousek 1990, D'Antonio and Vitousek 1992, Vitousek 1992, and Belt Collins Hawai'i LTD 2008). The ability of invasive species to reach new areas is influenced by the number of individuals involved in a release event and the number of release events, also referred to as *propagule pressure* (Lockwood et al 2005). Propagule pressure increases in areas with high visitation (Leung and Mandrak 2007), such as recreational parks. In particular, recreational boating, diving, snorkeling, and fishing increases the risk of introducing non-native species through hulls, wetsuits, bait, or other equipment (Meliene and Hewitt 2005). Recreational hiking can also introduce invasive species, especially plants, by passive dispersal on hiker's shoes and clothing. Ironwood (*Casuarina equisetifolia*), false kamani (*Terminalia catappa*) are invasive terrestrial plant species found within the park boundaries that compete with native vegetation.

Two non-native reef fish species introduced by the Hawai'i Department of Land and Natural Resources Division of Aquatic Resources to supplement coastal sport fisheries are present in the nearshore waters of the Park. Although the predatory grouper roi (*Cephalopholis argus*) and the blue line snapper ta'ape (*Lutjanus kasmira*) successfully established large populations throughout the main Hawaiian Islands, their impact upon preferred local species has not been well-understood and is the subject of controversy. Roi feed on small fishes over shallow reefs, while ta'ape feeds over sand flats during the night (Dierking 2007, Birkeland and Dierking 2007).

Invasions by non-native limu (seaweed) in some areas of Hawai'i have been shown to blanket coral reefs, kill coral, and reduce water exchange within the reef (Hadfield and Koehl 2007). However, none of the four noxious invasive algae species known from Hawai'i were found at Hā'ena during surveys conducted there a decade ago by University of Hawai'i investigators Isabella Abbott and Cynthia Hunter ([www.hawaii.edu/ssri/hcri/text/research/results/kauai/haena.html](http://www.hawaii.edu/ssri/hcri/text/research/results/kauai/haena.html)). Some native algae species have the potential to become invasive, or to dominate the marine substrata to the exclusion of other species, in

areas that receive excessive nutrient input or have been altered in some other way in which to foster the growth of a single species of algae. There is no evidence that this has become a problem at Hā'ena.

#### 7.3 Park Management Requirements

The natural beauty and cultural features at the Hā'ena State Park depend on the proper management and use of the park. Management policies derived from the *Hā'ena State Park Master Plan and Draft Environmental Impact Statement* (2001) include the following:

- Prevent and rectify existing anthropogenic erosion;
- Upgrade wastewater facilities;
- Eliminate or control exotic plant species;
- Utilize non-chemical plant management techniques when feasible; and
- Identify and protect fragile habitats;

*Kaua'i's Economic Development Plan 2005-2015* (2004) states that the island's parks require "improvements and better maintenance" in order to meet recreational demands. In particular, roads are inadequate for residents and visitors. The plan suggests dedicated user fees be initiated at all state parks to support maintenance and improvement costs.

DLNR, DAR, and Hawai'i Ecotourism Association (2005) suggest that coastal and marine recreation areas can be managed by reducing human uses or reducing the impact of human use. The strategy specifically identifies the following management techniques for coastal and marine recreation areas:

- Restrict access: reduce the level of use by determining a site's carrying capacity and setting limits on number of users or banning certain types of activities or behaviors;
- Relocate use: create artificial reefs for recreation users (in suitable areas);
- Education: modify human behavior through signage, brochures, videos, tours, etc.; and
- Mechanisms for compliance: design physical infrastructure to encourage certain limits or behaviors or institute legal or voluntary compliances with tangible consequences.

#### 7.4 Sustainability of Recreational Uses

With proper management, most of the recreational uses currently occurring at the Hā'ena State Park can be sustainable. The sustainability of a recreational use depends on the carrying capacity of the recreational area. Within a recreational context, carrying capacity can be defined as "the amount of visitor use that can be appropriately accommodated within a park or outdoor recreation area" while providing "sustained quality recreational experiences" (Lankford et al. 2005). The carrying capacity of a recreational use is determined by evaluating the following issues:

- Physical capacity: the amount of space available for the recreational use;
- Ecological or biological capacity: the ability of natural resources to withstand the recreational use;
- Facility capacity: the degree that the recreational area is able to support visitor needs during the recreational use; and
- Social capacity: the ability of the recreational use to provide an acceptable recreation experience (Lankford et al 2005).

DLNR, DAR, and Hawai'i Ecotourism Association (2005) recommended development of a carrying capacity tool to help determine optimal levels of activity for the various users at various sites. Management actions stemming from such a study might include limits on commercial operating permits and regulated visitor and vehicle entry. The report also advances the concept of establishing an ecological carrying capacity to take into account the various recreational activities and the unique physical conditions at a particular reef site; to provide a sound scientific basis for proactive management;

and to allow managers to identify optimal levels of use and set limits of use and set limits for various sites before projected increases in use occur. Additional recreational impacts to reefs and local action strategies (RIS-LAS) of pertinent to Hā'ena State Park can be found in DLNR, DAR, and Hawai'i Ecotourism Association (2005).

A study of this kind may be beneficial to identify the sustainability of existing recreational uses within the Park boundaries. To be successful, a carrying capacity study should be adequately funded and should be conducted with the collaboration of stakeholder groups in particularly controversial projects (NOAA 2007).

## 7.5 Complementary and Conflicting Use Issues

There is a growing number of eco-tourists and adventure-tourists who seek remote locations in Hawai'i, such as Hā'ena and Nāpali, for recreation and adventure. Many Hawai'i residents also visit these remote areas in search of greater resources, such as free diving spearfishers, who travel throughout the state to find populations of their preferred game fishes. These remote areas traditionally had small populations of local residents, many of whom rely upon the environment for sustenance (Friedlander et al. 2008). As visitor and resident populations on the north shore of Kaua'i, conflicts among and between recreational users are likely to increase.

### 7.5.1 Ahupua'a 'Ohana vs. Visitor and Other Residents

Ahupua'a 'ohana (family) are former Hā'ena residents and their descendants who have ancestors from the ahupua'a of Hā'ena and therefore have close ties to the land. Some private land was condemned from the ahupua'a 'ohana for the park establishment. Many members of the Hā'ena 'ohana are upset about the existing conditions of the park. Their specific complaints include rubbish on the beaches and trails, spiritual rituals conducted by visitors, souvenir vending, disturbing fishermen, harassing marine life, inappropriate public activities, commercial activities, and failure to heed traditional community protocols. Many believe these activities degrade the natural resources and cultural significance of the area (TKC and Earthplan 2001).

Some ahupua'a 'ohana members also feel that walking on the reef and using suntan oil in the area have a negative impact on the marine species, specifically limu (algae) that they collect for food. Because of the density of visitors to the park, the local 'ohana claim that can not practice cultural activities or enjoy the environment as they did in the past (Stepath 1999, TKC and Earthplan 2001). In turn, the ahupua'a 'ohana believe that denying them access affects their physical, mental, and spiritual health (Juran 2007).

### 7.5.2 Residents vs. Visitors

Residents in the Hā'ena area use Hā'ena State Park for various recreational activities, such as picnicking, camping, fishing, and windsurfing. Though residents consider the park, and especially Ke'e Beach, to be their personal recreation area (TKC and Earthplan 2001), some will not go to the area because of the large number of tourists. Other property owners have denied public access to the beach (Juran 2007). According to a 2002 tourism study (Kaua'i Economic Development Board 2004), Kaua'i residents are more strongly opposed to increased tourism activity than the residents of any other island in the state.

Traffic congestion and parking are major user conflicts between residents and visitors. This congestion is the result of the popularity of Ke'e Beach and the location of the entry point to the Kalalau trail head at the end of the highway (TKC and Earthplan 2001). A State Park Visitors Survey conducted in 2006, found between as many as 451 cars parked at the Hā'ena State Park per day. Of this total, only 13 percent were thought to be locally owned (Hā'ena State Park Visitors Survey 2006).

Residents tend to prefer Ke'e Beach area to other sub-areas of the Park (Figure 1), and enjoy the lax enforcement and rules, vehicle access, and convenient location. Residents have requested better comfort stations and other amenities at the park. Visitors have requested improvements for security and safety, as well as upgrading existing comfort stations (TKC and Earthplan 2001).

Some residents believe that visitors should be paying fees to offset impacts to the Hā'ena State Park. All State Parks receive money through the State Parks Special Fund which is generated through camping fees, cabin rentals, concessions leases, and recreational leases (DLNR 2003). Funding may be allocated from the Hawai'i Tourism Authority's Transient Accommodations Tax (TAT) Trust Fund depending on the amount of money in the fund (DLNR 2003). Therefore, if visitors to the Hā'ena State Park are not staying at nearby hotels, residents argue that they are not paying for enjoyment of the area.

### 7.5.3 Recreation vs. Conservation

Resource conservation is outlined as an important issue in the State Comprehensive Outdoor Recreation Plan (2003). The unique natural environment of Hawai'i is one of the main attractions for tourists. Preserving nearshore ecosystems in Hawai'i is critical to the tourism industry (Rodgers and Jokiel 2007). However, the need to conserve can constrain public access if the activity has the potential to endanger resources.

Solving this conflict requires a balance between allowing public access for recreation and restricting some public use to protect resources (DLNR 2003). As at other coastal recreation areas in the state, there is a need to measure and monitor recreation carrying capacity and to establish indicators to ensure that coastal resources (as well as user experiences) do not deteriorate (Needham et al. 2008).

### 7.5.4 Commercial Use vs. Private Use

Hā'ena State Park is widely promoted in visitor's guides, adventure travel books, equipment rental facilities, hotels, and tour companies (TKC and Earthplan 2001). Commercial activities occurring in the park boundaries include weddings on Ke'e Beach, kayak tours of Nāpali Coast, spiritual enlightenment tour groups, SCUBA diving instruction, and other commercial operators. Residents and native Hawaiians generally do not support having commercial activities at the Hā'ena State Park arguing that they degrade and exploit resources (TKC and Earthplan 2001). Furthermore, many residents or visitors would prefer to enjoy park without commercial operators, while others require a vendor to provide them with the necessary equipment (TKC and Earthplan 2001).

All private enterprises are required to have a state issued Special Use Permit from the Division of State Parks to conduct these activities on State owned lands. Commercial permits can provide a way to ensure compliance with legal requirements (DLNR, DAR, Hawai'i Ecotourism Association 2005); however, most commercial businesses which occur at Hā'ena State Park are not sanctioned by the State (TKC and Earthplan 2001).

### 7.5.5 Ecotourism vs. Development

Ecotourism is one of the fastest growing sectors of the tourism industry. According to the International Ecotourism Society, ecotourism is "responsible travel to natural areas that conserves the environment and improves the well-being of local people" (Blangy and Mehta 2006). Ecotourism in Hawai'i can be nature or culture based (<http://www.hawaii.ecotourism.org/Default.aspx?pageId=117830>). This type of tourism is designed to prevent negative social and environmental impacts that can be associated with tourism (DLNR 2003). Development has the potential to adversely impact natural and cultural resources on which the ecotourism industry relies on.

“Hard-core” eco-tourists typically seek isolated destinations with minimal development. Thus, development has the potential to compromise the ecotourism experience of these individuals (TKC and Earthplan 2001). However, more developed facilities still have the potential to attract some eco-tourists seeking nature and culture-based activities (DLNR 2003). In addition, there are increasing concerns about sustainability and carrying capacities of ecotourism (Rodgers and Jokiel 2007). Because of their interest in remote areas, eco-tourists are also a means of passive dispersal by non-native invasive species.

#### 7.5.6 Homeless/Squatters vs. Park Visitors

Homelessness remains an issue throughout the state as a result of nation-wide economic problems, mental illnesses, and cuts in state social programs (DLNR 2003). Squatters and homeless were evicted from the Hā'ena State Park during the Taylor's Camp era in the 1970s. However, squatters still reside in various locations throughout the isolated valleys of the adjacent Nāpali Coast and can be frequently seen at the Hā'ena State Park. Beach encampments can impact the visual image of the island, restrict users' access to facilities, create sanitation problems, and contribute to park maintenance needs (DLNR 2003, Gererna-Morales 2007). The presence of these individuals can ultimately impact the tourism industry; the Hawai'i Tourism Authority has stated that tourists have commented that seeing homeless people in parks or at the beaches makes them felt uncomfortable (Gererna-Morales 2007).

#### 7.5.7 Windsurfers vs. Other Recreational Pursuits

Windsurfing has been shown to disrupt other recreational users at parks throughout the state (CSV Consultants 2007). Windsurfers often come close to others at high speeds. Beginning windsurfers often find control of their boards difficult and represent a greater risk to others in the water than expert windsurfers. In turn, park users, such as swimmers, sunbathers, snorkelers, and divers, can obstruct windsurfing zones and launching areas (CSV Consultants 2007).

At the Hā'ena State Park, Clark (1992) identifies only a “minor conflict” between windsurfers and fishermen. Throw-net fishing primarily occurs during low tides when the reefs are more exposed. Low tides often coincide with strong, consistent trade winds, which are ideal conditions for windsurfing. When these activities happen together, windsurfers can scare away schools of fish for throw net and pole fishermen (TKC and Earthplan 2001).

#### 7.5.8 ORVs vs. Beach Users

ORVs can degrade the visual appearance of the beach by damaging vegetation and sand dunes. In addition, the noise and safety hazards associated with vehicle use on the beach conflict with other beach users and can detract from visitor experiences at the park (TKC and Earthplan 2001).

#### 7.5.9 Traditional Fishing vs. Recreational Fishing

In 2006, HRS 18-22.6 designated a community based subsistence fishing area at the shoreline of the Hā'ena district “for the purpose of reaffirming and protecting fishing practices customarily and traditionally exercised for purposes of native Hawaiian subsistence, culture, and religion (SB2501). Enacted in 2007, the subsistence fishing area law was modeled after other community-based subsistence areas elsewhere in the state (e.g. Mo'omomi, Moloka'i). Because the Hā'ena area is relatively new, specific management protocols are still being discussed amongst community members (Heacock, DAR, pers. comm.). It is anticipated that the self-policing of the area as called for by the act will include protocols for recreational fishers and visitors to seek permission to fish within the area from local stewards of the resource, seasonal and take limits, limits on gear, and so forth.

The only area on the north shore of Kaua'i where nearshore marine life is protected from fishing pressure is the Kilauea Point National Wildlife Refuge managed by the U.S. Fish and Wildlife Service. This area,

along with the more remote portions of the Nāpali Coast, may serve as defacto marine preserves because of their inaccessibility.

Reef waters of Hā'ena State Park also serve as a defacto preserve during winter months when high waves and strong currents limit fishing opportunities. Preserves provide safe havens for fish development and sources of stock enhancement following periods of increased fishing pressure on adjacent areas.

#### 7.6 Impacts of Increased Recreational Uses

An increase in recreational uses at the Hā'ena State Park would place greater demands on existing facilities infrastructure, and on the physical, ecological, and societal capacity of the area (See Section 7.4). Attracting more recreational users would further increase current traffic congestion and parking issues for both visitors and residents. More users would also have the potential to impact stream and nearshore water quality by increasing the amount of non-point and point-source pollution in the area. The reef ecosystem would be significantly impacted by an increase in unregulated recreational activity at the Park. Potential impacts to the coral reef ecosystem as a result of increased recreation in the nearshore area include: decreased coral coverage, altered coral growth, decreased fish populations, reduced local biodiversity and increased propagule pressure of invasive species. Without an enforceable Park management plan, an uncontrolled increase in current recreational activities at the Hā'ena State Park would lead to further dune erosion and the removal of dune vegetation; create untenable traffic congestion and conflicts; increase the level of pollutants in non-point source stormwater runoff; conflicts between recreational and subsistence fishers, and between other and various users of the Park's marine waters; loss of the unique socio-cultural character of the Park are surrounding neighborhood; reduced level of enjoyment by visitors and residents alike; and ultimately as a ‘worst case’, the potential economic collapse of the area as a visitor destination.

#### 8.0 Design Considerations and Resource Management Concepts

##### 8.1 Water Quality Issues

Several design considerations can be assessed to help maintain Class AA coastal water quality standards at Hā'ena State Park as visitations increase. These include following actions:

- Conduct a high-resolution assessment of Park topography and evaluate alternate storm drainage features to minimize or slow runoff into the ocean
- Upgrade sanitation facilities and conduct regular inspection and maintenance of sanitation systems at the public restrooms to prevent sewage seepage or spillage into the ocean or groundwater
- Create parking areas remote from the Park and allow only pedestrian or shuttle bus access
- Carefully design parking areas and apply best management practices to prevent the runoff of contaminants to streams and coastal waters
- Conduct regular maintenance of, and apply best management practices to, the Kalalau Trail to prevent unnecessary soil erosion, siltation, high turbidity, and possible coral mortality within the Kē'e Lagoon and reef
- Provide and regularly maintain an appropriate number of trash and recycling receptacles to reduce the amount of plastic and other solid waste that blows or gets washed into the ocean in storm runoff.

##### 8.2 Shoreline Erosion

Sandy beaches are at the heart of the multi-billion dollar visitor economy in Hawai'i that provides the greatest share of the state's jobs and income. When erosion threatens the built environment a common reaction is to armor the shoreline with a seawall or revetment. Armoring may impound sand thereby

impacting the sediment budget of a beach and exacerbating the erosion. Shoreline armoring also increases wave turbulence and reflection. It is common to find that the construction of one seawall on a beach leads to proliferation of additional seawalls. Armoring a chronically eroding coast leads to beach loss (Fletcher, et al. 1997). Beach loss because of seawall construction on eroding shorelines has been estimated to be 25% on O'ahu and 20% on Maui (<http://www.surfrider.org/>). In an era of accelerating sea-level rise (Church and White 2006) the threat of chronic erosion and beach loss is growing and the use of shoreline data becomes a potentially significant coastal management tool in the effort to conserve beaches for future generations.

The Kaua'i Shoreline Erosion Management Study (DHM et al 1999) developed management recommendations and plans for selected Kaua'i shoreline areas including the area between Hā'ena and Wainiha. The recommendations developed from this and related studies for preservation and restoration of sandy beaches and setbacks to compensate for coastal erosion at the Hā'ena State Park are consistent with the policies and guidelines of HRS 205A Hawai'i Coastal Zone Management, Hawai'i Coastal Erosion Management Plan (DLNR 1997), DLNR Office of Conservation and Coastal Plans and the County of Kaua'i General Plan (2000), and Kaua'i County Council Ordinance 863: Shoreline Setback and Coastal Protection Ordinance. Erosion prevention and control actions specifically relevant to the Park include:

- Delineate and manage specific erosion prone areas by 'littoral cells'. Littoral cells are self-contained beach compartments that are geographically bounded by specific physical features (e.g. groins, piers, points of land) that either provide or remove sand from the cell.
- Establish shoreline setbacks of no less than 60 feet for Hā'ena
- Prohibit shore protection structures
- Remove unpermitted shoreline structures
- Preservation of public shorelines in natural state
- Give non-structural remedies (e.g. beach nourishment) preference over structural work
- Develop and update a shoreline structure inventory

Design of future Hā'ena State Park facilities should employ the recent data and maps developed by the University of Hawai'i (UH) Coastal Geology Group (<http://www.soest.hawaii.edu/coasts/>) to calculate appropriate setbacks.

### 8.3 Marine Resource Issues and Conservation

Coral reef ecosystems have high gross primary productivity, yet the net productivity and potential fisheries yields on coral reefs are relatively low (Birkeland 2001). Populations of fishes and invertebrates on coral reefs can be fished out quickly and if severely depleted, may not return. Coral reef species are particularly vulnerable to overfishing partly because of their life-history adaptations. Because of the life-history traits of the targeted species and because of the nature of the ecosystem processes, we must be careful about expecting too much from coral reefs. The fisheries yield of coral reefs should not be expected to keep pace with the growing human population and its demand for protein (Birkeland 2001). Overfishing also can have a deleterious impact upon ecosystem function and marine community structure. While pelagic fisheries might be managed on a species-by-species basis, coral-reef fisheries must be managed on an ecosystem basis.

Four years of CRAMP monitoring data and several independent studies of the reefs within the Park suggest the nearshore waters of Hā'ena State Park from Kē'e Beach to Hā'ena Point contain largely undisturbed coral reef resources that provide habitat for healthy populations of fishes and invertebrates of subsistence and recreational value. These populations can be sustained provided that they are actively managed through carefully organized stewardship programs. Excessive fishing pressure, particularly upon a limited number of target species, can lead to dramatic adverse changes in community structure. Serious reduction or collapse of fish resources at Hā'ena and/or significant damage to the reef habitat would reduce its overall importance as a visitor destination area and would deprive the local community

of a valuable subsistence resource (Birkeland 2001). Stepath (1999) has highlighted the potential problems associated with excessive and inappropriate uses of the Park waters.

Improvements to the Park facilities through the master planning process may consider the following measures to help protect and sustain the long-term viability of the marine environment. These considerations are adapted in part from the Coral Reef Ecosystem Fishery Management Plan (CREFMP) for the western Pacific which is the first ecosystem-based fishery management plan for U.S. waters:

- Encourage the development of management guidelines and protocols for the Community-Based Subsistence Fishery Area established for Hā'ena by Hawai'i state law within a structured administrative framework;
- Establish a permit system as part of this program that requires catch reporting to allow the evaluation of changes over time in catch per unit effort and size distribution of the resource allows management to improve (Birkeland 2001);
- Establish a program of long-term scientific monitoring of fish and invertebrate populations trends within Park marine waters;
- Allow sufficient flexibility and insure long-term monitoring to employ the principal of adaptive management and allow changes to be made to permitting processes and management actions, as deemed appropriate based upon the results of long-term monitoring and catch statistics;
- Establish a means of enforcing the permitting system for recreational fishing within the Park waters.

Consideration might also be given to the establishment of a marine protected area (MPA) adjacent to or within a portion of the Park to serve as a fishery stock replacement area.

### 8.4 Mitigation of Conflicting Uses

Community consensus is the best mechanism to achieve a lasting solution of recreational user conflicts. Establishment of a Park users-group consisting of stakeholders, local residents, and government agencies should meet to discuss ways in which the conflicting uses discussed in the previous sections can be mitigated. User group meetings can be led by an independent moderator or by an agency or non-profit group. Segregation of conflicting uses might be considered on a rotating user basis by day and/or month, or weather and sea-condition basis, permit, or other system.

### 8.5 Shoreline Access

HRS 115-4 and 115-5 provide that the public has a right of access all State beaches and shorelines situated below the "upper reaches of the wash of the waves." In general, counties have the primary authority and duty to develop and maintain public shoreline access. The State's primary role in the shoreline area is to preserve and protect coastal resources within the conservation district and support public access along and below the shoreline (HRS Chapter 205A). Because of the steep shoreline along the Nāpali Coast west of the Park, the portion of the shoreline where pedestrian access becomes feasible begins at Kē'e Beach and extends eastward along the shore to Hā'ena Point.

- Shoreline access points can be placed to control access for specific recreational and subsistence uses, and should be limited to pedestrian access.
- No public vehicular traffic should be allowed on the beach within the Park.

## 9.0 Interpretive Concepts for Marine Recreational Use

A number of community-based and non-governmental (NGO) organizations, as well as government-private and NGO partnerships support periodic monitoring and educational studies of the lagoon and reef at Hā'ena State Park. These include Windward Community College (CRAMP), Makai Watch, Save our Seas, Reef Check, The Nature Conservancy, Mālāma Hawai'i, Community Conservation Network, Hawai'i Wildlife Fund, Sea Grant Program, Hawai'i Department of Land and Natural Resources Division of Aquatic Resources. Many of these activities are in turn supported by grants from government agencies and the private sector including those from Tesoro, Harold K.L. Castle Foundation, National Fish and Wildlife Foundation, NOAA, Hawai'i Tourism Authority, and others.

The State of Hawai'i Coastal Zone Management Program (CZMP) has prepared an Ocean Resources Management Plan (ORMP), as required by Chapter 205A of Hawai'i Revised Statutes (HRS), through collaboration with government agencies and stakeholders. The ORMP draws on traditional Hawaiian ecosystem management principles, relies on community and private sector involvement, promotes an adaptive learning approach, identifies responsibilities and a schedule for implementation, and emphasizes interagency collaboration and public-private partnerships. Hā'ena is one of several ORMP stewardship sites being studied over the next five years.

Each of these organizations can be considered a stakeholder in the development of interpretive, education, and management programs for Hā'ena State Park. Following the successful model of Hanauma Bay on O'ahu, consideration should be given to the establishment of a "Friends of Hā'ena State Park" organization. Such a non-profit organization can help develop and sustain a visitor education program, coordinate park cleanups by volunteer service groups, coordinate use of the park by different marine recreation groups (e.g. dive clubs, surfing contests, kayaking, etc.), provide formal and informal docent services, assist the Hawai'i Division of State Parks with management, and help alleviate user conflicts. A service group such as this might also serve as the point-of-contact for the community-based subsistence fishing area for those wishing to shorefish or spearfish within the Park.

Educational signage, a docent program, lectures, films, and interactive kiosks are all valuable approaches to consider for enhancement of visitor and resident enjoyment of Hā'ena State Park. More information on the Hanauma Bay carrying capacity study can be found in Lankford et al (2005). Friends of Hanauma Bay website is: <http://www.friendsofhanauabay.org/history.html>.

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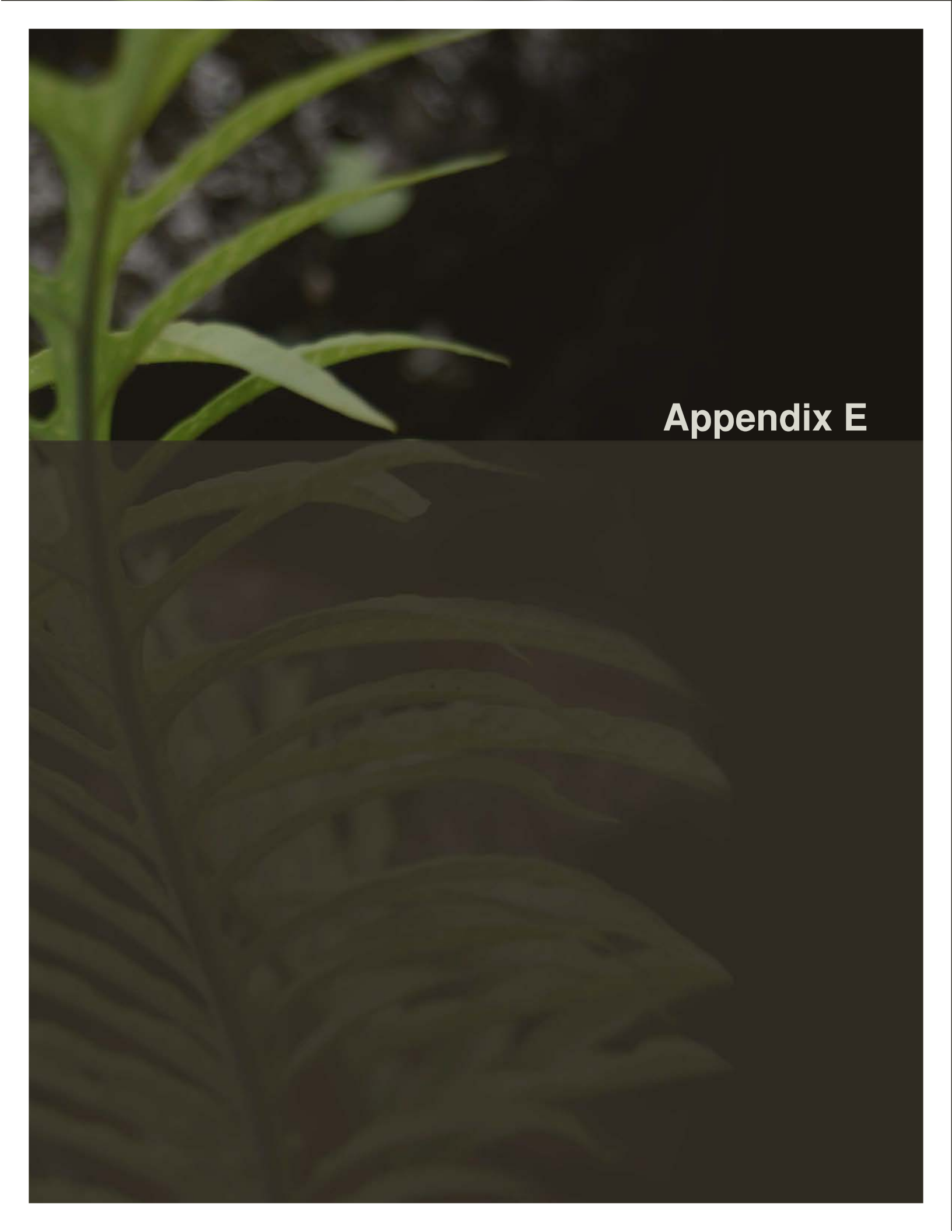
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## Appendix E





Hā'ena State Park Master Plan/EIS  
Cultural Impact Assessment



Prepared for  
PBR Hawai'i and Associates Inc.  
by  
Maria "Kaimi" Orr  
Kaimipono Consulting Services LLC  
2<sup>nd</sup> Revision  
January 27, 2011

**Cover Photos 1-12**

Hā'ena State Park cultural resources:

Mountain peaks, Kalo, Lohiau's wall,  
Ka-Ahu-A Laka, Hula Pā, Ka-Ulu-O-Paoa,  
Loko Kē'ē/Loko Naia/Marsh, Park sign, Waiakapala'e Cave,  
Kē'ē Beach/Lagoon, Limahuli Stream, Muliwai Beach

## EXECUTIVE SUMMARY

At the request of *PBR Hawai'i and Associates, Inc.* and the Division of State Parks, Department of Land and Natural Resources (DLNR), a Cultural Impact Assessment [CIA] was conducted for *Hā'ena State Park* as part of a larger project, *Hā'ena State Park Master Plan/EIS*. The purpose of this CIA was to gather information about traditional cultural practices, ethnic cultural practices and pre-historic and historic cultural resources that may be affected by the implementation of the Master Plan. The level of effort of this study included a broad cultural and historical background review; review/analysis of oral histories of six people knowledgeable about Hā'ena State Parks lands.

According to the archival material, Kaua'i has had a long history of habitation that included most of its coastal lands, with great resources in the interior lands and waterways. Kaua'i was inhabited long before the arrival of the Pele *ohana*. The famous epic saga of Pele, her sisters and brothers is where we see Lohi'au mentioned, Hā'ena's most famous resident *ali'i*. The foundation and walls of his *hale* still stand today, as does the *heiau* and *hula* platform where he worshipped and honored the *hula* goddess Laka. Ancient Menehune and Mai'a people were said to have gone back to their homeland from Hā'ena. The ancient ceremony of throwing fire brands (*ōahi*) off the mountain was performed from the top of Pu'u Makana, a prominent natural feature in Hā'ena State Park lands. There are many other stories about gods, goddesses, chiefs and chiefesses who made Hā'ena home, as well as a long tradition of *maka'āinana* who farmed its rich lands and fished in the abundant coastal waters, evidenced by burials and oral histories that have been passed down through generations.

The Hā'ena State Park lands were once part of an ancient Hawai'i *ahupua'a* life-system as well as a support system for the *ali'i* who lived there. The physical evidence of multi-use ancient or traditional cultural practices still exists near by (e.g. Lohi'au's *hale*, *hula* platform, *heiau*, *loko* or fishponds and *lo'i*), which not only indicate traditional land use of the area, but that it was/is considered *wahi pana* (sacred or significant place). They also indicate that Hā'ena was not only well established, but part of ancient Hawai'i *ahupua'a* life-systems that included the *ali'i*, officiating *kahuna* and people who lived and cared for the land. The *hale* complex of Lohi'au confirms that portions of Hā'ena were *ali'i* lands with all the infrastructure and required support systems. Fishponds or *loko* were considered resource/property of the *ali'i nui* therefore it can be assumed that Loko Kē'ē and Loko Naia were most likely under the control of and primarily for the benefit of *ali'i*.

According to several sources, there are many pre-Contact burials in the park sand dunes and in the vicinity of the comfort station; one consultant said there were burials in the *lo'i* area as well. There are several historic burials near the area of the foundation of the old poi mill. Burials were and are considered a very significant cultural practice.

Hā'ena State Park lands are located on storied lands, once part of ancient and historic communities who lived, farmed, fished, gathered, tended fishponds and buried their dead. A limited number of people were interviewed and shared their *mana'o* and many concerns regarding Hā'ena State Park; a long list of recommendations for the Hā'ena State Park Master Plan/EIS is provided based on their *mana'o*. It is also highly recommended that a cultural advisory committee or group be formed, hopefully including these interviewees, who could provide cultural expertise during the Master Plan/EIS process and during any later park development projects.

## ACKNOWLEDGEMENTS

Mahalo nui loa to all the people who agreed to take the time to be interviewed for the Master Plan/EIS in 2008 whose interviews I reviewed and analyzed for this project: Kumu Kapu Alquiza; Uncle Thomas Hashimoto; Mr. Clarence Hashimoto; Mr. Chipper Wichman; Uncle F. Bruce Wichman; and especially Mr. Randy Wichman (and his wife Victoria) for their awesome hospitality and dinner. And another *mahalo nui loa* to Randy for agreeing to a telephone interview (2009) for the comfort station project.

Mahalo to Mr. Kepā Maly for allowing me to review his reports and to the staff of PBR for providing reports of various studies conducted in Hā'ena State Park.

MAHALO NUI LOA!!!!!!

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## 1.0 INTRODUCTION

At the request of *PBR Hawai`i and Associates, Inc.* and *Hawai`i State Parks*, a Cultural Impact Assessment (CIA) was conducted for *Hā`ena State Park* as part of a larger project, *Hā`ena State Park Master Plan and Environmental Impact Statement* (Job No. F74C664A). This CIA was in accordance with the State of Hawai`i Environmental Council *Guidelines for Assessing Cultural Impacts* [1997] and in compliance with Act 50 SLH 2000 (HB 28 H.D.1) (Appendix A) as it amends the State of Hawai`i Environmental Impact Statement law [Chapter 343, HRS] to include "effects on the cultural practices of the community and State. [It] also amends the definition of 'significant effect' to include adverse effects on cultural practices."

The purpose of this CIA was to gather information about traditional cultural practices, ethnic cultural practices and pre-historic and historic cultural resources that may be affected by the implementation of the development project. The *level of effort* of this study included a broad cultural and historical background review; ethnographic survey (oral histories of six people); and review/analysis of twenty-two past oral histories.

This report is organized into five parts or chapters. Chapter 1 describes the project area in terms of location, in the context of *ahupua`a*, district and island, as well as a generalized description of the natural environment [geology, fauna, flora]. Chapter 2 explains the methods and constraints of this study. Chapter 3 summarizes the review of the traditional and historical literature in the context of the general history of Hawai`i, the island of Kaua`i and the local history of Hā`ena Ahupua`a (Figure 1). Chapter 4 presents the analysis of the ethnographic survey as it pertains to land, water, marine and cultural resources and use in the project area and vicinity. Chapter 5 summarizes the findings of this cultural impact assessment, which is based on the archival and ethnographic research data.

### 1.1.0 SCOPE OF WORK

The scope-of-work (SOW) [Appendix B] was based on the recommendations in the Environmental Council *Guidelines for Assessing Cultural Impacts* (1997) [Appendix C] and focuses on three cultural resource areas (traditional, historical and archaeological), conducted on two levels: archival research (literature review) and ethnographic survey (oral histories).

The research for this cultural impact assessment (CIA) was conducted within the broader context of the *ahupua`a* (traditional land division) and *moku* (traditional district), as well as the history of the agriculture, fishing and other industries in the area. The *level of effort* of this study included six interviews (oral history) and a broad literature review that included a review and analysis of twenty-two past oral histories.

Research on traditional resources entailed a review of the literature of Hawaiian *mo`olelo* or stories/legends, late nineteenth and early twentieth century ethnographic works and interviews with people who were knowledgeable about the area.

Historic research focused on Land Commission Awards (LCA) and archival material from the following: University of Hawai`i-Manoa Hamilton Library-Hawaiian Collections; Kaua`i Museum Archives; DLNR State Parks reports; reports provided by PBR-Hawai`i (on-line); Internet searches and personal library. Archaeological research entailed a review of reports provided by DLNR State Parks staff.

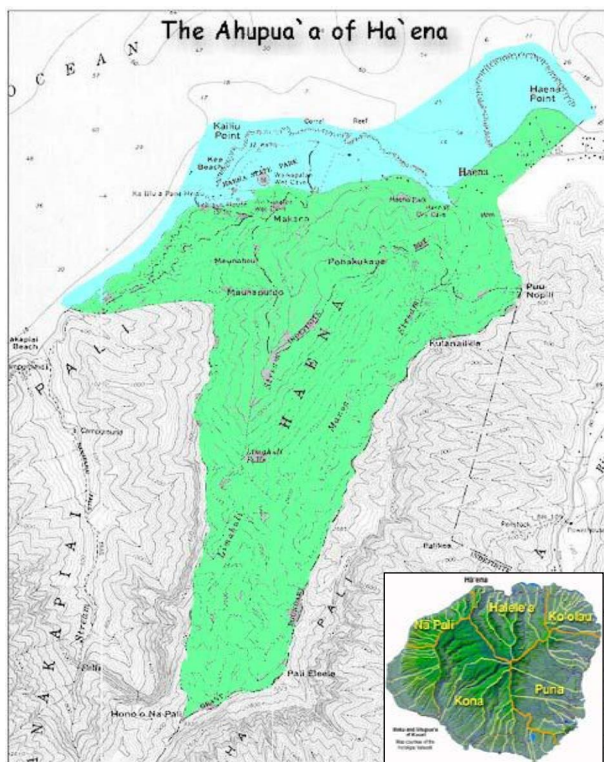


Figure 1. Ahupua'a of Hā'ena and Kaua'i Moku (Pacific Worlds/Stokes 1995)

## 1.2.0 PROJECT AREA

The project area is comprised of 64 acres within the park boundaries, the adjacent near-shore waters and Ke'e Beach, TMK 5-9-01:22 (por.) and TMK 5-9-08:1. Within the park area, parcel 25 of TMK: 5-9-01 owned by the County of Kaua'i (County) and includes Ka Ulu O Paoa Heiau and Ke Ahu A Laka (Hula Platform) and managed by the State Historic Preservation Division (SHPD). The project area also includes the State Department of Transportation highway within the park area.

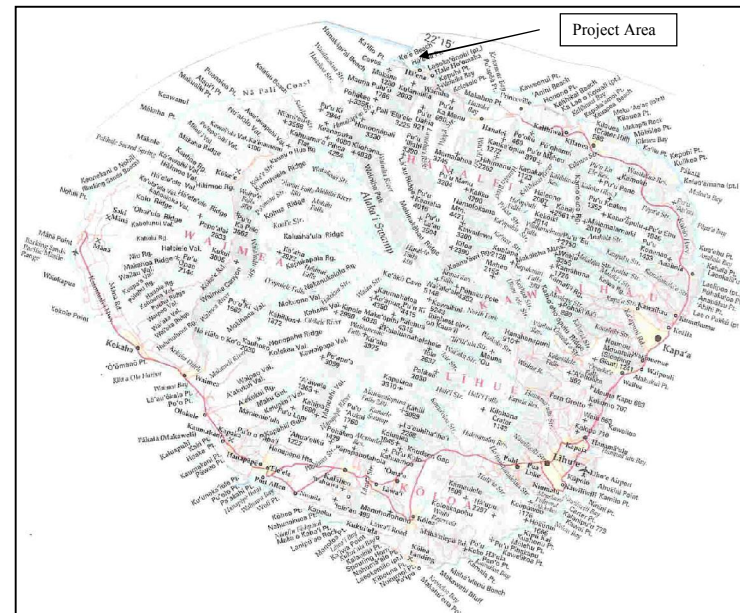


Figure 2. Map of Kaua'i. (adapted from Juvik & Juvik 1998:5).

## 1.2.1 PROJECT LOCATION

The park boundaries are defined by the Limahuli Stream on the east, the ocean on the north and west boundaries and cliffs on the south boundary. The majority of the park is below 40 feet above sea level, however, portions of the park area that are against the cliffs can be as high as 400 feet above sea level. The Kūhiō Highway (former Government Road and only access) runs east-west, bisects the park and terminates at Kē'e Beach. Natural features within the park include two wet caves (Waiakapala'e and Waiakanaloa) *ma uka* (mountain) side of the road, and a well defined sand dune. The *ma kai* (ocean) side of the road contains large areas of remnant irrigated taro terraces from pre-contact era through the 1960s - currently being revived - and mixed (introduced and alien) vegetation; portions of this area are marsh or wetlands with sections once former fishponds (now overgrown). Other cultural features within the park proper include remnants of Lōhi'au's house, the *hula* platform and *heiau*, and several burials within the sand dunes. Developed areas within the park included a newly constructed restroom facility that includes a shower system; two unimproved parking areas, the Kalalau trail, remnants of the former Brown/Allerton estate, which includes a caretaker's house, remnants of a mill and several historic burials. The majority of the park use includes Kē'e Beach and fringing reef (see Figure 1), the Kalalau trail, the beach trail through the Allerton estate, access to the *hula* platform (owned by Kaua'i County), the restored taro *lo'i* (pond fields) and access to fishing areas (TKC 2001:1-4).

The following is from the “Hā’ena State Park Master Plan and Draft Environmental Impact Statement” prepared by The Keith Companies –Hawai’i, Inc. (TKC) and Earthplan Planning and Design (July 2001).

The significance of Hā’ena State Park on a statewide scale relates to the cultural, historical, religious and recreational resources found within the park and beyond. From a cultural standpoint the Hā’ena State Park is unique in the sense of containing a large, complete, intact, Hawaiian cultural unit/complex in the regional context of the Hā’ena - Nāpali Coast, including sites associated with agriculture and marine subsistence, religion and habitation. It was a significant gathering place for early Native Hawaiians and continues to be so. The statewide (and national) significance of this Hā’ena Archaeological Complex is confirmed by its inclusion on the State and National register of Historic Sites. Interpretation of these features can offer a valuable educational tool that will enlighten visitors and the community alike of the early Native Hawaiian lifestyle (TKC 2001:I-1).

The Hā’ena State Park is a very significant feature as related to the island of Kaua’i. Located at the extreme northwestern end of the coastal beltroad highway system (Kūhiō Highway). Hā’ena State Park is, for many of the visitors to the island, one of the primary destinations. As is the case with its statewide significance, the Hā’ena State Park is significant island wide for its cultural, historical, religious and recreational resources. Historical features located within the park create a sense of island pride in its Hawaiian heritage value, especially for the North Shore community, whose *hula halau* continues to assist in the maintenance and care of the *hula* platform in exchange for use of the site (TKC 2001:I-2).

### 1.3.0 ENVIRONMENT

The Hawaiian Islands are geographically extremely isolated – 2,000 miles from North America and 1,000 miles from the nearest Pacific atoll. However, an impressive number of native plants, invertebrates and birds reached these islands by natural means (long-distance dispersal: direct, windborne, or waterborne) thousands of years before any human introductions (Juvik & Juvik 1998:103 -104).

According to the Kaua’i ecosystem map (Juvik & Juvik 1998:122 -123), the native ecosystems of the project area consisted of lowland dry and mesic forest, woodland and shrubland (terrestrial) and sandy beaches and major fringing reefs (marine). Today, the project area has been greatly transformed by human activity with trace remaining native ecosystem that consists of wet forest/woodland and lowland dry and mesic forest, woodland and shrubland.

#### 1.3.1 Terrestrial Ecosystems in Hā’ena State Park

##### 1.3.1.1 Native Wet Forest and Woodland (Juvik & Juvik 1998:126-127):

Climate/Substrate. Annual rainfall 80-<400 inches without regular dry periods; temperatures warm at low elevation, cool in montane areas. Substrates- very weathered soils on older islands.

Biota. Vegetation – closed-canopy forests of *‘ōhi’a*, sometimes with *koa* or *‘ōlapa* codominant; open-canopy forests or woodlands of *‘ōhi’a* and *uluhe*. Forests of *hala* in coastal lowlands; shrublands of *‘ōhi’a* and ferns; also *‘ākala* and shrublands.

Biota. Fauna – primary habitat of most extant Hawaiian honeycreepers and other forest birds: *‘apapane* most common; great diversity of native invertebrates.

Endangered Species: more than 50 plant species including lobeliads, *ha’iwale*, endemic mints and ferns (*kīhi*). Birds including *‘ō’ū* and *‘ākohekohe*.

Cultural Significance: traditional realm of Hawaiian gods (*wao akua*); not for casual human visitation. Source of plants for fiber (*‘olonā*); weaving (*‘ie’ie*), clothing (*kapa* from *wauke*), medicines and construction woods. It is also primary zone for bird collection for feather work.

Threats. Feral pigs, feral cats, black and Polynesian rats; alien slugs; introduced plants; clearing for agriculture and grazing; and suburbanization.

##### 1.3.1.2 Lowland Dry and Mesic Forest, Woodland and Shrubland (Juvik & Juvik 1998: 127):

Climate/Substrate. Annual rainfall 20-80 inches; warm to hot with seasonal drought. Soils less weathered than in wet forest.

Biota. Vegetation – plains, lower slopes, dry ridge tops and cliffs support grasslands of *pili* or *kāwele*. Dry or mesic shrublands of *‘a’ali’i*, *‘ākia*, *ko’oko’olau*, *‘ūlei*, and other shrubs. Dry forests of *‘ōhi’a*, *koa*, *lama*, *wiliwili* and rarer trees on ridges, rocky slopes and leeward gulches. Mesic forests (now rare) of *‘ōhi’a*, *koa* or *lama* and rarely *olopua* or *halapepe* occur in gulches and on lower slopes and less disturbed sites.

Biota. Fauna – native birds (*‘elepaio*, *‘apapane* and *‘amakihi*); native insects now depleted.

Endangered Species. Many trees and shrubs including *koki’o* and Kaua’i *hau kuahiki*; Hawaiian hoary bat greatest abundance in this zone.

Cultural Significance. Forested zone was the realm of Hawaiian gods, especially Kū. Sandalwood exploitation of the early 1880s occurred in lowland mesic forests. *Pili* grasslands, a source of thatch material maintained by fire; medicinal plants and hardwoods were gathered. Some mesic areas were converted from forest to dryland *kalo* and *‘uala* agriculture.

Threats. Feral goats, feral cats, rats, alien invertebrates, especially ants; invasive alien plants. Many lowland areas were burned and cleared in ancient Hawaiian times; today urbanization and development continue.

##### 1.3.1.3 Coastal Communities (Juvik & Juvik 1998:128-129):

Climate/Substrate. Warm; windward shores receive up to 120 inches annual rainfall; strong winds typical. Substrates include raised coral, basalt cliffs, sandy beaches, basalt and coral boulders, and littoral cones or tuff.

Biota. Vegetation – greatly influenced by proximity to ocean; many salt-tolerant species. Dwarf shrublands of *‘naupaka-kahakai* most common, *‘ilima*, *naio*, *hinahina* (uncommon), *‘ākulikuli*, *‘aki’aki* grass, or sedge. Coastal forest of *hala* in a few windward sites; wetlands of native sedge now rare.

Biota. Fauna – threatened green sea turtle (*honu lū’au*); shorebirds such as wandering tattler (*‘ulili*) and ruddy turnstone (*‘akekeke*) common in winter.

Endangered Species. Hawaiian monk seal, hawksbill turtle very rare; black-necked stilt (*ae’ō*) and Hawaiian coot (*‘alae ke’oke’o*) depend on remaining wetlands. Plants include *‘ōhai* and dwarf *naupaka*.

Cultural Significance. Coastal areas, the most densely populated lands in ancient times, continue to be important in traditional Hawaiian culture, providing medicines, *lei* materials and other resources.



### 1.3.2 Marine Ecosystems in Project Area

#### 1.3.2.1 Sandy Beaches (Juvik & Juvik 1998: 113-114):

White sand is primarily from the breakdown of coralline algae and corals. Wave action and biological and chemical erosion determine composition and longevity of beaches. Offshore sand reservoirs connected to beaches often undergo seasonal cycles of erosion, accretion and alongshore drift.

Biota. Vegetation— beach morning glory (*koali*), beach heliotrope, milo and *hau*.

Biota. Fauna — ghost crabs, mitre and auger shells, seabirds, threatened green sea turtle, endangered hawksbill sea turtle, and endangered monk seal use beaches for resting and nesting.

Cultural Significance. Hawaiians used beaches for burials (cemeteries), canoe launch sites and recreational, subsistence and ceremonial purposes. Beach sand and waterworn pebbles were used in the floors of Hawaiian houses.

Threats. Sand mining degradation by trash, beach erosion caused by shoreline fortifications.

[On the sandy areas along the coastal plain sweet potatoes [ *'uala* ] were grown. Formerly many varieties of banana [*mai'a*] were planted in Limahuli and Mānoa Valleys, as well as many kinds of sugar cane [*ko*] and several varieties of *'awa*...and while cultivation of coconut (*niu*) was limited in Hawai'i due to its northerly latitude, on Kaua'i 'the favored places' included Hā'ena and Hanalei (Handy in Pacific Worlds).]

#### 1.3.2.2 Rocky Beaches (Juvik & Juvik 1998:114):

Shorelines where sand and other sediments are absent due to constant wave action, currents, steep submarine slopes and lack of offshore sand reservoirs.

Conditions/Substrates. Mostly consolidated basalt, but sometimes consolidated limestone (cemented beach rock or raised coral reefs).

Biota. Vegetation— sea lettuce, Sargasso or various algae.

Biota. Fauna — Limpet, periwinkles, littorine snails, rock crabs, gastropods and rock urchin; offshore waters are possible feeding areas for threatened green turtle.

Cultural Significance. Rocky beaches often were important fishing grounds and canoe launching sites for Hawaiians.

Threats. Coastal, urban, resort development.

#### 1.3.2.3 Estuaries (Juvik & Juvik 1998:114-115):

Distribution. Places where fresh and marine waters meet at the coastline (stream mouth).

Conditions/Substrates. Freshwater flowing into the ocean floats on the sea surface because of its lower salt content and density.

Biota. Vegetation— marshes...some seaweeds.

Biota. Fauna — crabs, shrimps, mullets, endemic flagtails, *āholehole*, anchovies, small jacks, barracudas, eels, shorebirds, waterbirds,

Cultural Significance. Sources of fresh water and fish for Hawaiian communities in the past.

Threats. Modification for settlements; pollution by sewage and other discharges.

#### 1.3.2.4 Fringing Reefs (Juvik & Juvik 1998:117-118) (see also Figure 1):

Distribution. These reefs grow, terrace-like, off island shores, with their outer slopes extending to depths of about 165 feet.

Conditions/Substrates. Calcium carbonate skeletons and sediments produced by corals and coralline algae comprise the bulk of reefs. Sand deposits and seaweed common on shallow inner reef flats; living corals and coralline algae predominate at reefs outer edge; deeper slopes are mostly dominated by live corals or old reef rock. Beneath living outer layer of reef organisms, remains of previous reef builders are compacted and cemented into a hard, limestone, wave resistant structure which may be cut through by channels.

Biota. Threatened green sea turtle forage on reef flats; endangered hawksbill turtle feeds where sponges are common.

Cultural Significance. Fishpond development and intensive fishing occurred on reef flats.

Threats. Coastal construction, erosion, sewage discharges, overharvesting of fish, freshwater flooding.

### 1.4.0 MARSH-WETLAND ENVIRONMENT

Loko (fishpond) Kē'ē, Waiakapala'e Marsh - also called Hā'ena Marsh - is a small fresh water marsh located across Kūhiō Highway from Waiakapala'e Wet Cave. The wetlands appear and disappear depending on precipitation and marsh conditions and probably occur due to heavy rainfall and high water. During wetter years, grass encroached to the wetland and left only a small pooling of water, which is shallow and stagnant. While a dry streambed inlet empties into the northeast corner, there is no perennial stream or river that feeds the marsh and does not appear to be connected to the ocean (TKC 2001:II -33).



Photo 13. Loko Kē'ē or Waiakapala'e Marsh.

## 1.5.0 GEOLOGY

The island of Kauaʻi is a single shield volcano, 552 square miles and the oldest (5.6 million years) of the major Hawaiian Islands. The highly eroded island has spectacular land forms. Landslides have modified the island's north, northeast and possibly east flanks (Juvik & Juvik 1998:41).

The lava flows that produced the majority of this volcano are collectively known as the Nāpali Formation, which is the earliest phase of the Waimea Canyon volcanic series. Later eruptions filled a central caldera...but the Nā Pali coast and Hāʻena State Park area were protected from these later flows by the caldera rim. The Nā Pali coast and Hāʻena State Park area have therefore been subject to tropical weathering and erosion since their initial formation of Kauaʻi.... The prolonged erosion has created the dramatic sea cliffs, knife-like ridges and valleys along this portion of the coastline. The Hāʻena *ahupuaʻa*, which is situated in the Hanalei district at the extreme northeastern end of Nā Pali coast, is backed by high former sea cliffs, which have been cut by two small stream valleys, Mānoa and Limahuli. Portions of the western side of the Limahuli Valley fall within the Hāʻena State Park. The dry cave near the Hāʻena County Park and the two wet caves within Hāʻena State Park are former sea caves carved by wave action. The narrow coastal flat between the cliffs and the beach is the result of alluvial deposition. This alluvial flat is fronted by calcareous beaches and a sand dune system that extends from Kēʻē Beach eastward to Wainiha Bay. The majority of the park falls on this alluvial deposition and encompasses portions of the dune system. Boulder beaches exist along the west side of Kēʻē Beach and the mouth of Limahuli Stream. Offshore is a fringing reef (TKC 2001:13).

Calcareous sand beaches are beautifully developed on Kauaʻi with the largest between Hāʻena and Lumahai and at Hanalei Bay. Sand is cemented into "beach rock" at places such as Ka Lae o ka ʻĪlio near Hāʻena and contains enough olivine to give it a greenish color (Macdonald et al 1983:470). The Hāʻena dune site estimated (1200-1860AD) (Juvik & Juvik 1998:166-map).

According to Quinn (2010:1) the current view of Kauaʻi geology is as follows:

Current thinking is that a probable second large shield volcano built the eastern part of the island and slipped down to create the expansive Lihue basin and the windward facing scarp of Mt. Waiʻaleʻale. *Kauaʻi Geologic History, A Simplified Guide*, by Chuck Blay and Robert Sievers represents an alternate view of the island's geologic history. Alluvial deposits are silts and clay, not sand. Hāʻena is a coastal plain and covering of alluvial deposits over basalt substrate behind the dune. Biogenic reefs, comprised mainly of coral and coralline algae, have grown like a "fringe" around the island. These reefs have provided skeletal matter for fragmentation, transport and deposition at the shoreline to produce sandy beaches.



Photo 14. Introduced species around the wetland area

## 1.6.0 FLORA

Hāʻena State Park is dominated by introduced species that include 218 flowering plants and nine species of pteridophytes; eleven were Polynesian-introduced species, nine are endemic, fifteen are indigenous to Hawaiʻi and four are possibly indigenous. Many of the introduced species are ornamentals (TKC 2001:11-34).

### 1.6.1 Wetland Community

During wet periods, land surrounding Waikapalaʻe Marsh is covered with a dense growth of *hau*, guava and *koa haole*. A small patch of *ape* or arrowhead, a close relative of taro and a food of early Hawaiians, still remains in the wettest, northeast corner. A *hau* thicket borders the wetland to the north, east and west. During the dryer periods, the marsh was observed to be covered with a dense hummocky, two feet high growth of *hono hono* grass. The *ape* still occupied the northeastern corner, *Halo* grass covered the western tip and a *hau* thicket still bordered the north, east and west (TKC 2001:11-34).

### 1.6.2 Strand Community

The strand, defined as the zone seaward of the tree line at Hāʻena State Park, does not have much growth...it consists mostly of *pōhuehue*, *kūkaʻipuaʻa*, fireweed, sow thistle, narrow-leaved plantain and seedlings of ironwood and false *kamani*. Beach *naupaka* occurs uncommonly. Few other species are found in this community (TKC 2001:34).

### 1.6.3 Beach Forest Community

The Hāʻena State Park coastline, especially in sandy areas...consists of false *kamani* and ironwood trees, 30 to 40 feet tall with occasional Java plum inland. The canopy cover is typically 100%, the understory is generally open and dense shade and needles preclude the development of any significant ground cover.... Understory species include veldia, pothos, four o'clock and sow thistle (TKC 2001:11-34).

### 1.6.4 Java Plum Forest Community

The Java plum forest is one of the two largest plant communities in Hāʻena State Park. It is found along Limahuli Stream occupying abandoned taro terraces, along the dirt road near the restroom facilities and on the talus along the *mauka* side of Kūhiō Highway between Waikanaloa wet cave and the rock shelter. Typically the forest consists of Java plum trees at least 30 feet tall with 50-100% canopy cover.... The density and composition of the understory vary considerably (e.g. Java plum saplings, guava, Boston fern, Christmas berry, basket grass).... Near Limahuli Stream, numerous ornamental species are found. Several are remnants of old plantings; others have become widespread such as gingers, spiral flag and marica (TKC 2001:11-34).

### 1.6.5 Mixed Forest Community

The mixed forest is the second largest vegetation type and is located in the central portion of Hāʻena State Park, *makai* of Kūhiō Highway, at the west end along the Kalalau Trail and Lohiʻau's House and on the east side along Limahuli Stream *mauka* of Kūhiō Highway...it consists of groves of *hau*, Java plum and *kukui*, mango, African tulip, octopus tree, *hala* and strawberry guava.... The Kalalau Trail portion consists largely of *hala*, *kukui*, Java plum, octopus tree and guava that are overgrown with yellow water lemon, *taro* and pothos vines [other species include rose apple, cinnamon, *lauaʻe*, *ʻawapuhi-kuahiwi* and *ti*] (TKC 2001:11-35).

### 1.6.6 Ancient Taro Beds

There are taro beds along the trail from Hā'ena to Kalalau valley which must have been cultivated by the people living at one of the two places (Bennet 1931:9).

### 1.7.0 FAUNA

In almost all of the elevation zones of the Hawaiian Islands, alien animals such as feral pigs, goats, cattle and horses have damaged native vegetation. Terrestrial fauna in pre-colonized Hawai'i consisted of only one endemic mammal, the hoary bat (*Lasiurus cinereus*), thousands of endemic insects [i.e., damselflies (*Ischnura ramburii* and *Ischnura posita*) found around reservoirs and streams], and about 100 species of endemic birds such as the Hawaiian owl (pueo) and Hawaiian honeycreeper (*Drepanididae spp*) (Berger, 1972:7, Kirch, 1985:28). Early Polynesians introduced animals included the Southeast Asian pig (*Sus scrofa*), jungle fowl or chicken (*Gallus gallus*), dog (*canis j. familiaris*), and the Polynesian rat (*Rattus exulans*). Photo 15. Wild chickens in Park



### 1.7.1 Stream Fauna

Nineteen species of macro fauna were found in Limahuli Stream...and include ten insects, three crustaceans and five fishes. Of the nineteen, eleven are native to Hawai'i, with ten of those being endemic or occurring naturally only in Hawai'i. Three of these endemic (*opae-kala'ole*, *'o'opu-nākea* and *'o'opu-nōpili*) are of some economic importance. Two endemic species (*'o'opu-nakea* and *'o'opu-nōpili*) are listed as "threatened" and of special concern. The *'o'opu-nakea* is diadromous, meaning it is migratory between fresh and salt water and it is probable that all gobies (*'o'opu*) are [endangered]. Of the alien species, the Tahitian prawn is harvested for food. In checking with the Limahuli Gardens, no other exotic species are apparent (TKC 2001:II-31).

### 1.7.2 Marsh Fauna

Bullfrogs have been heard in the marsh, however, no fish were observed.... Small numbers of Spotted Munia, Common Myna, Spotted and Barred Dove have been seen at Hā'ena Marsh. Other exotic birds (Northern Cardinal, Shama, Japanese White-eye, House Finch) are common in adjacent forested habitat. White-tailed Tropicbirds were seen in the area, though their presence bears no relationship to the wetland. No other waterbirds have been observed and there are no records of wetland birds at Hā'ena Marsh, however, because of proximity to the ocean, it is possible that all five resident native species of waterbirds and the Cattle Egret are temporary visitors (TKC 2001: II-33).

### 1.7.3 Park Wildlife

**Goats** Feral goats live in herds primarily on the cliffs of the Nā Pali Coast. Because of the proximity of the Nā Pali Coast to Hā'ena State Park, there is the possibility that goats frequent the park, especially the rugged western portion surrounding the *heiau* and the *mauka* cliff areas...[however] there are no records or evidence of goats in Hā'ena State Park (TKC 2001:II-41).

**Pigs** Although there is a large population of feral pigs on the island, no feral pigs have been sighted in Hā'ena State Park...[but] feral pigs have been observed along the beginning of the Kalalau Trail, with the only access to that area being through the Park (TKC 2001:II-41).

**Bats** Kaua'i's only endemic land mammal is the Hoary bat (*Lasiurus cinereus semotusi*). According to the DLNR-DoFAW, the hoary bat was added to the Federally endangered species list over thirty years ago.... They frequent all low lying coastal areas and DLNR - DoFAW

confirmed that they dwell in caves and treetops of Hā'ena State Park. It is recommended by DLNR-DoFAW that mass clearing of the park be avoided and that forested areas be maintained to preserve the bat habitat (TKC 2001:II-42).

**Birds** The DLNR-DoFAW confirms that there are no native, resident forest birds below 2000 feet because of avian diseases carried by mosquitoes.... Gallinule and the Koloa Duck have been sighted by DLNR-DoFAW in the Hā'ena State Park.... The indigenous Hawaiian Short-eared Owl (*pueo*) and Black-crowned night heron (*'auku'u*) are present along the coast; the latter is also found along the major streams (TKC 2001:II-42).



Photo 16. Ironwood and False Kamani



Photo 17. Canopy and understory

## 2.0 METHODS

The Hā'ena State Park Cultural Impact Study/Assessment was conducted between the months of September 2008 to April 2009. The study consisted of three phases: (1) cultural and historical archival research (limited literature review); (2) ethnographic survey (oral history interviews/questionnaires), transcribing interviews, analysis of ethnographic data; and (3) report writing.

### 2.1.0 Personnel

The personnel consisted of (1) the principal investigator -author- ethnographer who has a Masters degree in Anthropology, with a graduate curriculum (archaeology track) that included anthropology theory, cultural resource management, ethnographic research methods, and public archaeology; an undergraduate curriculum background (archaeology track) that included Hawaiian History, Hawaiian Language, Hawaiian Archaeology, Pacific Islands Religion, Pacific Islands Archaeology, Cultural Anthropology, as well as Geology and Tropical Plant Botany; and ethnographic field experience that includes over 300 interviews to date; and (2) subs, transcribers Carol Kalahiki and Dot Uchima.

### 2.2.0 Level of Effort

The level of effort for this CIS/A project was an ethnographic survey that consisted of 5-7 interviews and questionnaires; and a broad archival research primarily based on reports of previous studies and limited primary source research in Kaua'i Museum Archives.

### 2.3.0 Theoretical approach

This study is loosely based on *Grounded Theory*, a qualitative research approach in which "raw data" [transcripts and literature] are analyzed for concepts, categories and propositions. Conceptual labels or codes are generated by topic indicators [i.e., agriculture, flora, burials, fishing]. Categories are generated in a similar manner by forming groupings such as "Land Resources & Use," "Marine Resources & Use" or "Cultural Resources & Use." Since this was a semi-focused study, categories were pre-selected as part of the overall research design. However, it is not always the case that these research categories are supported in the data. In the *Grounded Theory* approach, theories about the social process are developed from the data analysis and interpretation process (Haig 1995; Pandit 1996). This step was not part of this cultural impact assessment as the research sample was too small.

### 2.4.0 Archival Research

It took several weeks of intermittent archival research and reviewing archival material compiled by *Hawai'i State Parks* staff. The majority of the archival research [primary and secondary sources] came from the Kaua'i Museum Archives, State Historic Preservation Division library; State Parks collections, personal library; and Internet searches. Most of the secondary source material included translations of 19<sup>th</sup> century ethnographic works, historical texts, archaeological reports, and Hawaiian language resources [i.e., proverbs, place names and dictionary].

### 2.5.0 Ethnographic Consultant (Interviewee) Selection

The selection of the consultants was based on the following criteria (explained further in Chapter 4):

- ❖ Had/has Ties to Project Location (including lineal descendant)
- ❖ Known Hawaiian Cultural Resource Person
- ❖ Referred by *Hā'ena State Park* Staff
- ❖ Referred by NTBG-Limahuli staff

### 2.6.0 Ethnographic Questionnaires

An ethnographic survey form/questionnaire was developed to accommodate the people who wanted to share information about Hā'ena and vicinity, but who were not slated to be interviewed due to time constraints or other limitations. This form was either mailed to people of "standing" or who expressed an interest in sharing information or distributed at public information meetings. Only two people filled out the questionnaire and mailed it back (insufficient information).

### 2.7.0 Ethnographic Interview Process

The interview process included a brief verbal overview of the study. Then the ethnographic consultant was provided with an informed consent or agreement to participate form to review, which was drafted for the edification and protection of each consultant (Appendix D). An ethnographic research instrument (Appendix E) was designed to facilitate the interview, a semi-structured and open-ended method of questioning based on the person's answers to questions ('talk-story' style). Each interview was conducted at the convenience (date, place and time) of each consultant. A *makana* or gift was given to each consultant in keeping with traditional reciprocal protocol.

### 2.8.0 Interview Procedures

Interviews were conducted at Limahuli Hale (1), home (3), or work office (1) at the request of the consultants, using an audio-cassette tape recorder. Notes were also taken as needed, but more attention was given to listening intently to each consultant.

### 2.9.0 Transcribing/Review Process

The taped interviews were transcribed by hired transcribers using a Sony Dictator Transcriber (BM-87DST) and later edited by the author. Most consultants were emailed a copy of the edited interview transcripts along with a *mahalo* letter that explained the transcript review process, along with a self-addressed, stamped envelope for return of the revised transcripts; one was mailed although the consultant said there was no need to mail copy. This allowed for corrections (i.e., spelling of names, places), as well as a chance to delete any part of the information if so desired. Consultants were also given a "Release" form (Appendix F) to sign when they were satisfied with the transcript information/revisions. One emailed permission to use information without revisions; no one else submitted any release forms.

### 2.10.0 Ethnographic Analysis Process

The analysis process followed a more traditional method, as a qualitative analysis software program was not necessary. The interview was manually coded for research thematic indicators or categories (i.e., personal information; land, marine and cultural resources and use; site information -traditional and/or historical; and anecdotal stories). For the purpose of this study, it was also not necessary to go beyond the first level of content and thematic analysis, as this was a more focused study. However, sub-themes or sub-categories were developed from the content or threads of each interview [i.e., agriculture, fishing, hula].

### 2.11.0 Research Problems

Coordinating people's schedules for interviews was cumbersome. Coordinating tasks was also a problem. However, the primary problems were people not following through with scheduled interviews, and not returning phone calls and emails.

### 3.0 CULTURAL and HISTORICAL BACKGROUND REVIEW

The Cultural and Historical Background Review entailed a broad search of primary and secondary source literature over time. The majority of the research material for this section came from the State Historic Preservation Division library, Bishop Museum archives; Hawaiian Collections of the University of Hawai'i Hamilton Library (Manoa Campus) and the author's private library. Primary source material included maps, visitor journals, genealogies and other studies. Secondary source material included translations of 19<sup>th</sup> century ethnographic works, historical texts, indexes, archaeological reports, and Hawaiian language resources (i.e., proverbs, place names and Hawaiian language dictionary). A review of the archival material is presented in this section within the chronological context of the broader history of Greater Hawai'i, the *moku 'āina* (island) of Kaua'i and the Hā'ena District. This context will illustrate that Hā'ena was not only a part of the dynamics of Kaua'i, but of greater Hawai'i as well.

#### 3.1.0 Models of Hawaiian Chronology

Models of Hawaiian Chronology such as Cordy (1974/1996), Hommon (1976/1986) or Kirch (1985) provide a temporal view of settlement patterns as well as cultural changes through time, from initial settlement through first recorded contact with the western world. Cordy's (1974) first model of a cultural development sequence looked at Initial Settlement Period, New Adaptation Period and a Complex Chiefdom Period. He has since modified this model (1996). Hommon's (1976) model of sociopolitical development sequence included four phases: Phase I AD 500 -1400; Phase II AD 1400 -1550; Phase III AD 1550-1650; and Phase IV AD 1650 -1778. This model was later modified (1986) to three phases: Phase I AD 400 -1400 Exploration and Settlement; Phase II AD 1400 -1600 Expansion; and Phase III AD 1600-1778 Consolidation. Kirch (1985) believed that initial settlement occurred much earlier than AD 600. His cultural -historical sequence model has four phases: Phase I Colonization Period (AD 300 -600); Phase II Developmental Period (AD 600 -1100); Phase III Expansion Period (AD 1100-1650); and Phase IV Proto-Historic Period (AD 1650-1795) (Kirch, 1985:296-308; Kolb, 1991:205).

For this cultural impact study/assessment, Kirch's (1985) model will be used with the following additions: Early Historic Period (AD 1795 -1899), Territorial History (AD 1900 -1949), and Modern Historic Period (post AD 1950). The reasoning behind Kirch's model is the belief of many aboriginal Hawaiian people that based on oral histories or legends, the migrations of their Polynesian ancestors to Hawai'i took place prior to 700 AD. According to Fornander (1917: IV: II: 406), there are seventy -five generations from Wakea to Kamehameha I who was born around 1753 AD. If just eighteen years were allotted to each generation (typically a generation is twenty years) that would make the time of Hawaiian progenitors Wakea and Papa Haumea (who settled in Nu'uano, O'ahu) approximately 403 AD. [McKinzie (1983:12) gives thirty years per generation.] Yent's (1980) settlement phase for Hā'ena will also be referenced (In Dye 2002:5).

It should be noted that a study by Tuggle & Spriggs (2001) refutes the 'early colonization' supposition. For decades, the consensus among Hawaiian archaeologists was that evidence from Bellows, O'ahu and Ka'i'i, Hawai'i Island, supported early Polynesian colonization dates of AD 300 to AD 600 (Tuggle 1979; Kirch 1985). However, Tuggle and Spriggs (2001) have since studied new data and re-evaluated past dates and dating methods and have concluded that acceptable early dates fall within 700 -1100 AD. These dates appear to coincide with data that eastern Polynesia was settled much later than previously thought (Rolett 1989).

The following overview encapsulates cultural changes over time and highlights significant events and people. More corroborating details follow this overview section with traditional *mo'olelo*, *mele*, *oli*, historic works and various studies.

### 3.2.0 An Overview of Human Impact, Settlement and Socio-economic Development of Kaua'i in the context of Greater Hawai'i

#### 3.2.1 Colonization Period (300-600 AD)

First voyager dating is scanty at best, however, based on early site dates from Bellows, O'ahu and South Point, Hawai'i, Kirch (1985) estimated that the Colonization Period of the Hawaiian Islands was somewhere between 300 -600AD. These first Polynesian voyagers to Hawai'i followed the tracks of migratory birds. They traveled mainly by the stars on a voyage of migration; sixty to a hundred persons could exist for weeks on a large canoe, which could have been a hundred feet in length (Day 1992:3). This feat was "remarkable in that it was done in canoes carved with tools of stone, bone, and coral; lashed with handmade fiber; and navigated without instruments" (Henry 1995: vii).

Reconstructing the cultural sequence for the district of Hā'ena, Kaua'i and greater Hawai'i during the colonization period would involve the 'founder effect' and time necessary to adjust and adapt to a new environment. The colonizers were not able to bring all of the gene pool or cultigens from their homeland, so their new culture consisted of what survived the journey, what was remembered and what could be applied to the new environment (Kirch 1985:285 -6). Although early Hawaiians were farmers and felt spiritually tied to the 'aina (land) in many ways (Waters, n.d.), when they first arrived they had to modify both their subsistence practices and the land. Faunal remains analyses indicate that early Hawaiian subsistence depended on fishing, gathering, bird hunting (extinct fossil remains, see Olson and James, 1982), as it took time to clear the forests, plant their crops, breed their animals, and construct suitable living quarters.

According to Wichman (2003), Kaua'i was first settled by descendants of Kumuhonua and Lalo-honua - thirty-six generations before Papa was born (Wichman 2003:2) - during the time of Papa and Wakea (second son of Kahiko and Kū-pūlana-kehau) (Wichman 2003:4) who came well before the descendants of Nana'ulu came to Kaua'i. Wichman's genealogies (2003:117-131) are used as approximate/guiding dates in this report.

Ho'ohoku-i-kalani [daughter of Papa and Wakea (ca A.D. 530)] gave birth to another son [from Wakea] whom they named Hāloa after his dead brother. From Hāloa, it is said, descend all the Polynesians. Kaua'i historians claim that a younger brother of Hāloa discovered and settled on this island. This was Chief Ka-māwae-lua-lani-moku [ca A.D. 555], who traveled to this island with his wife, Kahiki-lau-lani, and her two paddlers Kō-nihinihi and Kō-nahenahe. Because of his good deeds, the great number of his descendants, and the prosperity of his reign, people began to call this island Kau-a-i (*Place of Abundance*).... Whether Ka-māwae-lua-lani-moku and Kahiki-lau-lani ever lived on Kaua'i is unknown. It is more certain that one day, not too many generations after Papa and well before the descendants of Nana'ulu came to Kaua'i, a voyaging canoe commanded by Kū'alu-nui-kini-akua approached the island from the west. Nothing is known of him except his name and that he had a counselor named Pi'i -'ali'i. The genealogy of the first Kaua'i settlers is broken, for they lost their lands and identity after a long war to new, vigorous, and more warlike adventurers.... The most famous connected to two almost mythical groups of people, the Menehune and the Mū (Wichman 2003:5).

The first group to settle on Kaua'i landed at the river mouth of Waimea in the Kona district. What they encountered was an area of abundant water and resources.

Kū'alu-nui-kini-akua stepped ashore at the mouth of Waimea river. It was an ideal place. There was abundant water from the swift rivers and streams that flowed within a protected canyon complex....There was good soil within the canyon valleys.... As the population increased, settlements spread inward into Waimea canyon and its side canyons, into the valleys of Nāpali along the southern coast to Koloa and northward to Wailua and Hanalei(Wichman 2003 5-7).



It was during this period that Kū'alu-nui-paukū-mokumoku was the ruling chief. His first wife had been murdered by his *kahuna nui* who wanted to go back to their homelands so he married Kahāpua, a chiefess born on the slopes of Pe'ape'a overlooking Hanapēpē Valley. When she became pregnant, Kū'alu arranged for her to live in the remote valley of upper Waimea in order to protect their child. During this time Kū'alu-nui-paukū-mokumoku sent back to his homeland for the Menehune who were masters of stonework and engineering and under his direction they built many *heiau*, fishponds and irrigation systems for wetland farming. The Menehune preferred to live on the ridge between Wainiha and Lumahai valleys (Wichman 2003: 7 -10). When his son Ola was of age he was brought to his father. Ola later became the ruling chief of Kaua'i and it was during his reign that many other works by the Menehune were constructed. However, years later Menehune Queen Mōhihi decided to take her people back to their homelands as the men were marrying Hawaiian women. They marched along the edge of Napili valleys to the plains of Hā'ena where they sailed away to their homeland (Wichman 2003: 8-12).

### 3.2.2 Developmental Period (600-1100 AD)

During the Developmental Period, 600 -1100 AD, as the founding groups grew, they fissioned into subgroups referred to as ramage, with the senior male of the original ramage as chief of the conical clan, although hierarchical ranking was not just relegated through the patrilineal line of descent (Kirch 1985:31). Bellwood refers to these groups as tribal and related by blood (Bellwood 1978:31). In *Ka Po'e Kahiko* Kamakau refers to Hawaiian ranking in the following passage:

For 28 generations from Hulihonua to Wakea, no man was made chief over another. During the 25 generations from Wakea to Kapawa, various noted deeds are mentioned in the traditions and well-known stories. Kapawa was the first chief to be set up as a ruling chief. This was at Waialua, O'ahu; and from then on the group of Hawaiian Islands became established as chief-ruled kingdoms - Maui from the time of Heleipawa, son of Kapawa and Kaua'i from the time of Luau'u[\*]. In [this] time...records (oral) began to be kept of the chiefs; of the day of birth, the land where each was born, the land where each was born, the places where the placenta (*a'a*) and its navel string (*ewe*) were deposited, the place where the navel cord (*piko*) was cut, the famous deeds of each, and the burial place where each was laid (Kamakau 1964:3).

[\*Luau'u (ca A.D. 1380) was the son of Kama-hano and Ka-'auea-o-ka-lani; grandson of Ahukini -a-La'a and Ha'i -a-Kama'i'o; great-grandson of La'a -mai-Kahiki, foster son on Mo'ikeha (Wichman 2003:39-41). These people could very well have been living in the later part of this period but more likely the early part of the Expansion Period.] (see Appendix G for Kaua'i Ali'i Aimoku)

Over time other settlers inhabited all the Hawaiian Islands. Many genealogies of Hawaiian *ali'i* indicate that Nana'ulu and 'Ulu (ca A.D. 830) were prominent ancient ancestors who settled all over the Pacific islands.

Thirteen generations or more than three hundred years, after Papa-nui-hānau-moku and Wākea, a chief of Tahiti, Ki'i and his wife, Hina -kō'ula, became parents of two sons, Nana'ulu and 'Ulu. When they were grown, Ki'i asked his sons to go on a voyage of discovery. All memory of the navigational signposts back to their original homeland were forgotten.... Nana'ulu sailed north in his canoe named *Manō-nui* (Great Shark) and found the islands of Hawai'i. The way from Hawai'i to Tahiti was charted. Voyagers came in increasing numbers (Wichman 2003:2422).

According to Kalākaua (1887/1990), it is likely that when Nana'ulu first landed in the islands, he did not find anyone else. This may be true if they landed on an island not yet inhabited by those from the north islands such as Kaua'i, Ni'ihau, Necker and Nihoa.

Nanaula, a distinguished chief, was the first to arrive from the southern islands. It is not known whether he discovered the group [Hawai'i] by being blown northward by adverse winds, or in deliberately adventuring far out upon the ocean in search of new lands. In either event, he brought with him his gods, priests, prophets and astrologers, and a considerable body of followers and retainers. He was also provided with dogs, swine and fowls, and the seeds and germs of useful plants for propagation. It is probable that he found the group without human inhabitants.

During that period --probably during the life of Nanaula --other chiefs of less importance arrived with their families and followers either from Tahiti or Samoa. They came in barges and double canoes capable of accommodating from fifty to one hundred persons each. They brought with them not only their priests and gods, but the earliest of Polynesian traditions. It is thought that none of the pioneers of the time of Nanaula ever returned to the southern islands, nor did others immediately follow the first migratory wave that peopled the Hawaiian group (Kalākaua 1887/1990:19-20).

The descendants of 'Ulu spread out over the South Pacific. Among them were extraordinary people who lived such wonderful adventures that storytellers had rich material to develop into entertaining sagas [e.g., Māui-ki'iki'i, 'Aikanaka-a-Mako'o, Hina-hānau-a-ka-mālama, twins Puna and Hema].... There were so many astonishing ancestors like these that the genealogists added them all into the 'Ulu genealogy (Wichman 2003:23).

Changes occurred during this period that brought about a uniquely Hawaiian culture, documented by the material culture found in archaeological sites. These include quadrangular adze, bone fishhook variations, *'ulu maika* (a game piece) stones, *lei niho palaoa* (necklace of bone or ivory and human hair worn by high ranked chiefs) and evidence of shifting cultivation. Kaua'i developed a unique form of poi pounder such as *pōhaku ku'i poi* (ring and stirrup pounders), double-grooved stone club heads, and a broad anvil *kapa* beater (Wichman 2003:6).

On Kaua'i there is evidence of ancient connections with the southern islands of Central Polynesia not found on the other islands of Hawai'i.... Differences are seen in the stone implements that were once used on Kaua'i, in styles of heiau, in language, and in the stories of the Menehune. Long considered a mythical people of Kaua'i, in reality the Menehune were a distinct people of an ancient time. Among the stone implements common to Kaua'i were two types of poi pounders restricted almost exclusively to that island.... The two Kaua'i types are the ring and stirrup pounders.... A discovery of significance was made in recent years on the island of Uahuka in the northern Marquesas when an "ancestor" stirrup pounder was discovered there. It is estimated, through radiocarbon dating that it was in use at sometime between A.D. 600 and 1300. This type of pounder had been found only on Uahuka and Kaua'i (Joesting 1984:19).

The archaeological evidence indicates that transient fishing camps were already utilizing Kō'e'e, Hā'ena prior to AD 1000 (Major and Carpenter 2001:38). According to Yent's (1980) Phase I of Hā'ena, there was transient settlement along the coastal terrace of Kō'e'e Beach from about 989 AD. Legends indicate that a chief of Hā'ena, Lohi'au, lived around this time and had several encounters with goddesses of Hawai'i Island; the structural remains of his house still exist.

As Pele and Hi'iaka danced in human form before Lohi'au on the hula platform at Ha'ena, gods and mortal Hawaiians alike could look at the cliffs - Na Pali - running down the coast beyond Kalalau, and at headland after headland, each marking another narrow valley as the wet of the north changed to the dry of the west. Glancing below and east, Lohi'au and his companions could see the blues, whites, and greens of Ha'ena itself, for Ha'ena was fronted by reef and the many blues of the Pacific, by the white coral sand of Ke'e beach, and the green of coastal vegetation, taro, and the cover of the mountainous cliffs immediately beyond. Lohi'au, his ancestors, and his descendants have lived at Ha'ena since perhaps before A.D. 1000 (Griffin 1984: 1).

General archaeological evidence indicates that the “ancestral pattern of corporate descent groups” were still in place at this time (Kirch 1985:30-2-3). The early culture evolved as the population grew, and many of the changes were related to significant socio-economic changes.

For thirteen or fourteen generations the first occupants of the Hawaiian Islands lived sequestered from the rest of the world, multiplying and spreading throughout the group. They erected temples to their gods, maintained their ancient religion, and yielded obedience to their chiefs. The traditions of the period are so meager as to leave the impression that it was one of uninterrupted peace, little having been preserved beyond the genealogies of the governing chiefs (Kalākau 1887/1990:20).

In about A.D. 1025 or perhaps a little earlier, the people of the group were suddenly aroused from their long dream of six centuries by the arrival of a large party of adventurers from Tahiti. Their chief was Nanamaoa. Their language resembled that of the Hawaiians and their customs and religions were not greatly at variance. They were therefore received with kindness, and in a few years their influence began to be felt throughout the group. They landed at Kohala, Hawai'i, and Nanamaoa soon succeeded in establishing himself as an influential chief. His sons secured possessions on Maui and O'ahu, and on the latter island one of them—Nanakaoko—instituted the sacred place called Kūkaniloko, in the district of Ewa, where it was the desire of future chiefs that their sons should be born.... This became the sacred birth-place of princes', as 'Iao, in Wailuku valley, on the island of Maui, became their *taboo* spot of internment. It was at Kūkaniloko that Kapawa, the son of Nanakaoko, was born. His principal seat of power was probably on Hawai'i, although he retained possessions on Maui and O'ahu (Kalākau 1888/1990:70-71).

But stronger leaders were soon to follow from the south. Among the first was the high priest Pā'ao, from Samoa [some say it was Society Islands]. He arrived during the reign of Kapawa, the grandson of Nanamaoa, or immediately after his death. The people were in an unsettled condition politically, and Pā'ao, grasping the situation, either sent or returned in person to Samoa for Pili, a distinguished chief of that island. Arriving with a large following, Pili assumed the sovereignty of the island of Hawai'i and founded a new dynasty. Pā'ao became his high priest, and somewhat disturbed the religious practices of the people by the introduction of new rites [ *luakini* or human sacrifice] and two or three new gods [Kūka'ilimoku] (Kalākau 1887/1990:20-21).

Kamakau (1991) says that there were seventeen generations during which Hawai'i Island was without chiefs—some eight hundred years. “The lack of a high chief was the reason for seeking a chief in Kahiki, and that is perhaps how Pili became the chief of Hawai'i” (island) (Kamakau 1991:101-102).

The Pā'ao/Pili influence created a major shift in “religion” and socio-economic patterns. Pā'ao brought with him the Kū practice of human sacrifice, used in monumental *luakini heiau* or war temples. Pili started a line of *ali'i nui* that would continue to the Kamehameha “dynasty.” The evolution of the *luakini heiau* is difficult to place archaeologically, and although the arrival of Pā'ao may have been a real event; the uniqueness and complexity of *heiau* were most likely a local (Hawaiian) development (Kolb 1989:3).

Two voyaging canoes set out from Tahiti fifteen generations after Nana'ulu and arrived on O'ahu and Kaua'i. Maweke and Paumakua settled peacefully on O'ahu and quickly became ruling chiefs of a district of that island (Wichman 2003:23).

[According to Kalākau (1887/1990)] The next arrivals of note [after Nanamaoa] from the southern islands were the two Paumakua families, one of which settled in O'ahu and Kaua'i and the other in Hawai'i and Maui.... The Paumakua family, which became so influential in Hawai'i and Maui, arrived during the early part of the reign of Pili, in about A.D. 1090. A large party accompanied the family, and they brought with them their gods, priests, astrologers and prophets. They first landed and secured possessions on Maui, but the sons and other relatives of Paumakua were brave and ambitious, and soon by conquest and marriage secured an almost sovereign footing both in Maui and Hawai'i (Kalākau 1888/1990:71-72).

At the same time, Puna-nui-ka-āina, whose genealogy has not survived, arrived on Kaua'i, having come, most likely, from the Marquesas Islands. Puna-nui-ka-āina arrived when the chief with the deadly riddles, Ka-iki-pa'a-nānea, was ruler of Waimea. The newcomer chose to settle along the banks of the Wailua River. This land came to be called Puna. There were now two chiefdoms on Kaua'i, Puna and Kona (Wichman 2003:23).

Newcomers were soon changing the socio-political structure of the island polities. There were attempts by some of the prominent families to join forces, but to no avail. Kalākau (1888/1990) explains:

At that time Kamauaua, a powerful chief of the ancient native line of Nanaula, held sway over the island of Moloka'i. He proudly traced his ancestry to the first migration in the sixth century, and regarded with aversion and well-founded alarm the new migratory tide which for years past had been casting upon the shores of the islands a flood of alien adventurers, whose warlike and aggressive chiefs steadily possessed themselves of the fairest portions of the group. He had sought to form a league of native chiefs against these dangerous encroachments; but the wily invaders, with new gods to awe the native nobility, had, through intermarriage and strategy rather than force, become the virtual rulers of Hawai'i, Maui, O'ahu, and Kaua'i, and he had abandoned all hope of seeing them supplanted. Moloka'i alone remained exclusively under native control, and its resolute old chief had from their infancy instilled into his sons a hatred of the southern spoilers and a resolution to resist their aggressions to the bitter end (Kalākau 1888/1990:71-72).

### 3.2.3 Expansion Period (1100-1650 AD)

The Expansion Period, 1100 -1650 AD, is significant for a number of reasons. Communication between the Hawaiian groups and southern groups suddenly ceases in the latter part of this period and oral histories don't offer any explanations. With the exception of Moloka'i and a portion of O'ahu who were of the Kamauaua and Maweke (ca 1230 AD) families from the Nana'ulu lines, all the others were of the southern chiefs and their descendants (Kalākau 1887/1990:21-22). Most of the “ecologically favorable zones,” the windward and coastal areas of all major islands, were now settled, and the more marginal leeward areas were being developed.

Archaeological evidence indicates that Hā'ena had permanent settlements and larger populations that utilized marine and inland resources by the 1200s (Yent's Phase II); permanent habitations were supported by wetland agriculture from this period to well into the 1700s (Major and Carpenter 2001:38; Yent 1980).

Legends reveal that during the 12<sup>th</sup> century, several Hua chiefs reigned on Maui who would later be connected to Kaua'i chiefs. Huanuikalalailai is the grandfather of Haho [Haho is the son of Paumakua (ca 1255 AD) who is buried in 'Iao; Haho also founded the *Aha-ali'i* (Kalākau 1888/1990:84-85)]; Haho is the grandfather of the famous Hāna twins Hanala'anui and Hanala'aiki who become the progenitors of the *ali'i nui* of Hawai'i Island, Maui, Moloka'i, Lāna'i, as well as O'ahu and Kaua'i (McKinzie 1983: xx).

Oral histories or *mo'ōlelo* of a southern adventurer winning the heart of a chiefess takes place on Kaua'i in the early part of this period, when Hina-a-ulu-a, daughter of Puna-ai-koā-i'i (son of Puna-kai-olohia and grandson of Puna-nui-ka-ia-āina, the first Puna chief of Wailua, Kaua'i), chooses newcomer Mo'ikeha (ca 1280 AD) over other local suitors. Puna-ai-koā-i'i, in order to be fair designs a contest where the suitors must swim to the island of Ka'ula off the southwest of Kaua'i, to retrieve a *lei paloa*. Mo'ikeha's genealogy indicated that he came from the Nana'ulu line down to Maweke. Maweke was a chief of a voyaging canoe from the south (Kahiki) who arrived in the islands two generations earlier and settled on O'ahu. An other advantage of Mo'ikeha was that his companion was La'a-maomao, owner of a calabash that kept all the winds of the world. Mo'ikeha's brother 'Olopana married a chiefess from Kohala. Mo'ikeha's wife, Hina-a-ulu-a gave birth to her three sons at the *heiau* Holoholokū, constructed

for Mo'ikeha by orders of his father -in-law Puna-'ai-koā-i'i. From then on all *ali'i nui* on Kaua'i were born at the birthing stones there (Wichman 2003:24 -29).

During the early part of this period (ca 1305 AD) the three sons of Mo'ikeha were settled on three different islands, O'ahu, Hawai'i and Kaua'i.

Ho'okamali'i, the oldest, moved to O'ahu to become the ruling chief of the Kona district and settled on the plains of Ewa. Kila went to Waipi'o on Hawai'i.... Haulani-nui-ai-ākea remained on Kaua'i, where on Mo'ikeha's death, he became *'ali'i nui* [Mo'ikeha's bones were taken to Ra'iātea by La'a-mai-Kahiki, his foster son]. Haulani-nui-ai-ākea proved to be an unsatisfactory *'ali'i nui*. Other Kaua'i chiefs, under the leadership of Ke-oloewa-a-Kamaua, deposed their unfit ruler. Ke-oloewa-a-Kamaua was a Moloka'i chief married to one of Maweke's granddaughters.... Haulani-nui-ai-ākea was easily overthrown. When Ke-oloewa-a-Kamaua refused the throne, Kila was asked to come to Kaua'i and take over as *'ali'i nui*...his heart was not on Kaua'i. He placed the highest ranking *ali'i* in the family, the beautiful Ka'ilī -lau-o-ke-koa, as paramount chief, returned to his canoe and sailed to Ra'iātea to remain the rest of his life (Wichman 2003:35).

The advisors of Ka'ilī -lau-o-ke-koa wanted her to marry Ke -li'i-koa, the Kona (Kaua'i) chief, but she declined. A lot of intrigue followed this decision along with attempted murder. This led to several centuries of war between the Kona and Puna chiefdoms. But it was during her reign that Ka'ilī -lau-o-ke-koa organized the women of Wailua to fight in the battle instigated by the Kona chief Ke -li'i-koa, who was eventually killed by Ka'ilī -lau-o-ke-koa with her *pīkoi* (tripping club). Sadly, Ka'ilī -lau-o-ke-koa died later without any heirs. The chiefdom was offered to Ahukini -a-La'a (ca 1305-1355 AD), the oldest son of La'a-mai-Kahiki (ca 1305 AD); followed by his son Kama -hano (ca 1330-1380 AD), then his son Lu'anuu'u (ca 1355-1405 AD) (Wichman 2003:36-41).

Lu'anuu'u (ca 1355 -1405 AD), grandson of Ahukini -La'a (ca. 1305 -1355 AD), was named after the grandfather of Ki'i, father of 'Ulu and Nana'ulu. He was a good chief and was greatly admired in spite of the continuing wars with Kona - references to him indicate a close relationship to Kona. During the time of Lu'anuu'u there was a great warrior named Palila, son of Ka -lua-o-pālena and Maihi-iki. He was taken at birth and raised by his grandmother Hina in a sacred temple of Alana -pō where he was trained very well. Later he helped his father defeat Kona chief Ka -maka-o-ka-lani on the plains of Koloa. Shortly after, a messenger from the ruling chief of O'ahu arrived asking for Palila's help. Palila had many adventures on O'ahu and Hawai'i and later became the ruling chief of Hilo (Wichman 2003: 44-47).

Kūkona (ca 1380-1430 AD) [son of Lu'anuu'u] inherited an island at war and left it united as one kingdom. From then on, the legends of the Kona kingdom were seldom told and the genealogies of the first settlers were forgotten.... Kūkona's *ali'i wahine* was Lau-puapua-ma'a and they had twin sons, Mano-ka-lani-pō (ca 1405 AD) and Palekaluhi. When Kūkona became *ali'i nui* (ca 1405 AD) of Puna, the Kona chief was Makali'i -nui-ku-a-ka-wai-ea. He had been at the royal court of O'ahu for many years and several times had fought in battles against Kama -pua'a.... Makali'i-nui-ku-a-ka-wai-ea had been sent by Kama-pua'a to the royal court with the bad news of defeat. Eventually Makali'i-nui-ku-a-ka-wai-ea returned home to Waimea and organized his own force. Makali'i-nui-ku-a-ka-wai-ea's army included the father and older brother of Kama-pua'a (Wichman 2003:47-48).

Kona and Puna forces met once more in battle in Koloa. After a stalemate the two kingdoms merged with Kūkona as the *ali'i nui* (ca 1405 AD). To insure the success of this situation, Nae -kapu-lani, the daughter of Kona's Makali'i-nui-ku-a-ka-wai-ea was married to Mano -ka-lani-pō (ca 1405 -1455 AD), son of Puna's Kūkona.

The archaeological evidence indicates that during this time (1400s) in Hā'ena, the use of inland irrigated agriculture reflects intensification; beach habitation declines, but activity areas persist on the dunes

(Major and Carpenter 2001:38). Yent's (1980) Phase III of Hā'ena (ca 1400 AD) are permanent settlements on the coastal terrace and alluvial plain with the development of an intensive irrigated agricultural complex that supports a subsistence economy that still includes marine resources with added domesticated mammals (Dye 2002:5).

A legend (Skinner 1902:212-216) tells about a Japanese vessel wrecking on Maui in the 1200s (according to Wichman's dates it was in the 1400s). The captain and his sister marry into *ali'i nui* families, but what is most significant about this story is the metal sword that the Captain had. During this period the *ali'i nui* of Hawai'i Island was Kalaunui [Ka -lau-nui-o-Hua] who had subdued Maui [Ka -malu-o-Hua] and Moloka'i [Ka-haku-o-Hua] and on O'ahu [Hua -i-pou-leilei] a great fight ensued. In the battle the Captain fought bravely with his sword, but was finally struck down by a warrior named Kaulu, son of Waahia, a seer of great renown. Rather than turn the sword over to the Hawai'i king, Kaulu buried it on the spot. He later retrieved it and put it into his mother's (Waahia) care before the Hawai'i contingency headed for battle on Kaua'i [where Kūkona (ca A.D. 1380-1430) was the ruling chief].

The Hawai'i warriors were overcome and defeated [by Kūkona] before they could even land their canoes by the sling stones and javelins of the Kaua'i warriors. The Hawai'i king Ka -lau-nui was taken prisoner and the kings of Maui, Moloka'i and O'ahu who were hostages of Ka -lau-nui were set free. Kaulu escaped with a remnant force only to be accused by the queen of cowardice. In the negotiations for the release of Kalaunui, the queen offered several things: a fleet of canoes with many spears; twenty feather cloaks with stone axes, ivory and whalebone; but these were all rejected. The last resort was to offer her daughter in matrimony to the king of Kaua'i. This too was rejected. After three years and unsuccessfully trying to get an army together, the queen was ready to give up. This is when Waahia asked for an audience at court. She explained that she alone could rescue the king, but the court had to grant whatever her wish was when they returned. They agreed and Wa'ahia left Hawai'i Island with a single oarsman for Kaua'i. They arrived during Makahiki festivities and Wa'ahia got an audience in court. Her offer was the Japanese sword "that was harder than stone, that broke spears like reeds, that gave its owner supreme fortune and supreme command." The offer was accepted. Before the release of Kalaunui, Wa'ahia had him agree that his release was contingent on him giving his daughter to her son in marriage. This too was agreed on [see also Wichman 2003:49 -52].

Once Kaua'i was united as one kingdom and was free from any threat of invasion from its windward neighbors, attention was focused on the development of a solid political system based on land division. The paramount chief ruled the entire island, owned all the land, and had the power of life and death over the people, *ali'i* and *maka'āinana* alike. To help him govern, the *ali'i nui* chose a *kalāimoku* (prime minister, land manager) to advise him on all practical and civil matters. The royal establishment was kept at Wailua, although there was also a permanent home at Waimea.... Kaua'i was divided into six *moku* (districts), which were governed by an *ali'i a'imoku*, each carefully chosen for his loyalty and close relationship to the ruling chief. The largest district was Kona, the former kingdom centered at Waimea, followed by Puna (Wichman 2003:53-54).

The genealogy of Kaua'i *ali'i* was considered the most ancient and impeccable in all the Hawaiian islands. *Ali'i* from other islands were eager to introduce the Kaua'i bloodline into their own.... A chiefess would live with a Kaua'i chief for a time, bear one or more children, then send the chief on his way, leaving his bloodline and genealogy to mingle with those of her own family on Maui and Hawai'i. Marriage to the O'ahu families was commonplace for Kaua'i chiefesses. It was a peaceful kingdom that Mano-ka-lani-pō inherited and helped to create. He ruled over the Golden Age of Kaua'i history (Wichman 2003:55).

This was also the period of the greatest population growth, the development of large irrigation field system projects, and dry land farming. The uniquely Hawaiian invention, the *loko* or fishpond aquaculture, was developed in the fifteenth century or the latter half of this period (Kirch 1985: 303).

Monumental *heiau* building flourished in this Period, as “religion” became more complex. Other monumental building included irrigation ditches or *auwai* such as the Pi’ilani *Auwai* in Lahaina, Maui and the Menehune Ditch in Waimea, Kaua’i.

During the last 200 years of the Expansion Period, the concept of *‘āhupua‘a* was established, as well as class stratification, territorial groupings, powerful chiefs and “*mo‘i*” or king (Kirch 1985:303-6). Most prominent during this period was Liloa and Umi of Hawai‘i Island; Kawaokalohe, Pi’ilani and his children Lono-a-Pi’ilani, Pi’ikea and Kiha -a-Pi’ilani of Maui; Kakuhihewa and Ku’alii of O‘ahu; and Kalanikūkama, Kamakapu and the beginning of the Kawelo line of *ali‘i nui* on Kaua’i.

Legends mention a few times where foreigners ship -wrecked or landed on the shores of various Hawaiian Islands. One story takes place during the reign of Kealiokaloa, son of Umi -a-Liloa, who reigned about 1525-30 AD on Hawai‘i Island. A vessel was wrecked at Ke‘ei, South Kona at a place now called Kulou, the captain and his sister reached shore in safety. They intermarried with the natives. Centuries later it was learned that on October 31, 1527, three vessels fitted out by Spaniard Cortez, conqueror of Mexico, left Zacatula for the Moluccas. About 1,000 leagues from port they were separated by a severe storm and two smaller vessels never made it to their destination. Later in 1555 the Spanish navigator Juan Gaetano discovered these islands; and ancient manuscript chart in Spanish archives indicates a group of islands in the same latitude as the Hawaiian Islands, but over ten degrees longitude too far east. In June 1743, a British warship captured a Spanish galleon near the Philippine Islands and found a manuscript chart on board with the same group of islands charted the same as the 1555 chart in the archives (Wisecarver 1993:11).

*Mo‘olelo* about events that took place in the early to mid 1600s were revealing in that they illustrate that many of the battles of this period were relatively quickly contained by the opposing *ali‘i* [see *History of Kuali‘i* (Kuali‘i ca. 1630-1660s) in Fornander 1917:IV: II: 364-434]. These stories also illustrate the ongoing inter-relationships between the people of the various islands. In the *History of Kuali‘i*, the exploits of Kuali‘i (great-great grandson of Kakuhihewa (ca. 1580 AD, *ali‘i nui* of O‘ahu) take him to every is land and he eventually unites all the islands “from Hawai‘i to Ni‘ihau” (Fornander 1917: IV: II: 406).

### 3.2.4 Proto-Historic Period (1650-1795 AD)

The Proto -Historic Period, 1650 -1795 AD, appears to be marked with both intensification and stress. Yent’s (1980) Phase IV of Hā‘ena – historic contact period - indicates a decrease in the population and a reduced occupation of Hā‘ena ca 1700-1800. Wet taro was grown in a terraced system on the alluvial plain irrigated by Limahuli Stream and sweet potatoes were grown on the coastal terrace (Handy & Handy 1972:429 In Dye 2002:5).

Many wars took place during this time between intra -island chiefdoms and inter -island kingdoms. However, it was during this period that the *Royal Kolowalu Statute* or Kuali‘i’s Law was enforced. Kuali‘i Kuniaakea Kuikealaikauakalani (ca 1655? -1730 AD) lived for a long time, was said to sometimes have supernatural powers, and was the first to “unite” all the islands. Kū-ali‘i acquired Kaua‘i (ca 1680 AD) after the deaths of cousins [Kawelo had ceded Kaua‘i to Kū-ali‘i should they both die in battle there. Kū-ali‘i was a descendant of the Kawelo line on his grandmother’s side.] Kū-ali‘i went to Kaua‘i and declared himself *ali‘i nui* and installed his son Pele-iō-hōlani (ca 1680-1755+ AD) as governor (Wichman 2003:89).

It (Kuali‘i’s Law) was strict, unvarying and always just. It was for the care and preservation of life; it was for the aged men and women to lie down in the road with safety; it was to help the husbandmen and the fishermen; to entertain (morally) strangers, and feed the hungry with food. If a man says, “I am hungry for food,” feed (him) with food, lest he hungers and claims his rights by swearing the *Kolowalu* law by his mouth, whereby that food becomes free, so that the owner

thereof cannot withhold it; it is forfeited by law. It is better to compensate.... A transgressor or one who is about to die, is, under the application of this law exonerated of his death or other penalty...(Fornander 1917: IV: II: 432).

Kū-ali‘i, *ali‘i nui* of O‘ahu, died at Kailua in Ko‘olaupoko in 1730 AD, supposedly at the age of one hundred and seventy five.

When Pele-iō-hōlani left Kaua‘i to pursue his destiny as the future ruler of the O‘ahu kingdom, he left his daughter Ka‘apuwai as governor of Kaua‘i. She was the first chiefess since Ka‘ili-lau-okekoa, some centuries before, to become paramount ruler. She was married to Ka‘ume-he-iwā, a high chief of Kaua‘i. They were both descended from Ka-lani-kukuma, and their marriage joined the junior and senior genealogical lines that stemmed from their common ancestor, thus giving their daughter Ka-maka-hele a stronger *mana* than either of her parents (Wichman 2003:92).

In 1736, Maui *ali‘i nui* Kekaulike died. He chose his *nī‘aupi‘o* son Kamehameha -nui to be his heir, though Ka‘uhi‘aimoku-a-Kama was the oldest he was of a slightly lower rank.

Ke-kaulike had many children by his wives (*wahine*) and female retainers (*haha wahine*). Ka-uhī‘aimoku-a-Kama by Kaha-walu was the first born; Manu-ha‘a-ipo, Ke-hau-hiwa-moku and Ka‘eo [kulani] were the children of Holau; Kamehameha -nui, Ka-lola, Ka-hekili and Ku -ho‘oheihai-pahu, of Ke-ku‘i-apo-iwa-nui; Na-mahana and Ke-kua-manoha of Ha‘alo‘u.... When Ke-kau-like heard that the ruling chief of Hawai‘i was at Kohala on his way to war against Maui, he was afraid and fled to Wailuku in his double war canoe named Ke -aka-milo. He sailed with his wives and children...his officers, war leaders, chiefs, and fighting men, including warriors, spearmen, and counselors.... The fleet landed at Kapa‘ahu at the pit of Aihako‘ko in Kula. Here on the shore the chiefs prepared a litter for Ke -kau-like and bore him upland to Haleki‘i in Kukahua. There Ke -kau-like died, and the sound of lamentation for the dead arose. Then fearing the arrival of Alapa‘i bent on war, the chiefs cut the flesh from the bones of Ke -kau-like in order to lighten the load in carrying the body to ‘Āo (for burial) (Kamakau 1992:69).

Alapa‘i sailed from Kohala on Hawai‘i with a great company of chiefs of Hawai‘i, his war leaders, warriors, and the district chiefs of the island...but when he landed at Mokulau in Kaupō and heard that Ke-kau-like was dying, he gave up all thought of war and wished only to meet Ke -kau-like and his (half) sister Ke -ku‘i-apo-iwa-nui. He heard that Kamehameha -nui had been chosen ruler over Maui and he had no desire to make war upon his sister’s child (Kamakau 1992:70).

In 1737 and 1738 a couple of great battles took place in the districts of Lahaina and Kā‘anapali. Kauhi-‘aimoku-a-Kama (Kauhi), oldest son of Ke -kau-like rebelled against his younger brother, Kamehameha -nui. “Near the house of David Malo is a breadfruit tree on which the first victim of the battle was laid. There the fighting men of Kamehameha -nui were slaughtered.” This prompted Kamehameha-nui to flee to his uncle’s canoe, big island *ali‘i nui* Alapa‘i-nui-a-Ka-uaua (Alapa‘i), who took him to Hawai‘i island where they spent a year preparing for war. Alapa‘i was the half -brother of Kamehameha -nui’s mother (Kamakau 1992:73-74).

When Ka-uhī heard that Alapa‘i was heading back to Maui, he enlisted the help of his uncle, Pele -iō-hōlani, Kaua‘i *ali‘i nui*, ruling chief of O‘ahu, son of Kū-ali‘i and cousin of Alapa‘i. Alapa‘i attacked Maui (1738 AD), drying up the streams of Kaua‘ula, Kanaha and Mahoma near Lahainaluna, destroying the taro patches. His men kept guard over the streams of Olowalu, Ukumehame, Wailuku and Honokawai (sic). “When Pele-iō-hōlani heard that Alapa‘i was in Lahaina he gathered all his forces at Honokahua and at Honolua. At Honokawai (sic) an engagement took place between the two armies, and the forces of Alapa‘i were slaughtered and fled to Keawawa.” Pele-iō-hōlani had 640 men to Alapa‘i’s 8,440. The cousins once again came face to face in Pu‘unene and decided to once more opt for peace between the families. Kamehamehanui ruled Maui in peace; Pele -iō-hōlani retired to Moloka‘i, and Alapa‘i went back to rule Hawai‘i (Kamakau 1992:74).

About 1755 AD Kaua'i's rule went to Ka-maka-helei, granddaughter of Pele-iō-hōlani.

Ka-apuwai died before her father [Pele -iō-hōlani], and the government of Kaua'i passed to Ka-maka-helei... [who] owed allegiance to her grandfather Pele-iō-hōlani.... Her first husband was a Kaua'i chief, Kiha, and with him she had three children: first a daughter, Lele-māhoa-lani, then a son, Keawe, and finally another daughter, Ka-lau-i-pihana. Then Pele-iō-hōlani sent his grandson Ka-neoneo to Kaua'i to ensure the island would remain loyal to him. Ka-neoneo and Ka-maka-helei were first cousins, and soon Ka-maka-helei put Kiha aside and took Ka-neoneo for her husband (Wichman 2003:92-93).

A few years later, around 1759 AD, High Chief Kalani'ōpu'u from the Island of Hawai'i made war on East Maui and conquered Hāna from *ali'i nui* Kamehameha-nui, brother of Kalola and Kahekili. Kalani'ōpu'u took control of Hāna's prominent Pu'u Kau'iki as his fortress. He appointed one his chiefs, Puna, as "governor" of Hāna and Kīpahulu (Kamakau 1992:81-82). Kamehameha-nui relinquished Hāna and lived in peace in West Maui with his wife and half-sister, Namahanaikaleleonalani. In 1766 the peaceful Maui *ali'i nui* died. After ruling Maui for 29 years, Kamehamehanui was taken ill at Kawaipapa, Hāna on a journey about the island. While still in Hāna Kamehamehanui ceded his lands to his younger brother Kahekilinui'āhumanu (Kahekili), a fierce warrior and "manipulator" (Kamakau, 1992:82-84; Kame'eiehiwa 1992:47).

But according to Kalākau (1990:353) Kamehamehanui "died very suddenly at Wailuku, which had been his favorite place of residence." During the period of mourning for him, his successor and younger brother, Kahekili "removed his court to Lahaina." It was while there that they were visited by an *ali'i* from Hawai'i Island. The visitor was Ke'eaumoku, son of Keawe-poepoe, who was the son of Lonoikahaupu (sovereign of Kona, Kaua'i) and Kalanikauleleaiwi (half sister/wife of Keawe, once *moi* of Hawai'i Island). Years before, after the death of his uncle Alapa'inui [Hawai'i Island *moi*], in 1754, Ke'eaumoku was discontent with the rule of his cousin Keaweopala so he joined forces with Kalani'ōpu'u of Ka'ū and defeated Keaweopala in Kona, making Kalani'ōpu'u, grandson of Keawe, the new *moi* of Hawai'i Island. Ke'eaumoku fortified himself in Kohala and later (1765) incurred the wrath of Kalani'ōpu'u and was attacked by him. Ke'eaumoku escaped and spent some time on Lāna'i before heading to Maui just after the death of Kamehamehanui. To the displeasure of Kahekili, Ke'eaumoku promptly won the heart of Namahana [I], the widow of his brother (Kalākau 1888/1990:353-356), and also his half-sister [Kekaulike was their father, but they had different mothers]. After the couple settled in Waihe'e (Namahana's lands), Kahekili decided to re-locate his court to Wailuku.

With the help of his nephew Kahahana, who was also a landholder of Waihe'e, Kahekili contrived to find cause to battle Ke'eaumoku. To this end he was successful, causing Ke'eaumoku, Namahana, her mother, two brothers and a considerable following of chiefs and retainers to flee to Moloka'i. This did not stop Kahekili who invaded Moloka'i with a large force, and once again defeated Ke'eaumoku. Barely escaping, Ke'eaumoku, Namahana and their entourage fled to Hāna which was still under the control of Hawai'i Island. There he was forgiven by Kalani'ōpu'u and given shelter by Mahihelelima, governor of the Hāna district (Kalākau 1888/1990:357-358). While in Hāna, Namahana (I) gave birth to Ka'āhumanu in 1768 (Kalākau 1888/1990:359) in a cave at the base of Pu'u Kauiki; she would later play a pivotal role in the history of Hawai'i.

During this period the socio-political intrigue continued to affect all islands including Kaua'i.

On O'ahu, Kūmahana, who was Pele-iō-hōlani's regent, proved himself to be an entirely unsatisfactory ruler. The O'ahu chiefs rebelled against him and sent Kūmahana, his wives, and children into exile on Kaua'i. Pele-iō-hōlani returned posthaste from his skirmishes against Kahekili on Maui to renew his claim to O'ahu. Kahekili...took this opportunity to lead his forces once again against those of Pele-iō-hōlani. After several battles, Kahekili was victorious. To

consolidate his rule, he married his sister Kalola to Ka-lani'ōpu'u of Hawai'i in the hopes that he would either help by sending men and arms or at least, remain indifferent to the situation.... From O'ahu, Pele-iō-hōlani sent Ka-neoneo to join him to help stem Kahekili.... This left Ka-maka-helei vulnerable. Although she was the nominal ruler of Kaua'i, her uncle Kūmahana began to make his moves to take over her government (Wichman 2003:93).

Kahekili...was quick to realize the opportunity this presented to neutralize Kaua'i. He sent his young half-brother Ka'eo-kū-lani to Kaua'i to woo Ka-maka-helei. Ka'eo-kū-lani was successful...since she was nine years older than Ka'eo-kū-lani, she did not expect to bear any more children, and her oldest son, Keawe, was named heir to the kingdom.... By this time, all of Maui, Moloka'i and Lāna'i were under the rule of Kahekili who had succeeded in taking them from Pele-iō-hōlani. He was gearing up for an invasion of O'ahu where Pele-iō-hōlani, now a very old man, had turned over the government to his grandson Kaneoneo (Wichman 2003:93-94).

In 1775 Kalani'ōpu'u, son of Ka-lani-nui-l-a-mamao (whom the *Kumulipo* was composed for) and his forces in Hāna raided and severely destroyed the neighboring Kaupō district, before continuing several more raids on the islands of Moloka'i, Lāna'i, Kaho'olawe and parts of West Maui. He returned again in 1776 and for several years later, raiding and treating the *maka'ānana* cruelly.

The Alapa, the fierce fighting men of Kalani'ōpu'u, were defeated; only two men escaped. The chiefs and fighting men of Kalani'ōpu'u wanted to continue; "tomorrow we will drink the waters of Wailuku and rest in the shade of Hekuawa." Kahekili prepared for the "great battle" which took place on the sand hills between Waikapu and Wailuku; Ka-hahana, now ruling chief of O'ahu and Moloka'i came to his aid.

Kahekili stopped that war and made peace at the request of his sister Ka-lola, but a few years later Kalani'ōpu'u once again sailed to ravage the lands of Maui and Lāna'i. It was during this war that Kamehameha I, nephew of Ka-lani'ōpu'u was noticed as a great and brave warrior by both sides.

In January 1778 Cook landed in Waimea, Kaua'i and the culture of old Hawai'i began its spiraling change (Day 1992). Fishermen off of Koloa, Kaua'i first saw the ship *Discovery* and rushed to tell Kaua'i *ali'i nui* Ka-maka-helei and Ka'eo-kū-lani. The *kahuna nui* Kū'ōhu declared "that can be nothing else than the *heiau* of the god Lono. In the center is the tower of the demi-god Ke-o-lewa, and there in the back is the place of sacrifice at the altar" (Wichman 2003:94; see also Kamakau 1961:92-96). However, after several days of observation the *kahuna* concluded that these were not gods, but men. He said they were like the two white priests who had come to the islands when Paumakua was living and they were like the *haole* Kū-ali'i had seen on his travels less than a hundred years earlier (Wichman 2003:94). According to Captain Clerke, he was visited by a young chief named Kaneoneo; up to this time "no chief had come to see either Clerke or Cook" (Beaglehole 1967:38 In Kikuchi et al 1978:8). According to Wichman (2003) and Kamakau (1961:93-96) Ka-neoneo was now on O'ahu, replaced by Ka'eo-kū-lani as husband of Ka-maka-helei, granddaughter of Pele-iō-hōlani.

[Ka-maka-helei] sent three men on board to see what this strange ship really was and to assess those on board. These three were *kahuna* Kū'ōhu, wearing his *lei palaoa* (necklace of woven human hair holding a hook of carved whale ivory), chief Kāne-a-ka-ho'owaha, and chief Kī'i-kikī who was Ka'eo-kū-lani's trusted man who had come with him from Maui.... Captain Cook gave Kū'ōhu a dagger, a gift beyond price. It was the first gift from Western civilization to Hawai'i, and it was considered an omen.... Kī'i-kikī reported back to Ka'eo-kū-lani and described the dagger. Ka-pupu'u, one of the guards surrounding Ka'eo-kū-lani...went out to the ship and saw quantities of iron things just lying about on deck. He grabbed as many pieces as he could and threw them into his canoe. One of the ship's guards raised his rifle and shot Ka-pupu'u dead. He was the first Hawaiian to die by a bullet....

Some chiefs thought that Captain Cook should be put to death for killing Ka-pupu'u but the



*kahuna* Kū'ohu said "No they were not to blame... Kapupu'u was to blame, for he went to steal even though our *ali'i nui* had forbidden it." The following day Captain Cook came ashore for the first time. His longboat landed at the mouth of the Waimea River, on the beach of Luhi beside Lā'au-ōkala point. He was greeted by a huge crowd of people pushing and shoving to get a look at this...living god come among them. People had come from Nāpali, Mānā, and Kīptū like a rushing stream during the night.

Captain Cook wandered about Waimea for a time before returning to his ship.... Ka-maka-helei presented gifts to Cook: hogs, chickens, bananas, taro, sweet potatoes, sugarcane, yams, fine mats, and tapa cloth. In return Cook presented them with cloth, iron, a sword, knives, bead necklaces, and mirrors. Then Ka-maka-helei offered Cook her own daughter, Lele-mahoe-lani. According to the Kaua'i source of this story, she spent the night on board with Cook. She left the following morning laden with presents (Wichman 2003:9596).

Cook also gave the chiefs some goats (Beaglehole 1974:677 In Mills 1996:72), sheep and a new breed of pigs (Joesting 1984:199). After visiting Hawai'i Island Cook left Hawai'i for several months, but returned later in the year. Kalani'ōpu'u was fighting Kahekili's forces in Wailua, Maui on November 19, 1778 when Cook's ship was sighted on his return trip to the islands. Kalani'ōpu'u visited Cook on the *Resolution*, while Kahekili visited Clerke on the *Discovery* (Kuykendall and Day 1976:16). When Cook sailed into Kealahou Bay on January 17, 1779, Kalani'ōpu'u was still fighting Kahekili on Maui. At this time Kahekili's brother, Kaeo was ruling chief of Kaua'i [co-ruler with Ka-maka-helei, granddaughter of Pele-i-ō-hōlani]; Kahekili's nephew Ka-hahana of O'ahu and Moloka'i; Kalani'ōpu'u of Hawai'i and Hāna [eastern Maui]; and Kahekili of western Maui, Lāna'i and Kaho'olawe (Kamakau, 1992:84-86, 92, 97-98). On January 25<sup>th</sup> Kalani'ōpu'u visited Cook again at Kealahou Bay, presenting him with several feather cloaks. By February Cook's scheme to kidnap Kalani'ōpu'u as a hostage were thwarted and Cook was killed following a skirmish over a stolen cutter (Kuykendall and Day 1976:18). His ships and crew visited Kaua'i once more (1799) after Cook's death. A battle had taken place the day before and warriors had been killed. It was also evident that venereal disease had spread throughout the island as a result of their first visit to the island (King 1967: part 2:585 -586 In Mills 1996:78).

On Kaua'i:

In 1780, Ka-maka-helei gave birth to another son, Ka-umu-ali'i. The situation on Maui grew uncomfortable for Kahekili. He sent a message to his brother Ka-ko-kū-lani to return to Maui. Ka-ko-kū-lani brought his two trusted counselors, Kī-i-kī and Kai-awa with him. Ka-umu-ali'i, his son with Ka-maka-helei, was declared heir to Kaua'i, passing over his older half-brother, Keawe (Wichman 2003:9697).

The warring between the Hawai'i and Maui forces continued. On his way to Kona from Ka-umu-ali'i, Kalani'ōpu'u was taken ill. He went instead to Ka'iliki'i at Waio'ahukini in Pakini where he died in January 1782. In 1781 a few months before the death of Kalani'ōpu'u, when Kahekili heard how ill Kalani'ōpu'u was, he split his forces and sent them through the south-eastern Kaupō Gap and the north-eastern Ko'olau Gap into Hāna. After damming and diverting the supply of spring water to Pu'u Kau'iki, the Hawai'i chiefs were finally defeated, and the Maui *ali'i nui* regained control of Hāna in 1782 (Kamakau, 1992:84-86; 110, 115-116; Fornander 1900: Vol II 146-7, 150, 216).

But what became of Ke'eumoku and his family [wife Namahana and daughter Ka'ahumanu], whose home for years had been the hills of Hāna? Learning of the meditated invasion of the district, and unwilling to trust himself to the mercy of Kahekili, Ke'eumoku fled with his family to the almost barren island of Kaho'olawe, where he lived in seclusion until after the fall of Kauhiki and death of Kalani'ōpu'u, when he boldly returned to Hawai'i, quietly settled on his old and inalienable estates at Kapalilua, in South Kona, and awaited the development of events, which he perceived were rapidly and irresistibly tending toward widespread revolution and disorder. For

more than fifteen years he had heard the clash of arms only at a distance, and he yearned for the shouts of battle and the music of marching columns (Kalakaua 1888/1990:361).

Kahekili reclaimed Hāna, then through war and trickery went on to gain control of all the islands except Hawai'i (Kamakau 1992:116, 128 -141).

The O'ahu chief [Ka-hahana, nephew and foster son of Kahekili] was living in Nu'uano Valley above Honolulu when he received word that Kahekili had landed on the beaches with a large fleet of war canoes and was gathering his warriors about him for an attack on the defenders of O'ahu. In January 1783, a decisive battle was fought. Kahekili's wife, Kau-wahine, who was also a noted fighter, took part in this battle.... Confusion seized the ranks; the warriors of Ka-hahana were dispersed while he and his wife fled to the forest. Thus, O'ahu and Moloka'i were taken by Kahekili.... [However] fighting erupted on his home island of Maui among minor chiefs... [along with] the growing threat from Hawai'i.... Kahekili's son and designated heir, Ka-lani-kū-pule, was dispatched to Wailuku to prepare for the coming attack. Ka-lani-kū-pule took with him Maui's war leaders and Kahekili's best warriors, the battle-scarred veterans of the war on O'ahu (Speakman 2001:4041).

In early 1790 when Captain George Vancouver made his first stop in the Hawaiian Islands he was told that Kalani'ōpu'u was dead; Hawai'i was ruled by Keoua Kuahū'ula (half-brother of Kiwala'ō), his uncle Keawe-mau-hili, and Keoua's cousin, Kamehameha (Day 1984:77). Vancouver went on to trade with Kalanikūpule in Waikīkī. He then found that the ruling chief of Kaua'i, Ka-umu-ali'i, was a mere child; his father Ka'eo was on Maui with Kahekili. Vancouver also noted a decrease in the population and the number of chiefs since the arrival of Cook (Kamakau 1992: 162 -163), but foreigners continued to arrive.

In spite of the ongoing battles, the foreign explorers and merchants were not deterred; foreign vessels continued to come to the islands.

By 1790 several other foreign ships also visited the islands, helping to establish them as a "familiar resort for the fur traders" and as a "port of call and wintering place -- for those engaged in the more general trade which grew up between Asia and the west coast of North and South America." These voyagers included English Captains Portlock, Dixon, and Meares and French naval vessels under the command of La Perouse.... Because of their excellent harbors and strategic location nearly equidistant from the coasts of the Orient and North America, the Hawaiian Islands quickly became a primary stop on the Pacific trade routes. These islands contained more cultivated land than most of the other Pacific islands, forming "an oasis in the ocean desert" (Greene 1993: Chap II).

By 1790 Kamehameha I had gained enough control of the island of Hawai'i from his uncles and cousins that he could leave to join the war parties on Maui. His canoe fleet "beached at Hāna and extended from Hamoa to Kawaipapa" to battle Kalanikūpule, son of Kahekili (who now ruled from O'ahu). After several battles along the East Maui coast, Kamehameha's forces reached Wailuku where the "great battle" took place. This would be the beginning of the end of independent ruling chiefs because of the inequity of battle strategy and weaponry. Kamehameha had brought a cannon from the *Eleanora* along with her captain, Isaac Davis, and crewmember John Young, who were now his *aikāne punahele* (favorites) and advisors (Kamakau 1992:147 -148). This battle of 1790 was known as the *Battle of Kepaniwai* where the bodies of fallen warriors dammed the I'ao Stream in Wailuku or "water of destruction" (Engelbreton 2000:2).

While Kamehameha was at Wailuku with his followers he heard of Ka-lola's being on Moloka'i with her daughters and granddaughter and he sent word by Kikane for her not to proceed to O'ahu as he was coming to escort her to Hawai'i. He sailed with a great company, among them Ke'eumoku, Keawe-a-heulu, Ka-me'e-ia-moku, and Ka-manawa, the brothers of Ka-lola, and landed at Kaunakakai. They met Ka-lola at Kalama'ula and, when Kamehameha saw how ill she

was and of an incurable disease according to kahuna's diagnosis, he asked, "Since you are so ill and perhaps about to die, will you permit me to take my royal daughter and my sisters [Ke-opu-o-lani, her mother Ke -ku'i-apo-iwa and aunt Ka -lani-hau-io-kikilo] to Hawai'i to rule as chiefs?" Kalola answered, "If I die, the girl and the sisters are yours." Then Kamehameha and all the chiefs waited until the death of Ka-lola [widow of Ka-lani-ōpu'u; sister of Kahekili and highest ranking *ali'i*] (Kamakau 1992:149).

While Kamehameha was on Moloka'i waiting for the passing of Kalola, *kapu* chiefess of Maui, he sent two messengers to O'ahu; one to Kahekili and one to find the Kaua'i *kahuna* Kapoukahi of the *kahuna* order Huli honua, as he was skilled in the art of reading omens and signs. It was he who advised that if Kamehameha wanted to rule over all the islands that he should build a great *heiau* at Pu'ukohola at Kawaihae (Kamakau 1992:149 -150). The messenger to Kahekili threw down two *maika* stones, a black one and a white one. Kahekili asked if Kamehameha was coming to O'ahu to wage war and the messenger said yes. Kahekili then asked him where he would land. The messenger told Kahekili of the landing places that were advised and who advised Kamehameha. After commenting on each suggestion, Kahekili imparted a message for Kamehameha:

Go back and tell Kamehameha to return to Hawai'i and watch, and when the black tapa covers Kahekili and the black pig rests at his nose, then is the time to cast stones. Then, when the light is snuffed out at Kahiki that is the time to come and take the land (Kamakau 1992:150).

While on Moloka'i Kamehameha heard that his cousin Keoua Kuahu'ula, Ka' ū chief, had waged war on other chiefs of Hawai'i Island and had killed Keawe -ma'u-hili, the Hilo chief who had aided Kamehameha in the Maui battle, in spite of an agreement with Keoua that he wouldn't "fight the sons of Kahekili." Keoua took over Hilo then went on to Waipi'o where he destroyed the fishponds and plundered the taro patches and robbed the people from Waipi'o to Waimea, then went on to ravage Kohala. Kamehameha returned to Hawai'i Island from Moloka'i and proceeded to wage war on Keoua. Several battles later, both sides could not gain an upper hand. Although Keoua's warriors seized the muskets of Kamehameha, they didn't have the powder to make them work. It took an act of nature or the goddess Pele to turn the tide as Keoua's army was annihilated by a volcano eruption (Kamakau 1992:151 -152).

In the meantime, Ka -eo-kū-lani, ruling chief of Kaua'i and brother of Kahekili, heard what happened to his nephew Kalanikūpule on Maui and how they narrowly escaped death. He heard "how the waters of 'Āo had been choked with the bodies of the slain in this war." He was so upset that he decided to wage war against Kamehameha (Kamakau 1992:148, 159). The shift in style of warfare that Kamehameha started during the *Battle of Kepaniwai* in Wailuku, Maui continued.

[Ka'-eo-ku-lani] set out with [nephew] Pe'ape'a, son of Kamehameha -nui, his counselor of war, Ki'ikiki'i, Kai-awa, and chiefs, warriors, and paddlers, all well armed with muskets and weapons of all kinds, and with his two man-eating dogs. (He also took with him) Maka'eha and Mr. Mare Amara [foreigner], a man skillful in the use of arms who acted as his gunner (Kamakau 1992:159).

On O'ahu Ka'eo met up with his brother Kahekili, ruling chief of O'ahu, Maui, Moloka'i and Lāna'i and persuaded Kahekili to join him in the war against Kamehameha. Kahekili left his son Kalanikūpule in charge of O'ahu and left for Moloka'i.

The war party landed at Kaunakakai on Moloka'i, and when the Kaua'i chief saw for the first time, by the ovens they had left, the size of the camp which Kamehameha had occupied he said, "Where a big squid digs itself a hole, there crab shells are heaped at the opening." Upon their reaching Maui...the army camped at Wailuku and of Waiehu the Kaua'i chief remarked, "Here is the land of the warrior to whom Kamehameha owes his kingdom (alluding to Ke'eumoku whose wife Namahana, brought him the land of Waiehu).... Waiehu fell to Ki'ikiki'i and it was, alas! The

Kaua'i people who ate the poi of Waiehu.... Kahekili gave some of the land of Maui to the ruling chief of Kaua'i to be divided among his men.... This caused discontent among the chiefs of Maui, who had thus to lose some of their land, and they rose against the Kaua'i chief. A battle was fought at Paukukalo adjoining Waiehu while some of the people were out surfing (Kamakau 1992:159-160).

It is not clear what happened right after that battle because what follows is Kahekili leaving Maui with his warriors from Kaup ō, while Ka'eo sails for Hawai'i with his warriors from Hāna. However, they both land in Waipi'o and Ka'eo keeps his vow and "wantonly destroyed everything in Waipi'o" including the sacred places and the tabu threshold of Liloa...not even Keoua who has passed through there the year before and destroyed the land and the food, had made such wanton destruction" (Kamakau 1992:160). Kahekili in the meantime goes on to Halawa in Kohala where fighting occurs, then sails from Halawa and joins Ka'eo in Waipi'o. When Kamehameha hears about Ka'eo and Kahekili, he sails with John Young and Isaac Davis and meets up with Ka'eo and Kahekili at Waimanu cliffs. The battle of 1791 called *Kepuwaha'ula*, was a stand-off with loss to both sides. Kahekili left and returned to Maui (Kamakau 1992:161-162).

Kamehameha decided to take the advice of the Kaua'i *kahuna* Kapoukahi and build a *heiau* at Pu'ukohola. Kamehameha personally helped to construct the *heiau* Pu'u Koholā in the summer of 1791, to assure his victory over his cousin, Keoua Kuahu'ula, son of his father's older brother. Messengers were sent to Keoua to ask him to come to the *heiau* so that there would be peace between the cousins. Keoua left Ka' ū with a fleet of twenty-seven canoes. As he sailed into Kawaihae Bay at Mailekin i, Ke'eumoku thrust a spear at Keoua, which he dodged, snatched and thrust back. Suddenly muskets were fired from the shore, leaving Keoua and all the others from his canoe dead. The rest of Keoua's warriors were spared when Kamehameha declared the law of the broken paddle [ *Mamalahoa*] (Day 1984:77; Kamakau 1992:154-157).

Vancouver returned to Hawai'i Island in February 1793 to find all the chiefs wanting guns and powder. Instead he gave Kamehameha a bull and heifer from California and asked that all the chiefs stop fighting. In March he sailed to Lahaina and saw Kahekili who was now an old man. He also asked Kahekili to stop the fighting. Kahekili said that "it was not right for the chiefs of Hawai'i to raid Maui and rob and pillage without cause." He told Vancouver he should stay and guard him against further wars. Vancouver went on to O'ahu to see Kalanikūpule, then to Kaua'i before going to North America. It was the last time Vancouver saw Kahekili who died later that year at the age of eighty-seven, after becoming ill and returning to Waikīkī, O'ahu. His bones were carried by his twin brothers Ka -me'e-ia-moku and Ka -manawa and hidden in a secret cave in Kaloko, North Kona. His gods were Ku -ke-olo-ewa, Kuho'one'e-nu'u, Kalai -pahoa, Ololupe, Kameha'ikana, Kala -mai-nu'u, Kiha -wahine, Haumea and Wali -nu'u (Kamakau 1992:164-166).

On Vancouver's third visit to the islands in 1794, Kamehameha I was ruling chief of Hawai'i; Ka'eo was ruling chief of Maui, Moloka'i and Lāna'i; Kalanikūpule of O'ahu and Ka -umu-ali'i of Kaua'i. Then Ka'eo got tired of Maui and wanted to go back to Kaua'i. Not knowing what his uncle's plans were, Kalanikūpule prepared for war. A few skirmishes and reconciliations took place that year on O'ahu, but as Ka'eo prepared to embark to Kaua'i from West O'ahu he discovered a conspiracy among some of his chiefs, principally his two counselors Ki -kīkī and Kai-awa, who were planning to throw him overboard in mid-ocean. He decided it was better to die in battle, then alone in the ocean so he dismantled his canoe and proceeded to make war on Kalanikūpule. Ka'eo won a couple of skirmishes, but in the end was defeated in 'Aiea by Kalanikūpule who was aided by foreign vessels in Pearl Harbor, guarding the shores with guns and cannons. Ka'eo died in mid-December 1794 (Kamakau 1992:168 -169).

The captain and some of his crew of the foreign vessels were then tricked and killed. Kalanikūpule

confiscated the vessels and munitions with the intention of sailing to Hawai'i to overtake Kamehameha. Just one day out they all got seasick and had to return to Waikīkī with Kalanikūpule and his wife still on board. The foreigners sailed off during the night, but put Kalanikūpule and his wife aboard a canoe and let them go back to O'ahu. The foreigners then sailed for Hawai'i Island to tell Kamehameha what happened and to give him all the munitions on board (Kamakau 1992:170-171).

Demographic trends during the Proto-Historic Period indicate a population reduction in some areas, yet show increases in others, with relatively little change in material culture. There was a continued trend in craft and status material, intensification of agriculture, *ali'i* (chief) controlled aquaculture, upland residential sites, and oral records [*mo'olelo*] from that period were rich in information. The Ku cult, *luakini heiau*, and the *kapu* (restriction or regulation) system were at their peak, although Western influence was altering the cultural fabric of the islands (Kirch 1985:308, Kent 1983:13). By 1794 American, English, Irish, Portuguese, Genoese, and Chinese foreigners were living in the islands (Day 1992:23-25). Between 1778 and 1794 at least 21 ships from various countries had visited Kaua'i for provisions and to trade (Mills 1996:68).

### 3.2.5 Early Historic Period (1795-1900 AD)

The Early Historic Period (1795-1900 AD) is marked by very significant events. Kamehameha left Hawai'i Island in early 1795 and landed in Lahaina, taking over all the food patches and cane fields before leaving for Moloka'i where the "whole coast from Kawela to Kalama'ula was covered by canoes. There on Moloka'i he awaited for the proper time to sail for O'ahu, where the chiefs and warriors of Kalanikūpule were slaughtered.... In the *Battle of Nu'uaniu*, O'ahu, Moloka'i, and Lāna'i were conquered" (Kamakau 1992:170-171). Kamehameha took Keku'iapoiwa Liliha and Kalanikauiakea alaneo to O'ahu to witness this battle of Nu'uaniu Pali and the defeat of O'ahu. It was during this trip that Kalanikauiakea alaneo was given the name Ke'ōpūlani (Klieger 1998:21).

During this Early Historic Period, "between one hundred and two hundred foreigners lived in the islands.... Hardly a ship touched without leaving a deserter or two behind.... A white man automatically ranked as a chief, although he could not own land in fee simple or build a permanent house... [and] they took Hawaiian wives" (Day 1992:25).

In Hā'ena during the 1700-1800s, according to archaeological evidence, the population declines and intensive occupation ends (Major and Carpenter 2001:38). Although evidence of habitation at the back and east side of Kē'ē Bay is rather intense and in historic times visitors referred to a "village" at this location (Emory 1929; In Major and Carpenter 2001:39).

In 1802 and 1803, Kamehameha I and his court resided in Lahaina where he had a two-story brick house built (Alexander 1953:63). Lahaina became the capitol of the islands (except for Kaua'i). This was short-lived, however, as Kamehameha I moved to Honolulu in 1803 (Klieger 1998:22). In 1802 on the island of Lāna'i a Chinese man named Wong Tze Chun is believed to have been the first person to mill sugar cane (WSC 1962:7); he came to Hawai'i as part of the sandalwood industry. In 1803 the first horses landed in Hawai'i from California (WSC 1962:7).

Hawai'i's culture and economy continued to change radically as capitalism and industry established a firm foothold. In 1810, Kaua'i *ali'i nui* Ka-umu-ali'i ceded his kingdom of Kaua'i, Ni'ihau, Lehua and Ka'ula to Kamehameha (see more C-3) although Ka-umu-ali'i continued to have autonomy over the island. At this time the sandalwood trade in Hawai'i was flourishing; the Fijian and Marquesan supply of sandalwood was exhausted. Sandalwood came under the personal control of Kamehameha I, who had become "a fervent consumer of high-priced western goods." The sandalwood industry was thriving to the point where the subsistence levels declined, as farmers and fishermen spent most of their time logging,

causing famine to set in (Kent 1983:17-20). Hawai'i became known as "Tan Heong Shan" or the "sandalwood mountains" to entrepreneurs of Southern China, who first came as early as 1794 in search of this prized wood (WSC 1962:41).

Although white men from various countries stayed over in temporary houses, it wasn't until 1816 when a large structure (80 x 100 meters) was constructed, primarily under the supervision of employees of the Russian-American Company (RAC), on the eastern banks of the Waimea River; it was known as *Hippo* or *Fort Elizabeth*—made of stone and adobe apparently with the help of Kaumuali'i's wives and over 300 "native Hawaiians" (Mills 1996:145). Before its completion the employees of the RAC were expelled from the island; the fort was then completed by Kaumuali'i, who had "acquired one of the most important symbols of European power" (Mills 1996:149, 151). However, Kamehameha continued to exercise his suzerainty by collecting tribute from Kaua'i in the form of sandalwood, hogs and vegetables (Mills 1996:153).

On May 8, 1819, Kamehameha I died at Kamakahonu, Kailua, Hawai'i Island. Following his death, his son and heir Liholiho banished the *kapu* system at the advice of his queen mother Ke'ōpūlani and queen regent Ka'ahumanu (Kamakau, 1992:210, 222). On October 1819, seventeen Protestant missionaries set sail from Boston to Hawai'i. The missionaries arrived in Kailua-Kona on March 30, 1820, to a markedly changed culture; one with a "religious" void and a growing appetite for western products. They brought George Humehe, the 21-year old son of Kaumuali'i, who had been living in the United States since he was six or seven—sent there by his father so he could receive an education (Mills 1996:155). Humehe finally returned to Waimea, Kaua'i in May, 1820 where his father Kaumuali'i and the queen Debra Kapule, primarily resided. Kaumuali'i gave Humehe the district of Waimea, including *Hipo* (Damon 1925:205-206, In Mills 1996:160). Shortly after arriving Humehe married Betty, a daughter of Isaac Davis whom he met on Hawai'i Island (Mills 1996:163).

The missionaries quickly started missions on all of the islands, at the objection of the trading community (Mills 1996:158). In 1820 Lahaina was proclaimed the capital of Hawai'i; this lasted until 1845 (Wisecarver 1983:18) when the court moved to Honolulu. Ka'ahumanu, the *kuhina nui* of Kamehameha II (Liholiho) was not automatically a convert to Christianity, however, when she finally embraced it, it was with tremendous zeal. Missionary Bingham (1847:162) wrote an entry in his journal in 1822:

Kaahumanu with husband made tour of windward islands with a large retinue, including sister Namahana [II], her brother-in-law Laanui...and while on this pleasure-seeking tour, searched out and destroyed many idols. On the 4<sup>th</sup> of June, she sent for Kalaipahoa, the so-called poison deity, and caused it to be publicly burnt, with nine other images. On the 26<sup>th</sup> of the same month, one hundred and two idols, collected from different parts of Hawai'i, where they had been hidden 'in the holes of the rocks and caves of the earth,'... [were] committed to flames.

In 1821 Liholiho paid a visit to Kaua'i, intending to resolve the issue of his sovereignty over all the islands. Kaumuali'i met Liholiho (his cousin) at Waimea, making a pledge to him the same as he had done to his father; he offered Liholiho the fort, his vessels, his munitions and even the island. Liholiho told him to keep the island. But Liholiho did take one of Kaumuali'i's wives. After spending a couple of months on the island, Liholiho invited Kaumuali'i onto his ship. When they had settled on board, Liholiho gave his men a signal to set sail, thus "kidnapping" Kaumuali'i. Shortly after arriving back on O'ahu, Ka'ahumanu married her cousin, Kaumuali'i (Mills 1996:171-172) [her mother Namahana was the half-sister of his father Ka'eo]. Ka'ahumanu, then married one of Kaumuali'i's sons, cementing her position of power. Kaumuali'i died a few years later in 1824 (Mills 1996:173) never being allowed to see his Kaua'i family again.

In August 1824, after Kaumuali'i's death, a skirmish took place at Fort Elizabeth that included his oldest son George Humehe who was married to a daughter of Isaac Davis. He wanted revenge and felt that

his father had been poisoned. Kalanimoku had arrived to check on Kaua'i and was faced with some opposition. He sent back to O'ahu for reinforcements; they came led by Maui governor Hoapili, a former warrior and counselor to Kamehameha I from Hawai'i Island, whose warriors were more experienced and had more weapons. The rebel warriors, including George Humehume, held a position overlooking Hanalei Valley. They were subsequently outnumbered and defeated by the forces of Hoapili. George, with his wife and infant daughter fled to the mountains on horseback. They were later captured and shipped off to O'ahu, where he died two years later at age twenty-nine. Most of Kaua'i *ali'i* were dispossessed of their lands and sent to other islands and the Kaua'i lands were divided among the Hawai'i Island chiefs who appointed their own *konohiki* or land managers [e.g. Moku'ohai]. The *maka'āinana* on the lands were treated as conquered rebels (Joesting 1984:104 -111).

In the 1820s and 1830's other industries such as whaling, merchandising and sugar crept into Hawai'i. "For the first time Hawaiian masses were drawn to a cash economy as workers and producers." By 1825 most of the powerful chiefs/chieftains had become Protestant Christians. The first sugar plantation was established on Kaua'i in 1836 (Kent 1983:22, 23, 29). The 1840s heralded other changes as well. The Hawaiian government, with the aid of the missionaries, encouraged the sugar industry as well as other enterprises such as coffee, cotton, rice, potatoes, and silk worms (Speakman 2001: 93).

In the mid -1840s a political act of the Hawaiian Kingdom government would change forever, the land tenure system in Hawai'i and have far-reaching effects. The historic land transformation process was an evolution of concepts brought about by fear, growing concerns of takeovers, and western influence regarding land possession. King Kamehameha III, in his mid -thirties, was persuaded by his *kuhina nui* and other advisors to take a course that would assure personal rights to land. One -third of all lands in the kingdom would be retained by the king; another one -third would go to *ali'i* as designated by the king; and the last one-third would be set aside for the *maka'āinana* or the people who looked after the land [native tenants or *kuleana* lands]. In 1846 he appointed a Board of Commissioners, commonly known as the Land Commissioners, to "confirm or reject all claims to land arising previously to the 10<sup>th</sup> day of December, 1845." Notices were frequently posted in *The Polynesian* (Moffat and Kirkpatrick, 1995). However, the legislature did not acknowledge this act until June 7, 1848 (Chinen 1958:16; Moffat and Kirkpatrick 1995:48 -49), known today as *The Great Mahele*. In 1850, the Kingdom government passed laws allowing foreigners to purchase fee simple lands (Speakman 2001:91).

In 1846 there were only eleven mills in Hawai'i manufacturing sugar and molasses; two on Kaua'i, three on Hawai'i Island and six on Maui (WSC 1962:10). The whaling industry was at its peak between 1846 and 1860 with almost 600 ships reaching Hawai'i ports in one year. But the late 1850s saw a decline in the whaling industry with the discovery of oil in Pennsylvania, the Civil War, and the sinking of at least forty whale ships by the Union to block the harbors; as well as the early freeze in the Bering Strait in 1871 which trapped thirty -three ships. Although the crews escaped, five hundred Hawaiian sailors returned home penniless (Speakman 2001:88 -89).

Disease had a devastating effect on the population and the landscape, killing *ali'i* and *maka'āinana* alike; measles epidemics in 1848 and 1849, were followed by the horrendous smallpox epidemic in 1852-1853. Ten thousand people are said to have died of this disease in Hawai'i (Kamakau, 1992:411, 418). John Papa I'i in *Fragments of Hawaiian History* (1984) talks about the impact of this disease and as *kahu* or guardian of several young *ali'i*, he had to take several of them off of O'ahu island. They just kept sailing from island to island and usually were not allowed to land as O'ahu was thought to be the source of the smallpox.

Historic land records indicate that by 1850, there were several households scattered among the Hā'ena *lo'i*, a pattern that may have developed when *lo'i* were in fallow periods. A photograph ca. 1910 shows a Hawaiian family and their house located in the midst of the Kē'ē *lo'i* (Major and Carpenter 2001:39).

By 1858 at least 2,119 foreigners lived in Hawai'i. Many were merchants who traded with whalers, while the missionaries lived in various locations throughout the islands. The foreigners also included one hundred and eighty Chinese contract laborers from Hong Kong (Speakman 2001:109). Some "foreigners engaged in agricultural pursuits with the idea of reaping a profit from the land, in contrast with the Hawaiians, who carried on... subsistence agriculture" (Coulter 1971:11).

The U. S. Civil War of the 1860s brought about a boost for the sugar industry in Hawai'i as sugar plantations in the South were boycotted or destroyed (Speakman 2001:91 -96). The rise in the number of plantations brought about a radical change in both the population in general, and the number and ratio of foreigners to native Hawaiians. As more and more labor was needed to accommodate the expanding industry, plantations sought laborers from several countries.

Statistics...show that far from being unsuited to plantation labor, or considered inefficient workers, Hawaiian labor was considered the best obtainable by many planters. As late as 1869 some plantations employed Hawaiian labor exclusively.... "The true reason why there is a dearth of Hawaiian labor is the increase of the planting interests from some 2,000,000 of pounds in nine or ten years to 18 or 20,000,000, requiring from eight to ten times as many men now as then." This source found more Hawaiians employed in such labor than ever before, and statistics for that year (1873) showed that out of 3,786 laborers employed on thirty -five plantations, 2,627 were Hawaiian men and 364 were Hawaiian women.... Nevertheless, the population decline was palpable and became a matter of public concern for the kings and their advisors, of the Hawaiian legislature, and of the sugar planters.... Immigration of labor from China and Japan [filled] the population and labor gap...it was from these two countries that the largest contingents of immigrants came, though supplemented by Caucasians, including Portuguese, and Filipinos, Koreans, Puerto Ricans, Germans, Pacific Islanders and many others.... In that period the population rose from 55,500 in 1876 to 154,000 in 1900. The following table shows the changes in percentages (Speakman 2001:107-108):

Table 1. Ethnic Demographics of Hawai'i

|                          | 1876  | 1900  |
|--------------------------|-------|-------|
| Hawaiian & Part-Hawaiian | 89.2% | 26.0% |
| Caucasian                | 6.3%  | 17.5% |
| Oriental                 | 4.5%  | 56.5% |

The Overthrow of the Hawaiian Kingdom government in 1893 and the subsequent annexation to the United States in 1898 (Daws 1974:28 9-290) heralded even more radical changes to the Hawaiian culture and to the local landscapes.

### 3.2.6 Territorial History Period (1900-1949 AD)

In 1900 Hawai'i had a population totaling 154,000 of whom only 29,799 were pure Hawaiians, 7,857 part-Hawaiians and the rest of 116,244 consisting of many other races (Wisecarver 1983:13). This period saw Native Hawaiians running for Congress (Daws 1974 297); and much of the lands being sold in fee simple. The Organic Act was effective on June 14, 1900 and Hawai'i became a Territory of the United States; in 1901 the first Territorial Legislature convened and passed the first income tax law (WSC 1962:26). In the 1940s, World War II also had some lasting influence on lives and industries as young men left the islands by the hundreds, for the front lines abroad.

While the population of Hā'ena decreased between 1700-1800 and the land further modified by the 1946 tsunami, Hā'ena continued to be occupied until decades into the Modern History Period.

If the volcanic glass dates are correct and considering the several projects along the beach, Hā'ena saw Hawaiian beach front cottages until the early decades (c. A.D. 1930) of the present century,

and in fact intensive occupation until the raid and destruction of "Taylor Camp" in A.D. 1977 (Riley and Clark 1979, Riley and Ibsen-Riley 1979). Sporadic occupation on the beach continues, perhaps not unlike the earliest, some one thousand years ago ... Beach excavations and the Land Commission Awards testimonies (c. 1850) verify that Ha'e'na was never abandoned (Griffin 1984:3).

### 3.2.7 Modern History Period (1950-)

Post World War II brought about an influx of people and industries to Hawai'i, allowing the tourism industry and offshoot enterprises to flourish. Along with the rise of the tourism industry, and competing sugar markets abroad, the sugar companies saw a sharpening decline in business (the Sugar Acts of 1934 and 1937, and ILWU Strike of 1946 didn't help). 1950 marked the introduction of radiocarbon analysis which shifted the focus of study in archaeology to excavation as a primary method of data recovery, with a research focus on settlement patterns, subsistence, land and marine use. The 1950s and 1960s were the bleakest years for the sugar industry and it was becoming apparent that the sugar industry was beyond salvage (Kent 1983:107-108). More changes were soon to take place on the landscapes of Hawai'i.

In the 1960s, various federal and state environmental and historic preservation laws and regulations were passed, mandating surveys and impact studies of the landscape, prior to development. In 2000 Hawai'i Legislature passed an EIS amendment resolution which the governor signed as Act 50. This legislation has broadened the scope of environmental impact studies to include cultural impact studies to assure that traditional Hawaiian and other ethnic cultural practices are not adversely impacted, as vacant sugar fields give way to the ever-growing populations and expanding tourist and real-estate industries.

### 3.3.0 Traditional Literature

The ethnographic works of the late 19<sup>th</sup> and early 20<sup>th</sup> century contribute a wealth of information that comprise the traditional literature --the *mo'olelo*, *oli*, and *mele*--as well as glimpses into snippets of time, and a part of the Hawaiian culture relatively forgotten. The genealogies handed down by oral tradition and later recorded for posterity, not only give a glimpse into the depth of the Hawaiian culture of old, they provide a permanent record of the links of notable Hawaiian family lines. The *mo'olelo* or legends allow *ka po'e kahiko*, the people of old, the *kupuna* or ancestor, to come alive, as their personalities, loves, and struggles are revealed. The *oli* (chants) and the *mele* (songs) not only give clues about the past, special people, and *wahi pana* or legendary places, they substantiate the magnitude of the language skills of *nā kupuna kahiko* (the people of old).

#### 3.3.1 Genealogies

*Po'e ku'auhau* or genealogy *kahuna* (masters) were very important people in the days of old. They not only kept the genealogical histories of chiefs "but of *kahunas*, seers, land experts, diviners, and the ancestry of commoners and slaves.... An expert genealogist was a favorite with a chief." During the time of 'Umi (ca 1500-1600s) genealogies became *kapu* (restricted) to commoners, which is why there "were few who understood the art; but some genealogists survived to the time of Kamehameha and even down to the arrival of the missionaries" (Kamakau 1992:242).

Surviving genealogies illustrate that the ruling families of each island were interrelated quite extensively. The chiefs of O'ahu, Kaua'i, Hawai'i, Maui and Moloka'i had common ancestries. Families branched out, but conjoined several times in succeeding generations (Kamakau in McKinzie, 1983: xxv). Not only were the chiefs or *ali'i* related to each other, they were also related to the commoners. In *Ruling Chiefs*, Kamakau states that "there is no country person who did not have a chiefly ancestor" Kamakau (1992:4). In the following passage Kamakau (1992) explains how some of the *ali'i* were connected.

It is said that the chiefs of Hawai'i island were from Maui and from O'ahu and Moloka'i between the times of 'Aikanaka and Hanala'anui. Thus 'Aikanaka was the chief of Koali and Mu'olea in Hāna; Hema, the chief of Ka'uiki in Hāna; Kaha'i, the chief of 'Iao in Wailuku; Wahieloa, the chief of Papauluana in Kīpahulu. Laka the chief was born at 'Alae in Kīpahulu, Maui; he ruled in Ko'olaupoko, O'ahu; the site of his house, Hale'ula, was at Waikane, O'ahu. Lu'ani'u was born at Waimea, Kaua'i, and ruled that kingdom. Kamea was from Waikale, Ewa, O'ahu; Pohukaina was from Kahuku; Pau, that is Ka-pau-nui-kua-'ōlohe, was from Kea'au in Wai'anāe. Hua was from Lahaina, Maui...this is Hua the son of Kapua'i -manakū [Pohukaina] whose *heiau* was Luakona, near to Kap'ū'ulu. Huanuikalālā'ilā'i [son of Pau, that is Kapaunuikea'ōlohe] was born at Kawelo in Honolulu; Paumakua-a-Lonoho'oneua was born at Kua'a-'ohe, Ko'olaupoko, and rules there; Haho was born by the *kawa*, the leaping place, of Kua'ikua at the stream of Kua'ikua in Wahiawā. Palena [-i-Haho] was born on the hill of Ka'uiki in Hāna, at the site Hānanaikū; he ruled and died on O'ahu; his remains and also his stone are at Ka-lua-o-Palena in Kalihi on O'ahu. Hānala'a-nui and Hānala'a-iki were the twin sons of H'i-ka-wai-nui and Palena; they were born at Kahin'ihini'ula, at Mokae and Hāmoa, and a certain *moku āina* land was named after these boys. Lana-ka-wai [son of Hānala'a-nui] was born at the *kawa* of Kua'ikua in Wahiawā, O'ahu (Kamakau, 1991:101).

Malo (1971) also wrote about the connection between the *maka'āinana* and the chiefs. "Commoners and *ali'i* were all descended from the same ancestor, Wa'kea and Papa" (Malo, 1971:52). This is evident in the genealogies. Genealogies were very important to the chiefs, because ranking was very important. The genealogies not only indicated rank, they ascertained a link to the gods. The following excerpt explains the idea and importance of rank and the role of genealogies:

Position in old Hawai'i, both social and political, depended in the first instance upon rank, and rank upon blood descent—hence the importance of genealogy as proof of high ancestry. Grades of rank were distinguished and divine honors paid to those chiefs alone who could show such an accumulation of inherited sacredness as to class with the gods among men...a child inherited from both parents.... The stories of usurping chiefs show how a successful inferior might seek intermarriage with a chiefess of rank in order that his heir might be in a better position to succeed his parent as ruling chief...a virgin wife must be taken in order to be sure of child's paternity—hence the careful guarding of a highborn girl's virginity (Beckwith 1990:11).

One could defend and/or prove their rank by knowing or having one's genealogist recite one's genealogy. For the *kanaka maoli*, genealogies were the indispensable proof of personal status. Chiefs traced their genealogies through the main lines of 'Ulu, Nana'ulu, and Pili, which all converged at Wakea and Papa (Barrere, 1969:24). Two well-known genealogy chants are the *Kumuhonua* and the *Kumulipo* [ten main genealogy chants are known today (Josephides 2010)].

#### 3.3.1.1 Kumuhonua

The *Kumuhonua*, first published by Fornander in 1878 in *The Polynesian Race* Vol. I was based on information from Kamakau and Kepelino. Kumuhonua, the man, was of the Nanaulu line, and the older brother of Olopana and Mo'ikeha (McKinzie 1986:14-15). However, the birth chant *Kumuhonua* has been a subject of controversy (Barrere, 1969: i). Some of the *Kumuhonua* legends were recorded by Kamakau and Kepelino between the years 1865 and 1869, however, the 'genealogy' of the *Kumuhonua*, published by Fornander, was given to him "to provide credibility to the legends...this 'genealogy' (was) constructed from previously existing genealogies --the *Ōlolo* (*Kumuhonua*) and the *Paliku* (*Hulihonua*) which are found in the *Kumulipo* chant (see Beckwith 1951:230 -234) and interpolations of their own invention" (Barrere, 1969:1).

#### 3.3.1.2 Kumulipo

A better example is the famous creation chant *The Kumulipo*. Feher (1969) has several notable Hawaiian scholars write passages in his *Kumulipo: Hawaiian Hymn of Creation -Visual Perspectives by Joseph*



Feher. In the *Introduction* Momi Naughton states “The Kumulipo belongs to a category of sacred chants known as *pule ho’ola’a ali’i*, ‘prayer to sanctify the chief,’ which was recited to honor a new-born chief (Feher, 1969:1).

In her passage, Edith McKinzie states:

“The *Kumulipo* is a historical genealogical chant that was composed by the court historians of King Keaweikēkahiali’iokamoku of the island of Hawai’i about 1700 AD in honor of his first born son Kālani-nui-‘I-a-mamao. This important chant honors his birth and shows the genealogical descent of both the *ali’i* (chiefs) and the *maka ānana* (commoners) from the gods, in particular Wakea” (Feher, 1969:1).

### 3.3.1.3 Hawaiian Genealogies

Edith McKinzie completed the first volume of *Hawaiian Genealogies* in 1983, based on genealogy articles translated from 19<sup>th</sup> Century Hawaiian newspapers such as *Ka Nonanona* and *Ka Nūpepe Kū’oko’a* in the late 19<sup>th</sup> century and early 20<sup>th</sup> century. These articles were in response to a call to preserve the Hawaiian heritage. Some of the information came from Malo’s (1838) *Hawaiian History*, and in Fornander’s (1880), *The Polynesian Race* (Book I) (McKinzie, 1983:1).

Using thirty years to account for one generation, McKinzie determined that Wakea was born in 190 AD; Umi-a-Liloa in 1450 AD; Keaweikēkahiali’iokamoku in 1650 AD; Kālanihūiikupuapaikalanui Keoua in 1710 AD; and Kamehameha I in 1740 AD” (McKinzie, 1983:12). Volume Two of *Hawaiian Genealogies* was published in 1986 and consists of information extracted from genealogical lists published in thirteen Hawaiian language newspapers from 1858 to 1920. It compliments genealogies found in other works, such as Fornander’s (1880) *An Account of the Polynesian Race...* and David Malo’s *Hawaiian Antiquities* (McKinzie, 1986: v).

The following excerpt is from Kamakau’s article in *Ka Nūpepe Kū’oko’a* October 7, 1865, and was translated by McKinzie (1986). It illustrates some of the mid-19<sup>th</sup> century sentiment regarding genealogies:

To the commoners, a genealogy was of no value because their parents forbade (sic) it lest comparisons should occur and country children be born and rise up as chiefs. Therefore, the children of the commoners were not taught beyond father, mother, and perhaps grandparents.... To us, the people of this time, there is no value of this thing of a chiefly lineage; we have no great interest in it. But in our thoughts it is of great value. We have entered into discussion of it; the chiefs valued the chiefs and ancestors; and we also value our knowledge of it. Because it was forbidden to the commoners, they were not to know this. However, due to the rise of wisdom and skill of the children of the commoners, therefore, all of the ranking privileges were no longer restricted; it was only lifted. What remains of the ancestors is something of value (McKinzie 1986:18-19).

### 3.3.2 Mo’olelo

Legends, stories or *mo’olelo* are a great cultural resource as well as entertaining. Leib and Day (1979) state in their annotated bibliography of Hawaiian legends, that legends “are a kind of rough history.” They noted Luamala’s idea of the value of legend and myth in the serious study of a culture and her following quote. “To a specialist in mythology, a myth incident or episode is as objective a unit as an axe, and the differences and similarities of these units can be observed equally clearly and scientifically.” The following definitions of terminology, including the Hawaiian classification of prose tales –*mo’olelo* or *ka’ao*, come from their work (Leib and Day 1979: xii, 1):

|                  |                                                                                                                                                                                                         |
|------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <i>Folklore</i>  | a rather inclusive term, covering the beliefs, proverbs, customs, and literature (both prose and poetry) of a people                                                                                    |
| <i>Ka’ao</i>     | “pure fiction”                                                                                                                                                                                          |
| <i>Legend</i>    | deals with human beings and used interchangeably with ‘myth’... because the collectors and translators of the tales often failed to make the strict distinction                                         |
| <i>Mo’olelo</i>  | deals with historical matters and somewhat didactic in purpose... included tales of the gods, as well as tales of historical personages... many have recurring patterns, plots, and types of characters |
| <i>Myth</i>      | a story of the doings of godlike beings                                                                                                                                                                 |
| <i>Tradition</i> | used to refer to that which is handed down orally in the way of folklore                                                                                                                                |

### 3.3.2.1 History of Mo’olelo Collecting

According to Leib and Day (1979) a substantial number of legends were collected and written in Hawaiian, during the century following Cook’s arrival in Hawai’i. A few accounts of the mythology were printed in the journals of missionaries and travelers, and a few of the Hawaiian lore were printed in languages other than English.

### 3.3.2.2 Legends involving Hā’ena (HSPLS 1989: v1 and other sources)

|                                  |                                                                                                                                   |
|----------------------------------|-----------------------------------------------------------------------------------------------------------------------------------|
| Pōhaku-loa, long stone of Kaua’i | In Armitage, <i>Ghosts Dog and other Hawaiian Legends</i> . [RH 398.2, A p. 136]                                                  |
| The Fire Goddess                 | In Colum, <i>Legends of Hawai’i</i> . [RH 398.2 C p. 25-37]                                                                       |
| Pele and Hi’iaka                 | In Emerson, <i>Pele and Hi’iaka</i> [RH 398.2 E]                                                                                  |
| The History of Moikeha           | In Fornander, <i>Fornander Collection of Hawaiian Antiquities and Folklore</i> V1 [RH 507 B4M, v4 pp 112-159]                     |
| Story of Lonoikamakahiki         | In Fornander, <i>Fornander Collection of Hawaiian Antiquities and Folklore</i> v1 [RH 507 B4M, v4 pp 256-363]                     |
| Legend of Kuapaka’a              | In Fornander, <i>Fornander Collection of Hawaiian Antiquities and Folklore</i> v2 [RH 507 B4M, v5 pp 78-135] (HSPLS-v1 1989:207). |
| Tradition of Kamapua’a           | In Fornander, <i>Fornander Collection of Hawaiian Antiquities and Folklore</i> v5 [RH 507 B4M, v4 pp 314-363]                     |
| The Maile                        | In Fornander, <i>Fornander Collection of Hawaiian Antiquities and Folklore</i> v2 [RH 507 B4M, v4 pp 614-619]                     |
| The shark gods of Kaū            | In Green, <i>Folk-tales from Hawai’i</i> [RH 398.2 G pp 105-107]                                                                  |
| The story of Iā’ieikawai         | In Kalākau, <i>Legends and myths of Hawai’i</i> [RH 398.2 K pp 455-480]                                                           |
| The phantom goat of Honopu       | In Knudsen, <i>Teller of Hawaiian Tales</i> [RH 398.2 K pp 82-85]                                                                 |
| The love of a chief              | In Knudsen, <i>Teller of Hawaiian Tales</i> [RH 398.2 K pp 99-102]                                                                |
| Na Ōhi O Kaua’i                  | In Knudsen, <i>Teller of Hawaiian Tales</i> [RH 398.2 K pp 143-146]                                                               |

|                                          |                                                                                  |
|------------------------------------------|----------------------------------------------------------------------------------|
| Lā'ie i ka wai                           | <i>The Hawaiian Romance of Lā'ieokawai</i> [RH 398.2 L]                          |
| Moikeha                                  | <i>The Hawaiian Romance of Lā'ieokawai</i> [RH 398.2 L pp 363-364]               |
| The love of a chief                      | <i>In</i> Lawrence, <i>Stories of the Volcano Goddess</i> [RH 398.2 L pp13-26]   |
| Kawelo's parentage                       | <i>In</i> Legend of Kawelo [RH 398.2 L pp 4-17]                                  |
| Pele and Lohi'au                         | <i>In</i> Nakuina, <i>Hawai'i, its People, their Legends</i> [RH 398.2 N p 26]   |
| How the Menehune saved their fish        | <i>In</i> Pukui, <i>Tales of the Menehune</i> [RH 398.2 P pp12-13]               |
| The Goddess Pele                         | <i>In</i> Rice, <i>Hawaiian Legends</i> [pg 1-14]                                |
| The stones of Kane                       | <i>In</i> Rice, <i>Hawaiian Legends</i> [pg 36]                                  |
| The Menehunes                            | <i>In</i> Rice, <i>Hawaiian Legends</i> [pg 36-54]                               |
| The story of Ola                         | <i>In</i> Rice, <i>Hawaiian Legends</i> [pg 54-56]                               |
| Legends resembling Old Testament history | <i>In</i> Thrum, <i>Hawaiian Folk Tales</i> [RH 398.2 T pp 15-30]                |
| Kila, the undaunted                      | <i>In</i> Thrum, <i>More Hawaiian Folk Tales</i> [RH 398.2 T pp 20-45]           |
| Pele's long sleep                        | <i>In</i> Westervelt, <i>Hawaiian Legends of Volcanoes</i> [RH 398.2 W pp 72-86] |
| Lohi'au                                  | <i>In</i> Westervelt, <i>Hawaiian Legends of Volcanoes</i> [pp126-138]           |
| Laukaieie                                | <i>In</i> Westervelt, <i>Legends of Gods and Ghosts</i> [RH 398.2 W pp 36-48]    |
| Ka-wai-o-Palai                           | <i>In</i> Wichman, <i>More Kaua'i Tales</i> [pp 105-111]                         |
| Nā Kia Manu a me Nā Mai'a                | <i>In</i> Wichman, <i>More Kaua'i Tales</i> [pp 125-131]                         |

### 3.3.3 Mo'ōlelo and Genealogy of Ali'i nui of Kaua'i

In the legends or *mo'ōlelo* collected by Fornander, Kamakau, Knudsen, Wichman and others, we can get a glimpse into the lives of some of the first settlers and *ali'i nui* or ruling chiefs of Kaua'i. Kaua'i was first settled by descendants of Kumu-honua and Lalo-honua thirty-six generations before Papa was born (Wichman 2003:2). The history of the Kaua'i *ali'i* begins in Waimea where according to Wichman (2003) the first settlers to Kaua'i landed generations before. From many of these *ali'i* one can understand why the genealogy of Hawai'i's chiefs and people on all the major Hawaiian islands share common ancestries. To reproduce any legend completely would take too long, therefore only excerpts are generally used for the following ancestors and descendants of the first *ali'i* of Kaua'i, who are said to be descendants of Papa and Wakea (second son of Kahiko and Kū-pūlana-kehau) (Wichman 2004:3) and their daughter Ho'ohoku-i-kalani.

#### 3.3.3.1 Papa and Wākea Progenitors of Kaua'i Chiefs

Papa and Wākea or Wākea and their daughter Ho'ohoku-i-ka-lani are said to be the progenitors of all Polynesians, however the islands were already populated when they arrived and settled in Nu'uuanu,

O'ahu. Hāloa is the name given to both sons of Wākea and Ho'ohoku-i-ka-lani. Kaua'i historians claim that a younger brother of Hāloa, Chief Ka-māwae-lua-lani-moku, son of Papa and Wākea, discovered and settled the island.

**Ka-māwae-lua-lani-moku & Kahiki-lau-lani** Chief *Ka-māwae-lua-lani-moku*...traveled to this island with his wife, *Kahiki-lau-lani*, and her two paddlers *Kō-nihinihi* and *Kō-nahenahe*. Because of his great deeds, the great number of his descendants, and the prosperity of his reign, people called the island Kau-a-i ("place of abundance").... Kaua'i is also the name of the youngest son of ancient voyager Hawai'i-loa. His wife was Wai'ale'ale, and her name was given to the lake beside the highest peak of the island. The word *Kaua'i* itself is older than Hawai'i-loa; it's true meaning is lost in the mists of the cosmic night from which Kaua'i's ruling chiefs descended (Wichman 2003:5).

Whether *Ka-māwae-lua-lani-moku* and *Kahiki-lau-lani* ever lived on Kaua'i is unknown. It is certain that one day, not too many generations after Papa and well before the descendants of Nana'ulu came to Kaua'i, a voyaging canoe commanded by *Kā'alu-nui-kini-ākea* [also spelled *Kā'alu-nui-kini-ākea*] approached the island from the west. Nothing is known of him except his name and that he had a son...and a counselor *Pi'i-ali'i* (Wichman 2003:5).

**Kū'alu-nui-kini-ākea and Kalaimoku Pi'i-ali'i** The first known settler to Kaua'i, *Kā'alu-nui-kini-ākea*, chose Waimea Valley for his new home. The shallow sea between Kaua'i and Ni'ihau teemed with fish, the river delivered fresh water and food, and even the climate was warm, ideal for growing crops, and comfortable to a people who wore a minimum of clothing.... The first settlers worshipped Kane, god of sun and fresh water, and thus all living things. The few *kānāwai* (laws) concerned the preservation of agriculture and marine resources. All ceremonies in the *heiau* (temple) were simple and the audience participated in all the rites. *Heiau* were built so that all priestly ceremonies could be seen by the assembled people who participated in the rites. From the beginning, there was a lack of distinction among the Kaua'i *ali'i* (chiefs). The rank of the mother determined in large part the rank of her child (Wichman 1998:67).

**Kū'alu-nui-paukū-mokumoku & the Menehune** *Kā'alu-nui-paukū-mokumoku* followed his father *Kā'alu-nui-kini-ākea* as *ali'i nui*. He sent back to his homeland for a people called *Menehune*, who were masters of stonework and engineering. The *Menehune* were an energetic, short but broad-shouldered, muscular people. They were organized in divisions based on their skills and work duties and were completely obedient to their leaders. They worked as a team and if a project was interrupted for any reason, they abandoned it and never returned to finish it. Under *Kā'alu-nui-paukū-mokumoku*, many *heiau*, fishponds, and irrigation systems for wet-land farming were built. These *Menehune* explored the island from one side to the other and left stories of their adventures in place-names that still remain (Wichman 1998:8).

**Kū'alu-nui-paukū-mokumoku, Ola and Kalaimoku Pi'i** The son of *Kā'alu-nui-paukū-mokumoku* was Ola. He opened the land between the ridges and the sea to agriculture. The land was considerably higher than the river, and separating the rich bottomland from freshwater was the cliff **Pali-uli**, "green cliff," which rose directly from the riverbed.... Ola gathered the *Menehune* and asked that an irrigation ditch be built around Pali-uli (Wichman 1998:8).... The ditch was called *Kā'ā-Ola*, "container acquired by Ola." The new farmland was named after their ancient homeland, *Pe'e Kaua'i*, "hidden Kaua'i" (Wichman 1998:9).

Like his ancestor Hawai'i-loa, Ola also contended with cannibalism. For several nights in a row, Ola and Pi'i noticed a bonfire flickering on the shores of Ni'ihau where no one lived. He asked his friend *Ka-hao-o-ka-moku*, who was about to set off on a fishing expedition to Ka'ula islet, to stop by Ni'ihau and find out who was there. Two days later Kāne-ōpa, the head *lawai'a* (fisherman) of the expedition, returned alone with a harrowing tale. As they landed on Ni'ihau, the fishing party had been greeted by a man who offered them food, shelter, and women. This unknown man had then shown them into a house where, tired from fishing, one by one they fell

asleep, all except Kāne-ōpa who was suspicious by nature and who had not liked the stranger's manner (Wichman 2003:13-14).

Kāne-ōpa was the only one to survive; he went back to Kaua'i and told Ola and Pi'i about the cannibals of Ni'ihau. They devised a plan and went back. Their plan worked and the cannibals were killed. "No mention of Ola's marriage or direct descendants has survived" (Wichman 2003:14).

### 3.3.3.2 Waimea and Wainiha Alliance

**Kā-la-kāne-hina and Lohipono** Sometime after Ola, *Kā-la-kāne-hina* became the *ali'i nui*. He lived at Lā'au-ōkala, the eastern point of the Waimea river outlet. He married Lohipono, a chiefess of Wainiha valley. She left her infant son *Kāne-a-Lohi* with her brother *Ka-lālā-pōpō'ulu*, a bird catcher who brought up his nephew in the mountains and trained him in the art of catching birds whose feathers were greatly prized (Wichman 2003:14).

**Kāne-a-Lohi** Kāne-a-Lohi exasperated his uncle a great deal, for he refused to eat most kinds of food and always demanded the flesh of small birds. To feed this prodigious appetite, *Ka-lālā-pōpō'ulu* moved to the cliffs above Halulu waterfall on the very edge of the immense cliffs of Wai'ale'ale. Here *uwā'u* (dark-rumped petrel) nested in deep holes dug into the sides of the cliffs. Each morning the *uwā'u* flew out to sea and each evening they flew home to their caves. The young...are good to eat (Wichman 2003:14).

A giant, *Ka-wai-pe'e*, from Pe'ape'a above Hanapēpē liked destroying the nests and killing the birds and throwing them away. *Kāne-a-Lohi* and his uncle set a trap for the giant and killed him as he came after a distressed bird. However, the Waimea chief *Kā-la-kāne-hina* also heard that men were eating his favorite *kapu* birds and set out for the mountains to catch and kill them. But *Kāne-a-Lohi* and his uncle destroyed his army and would have killed him too. But *Kā-la-kāne-hina* called out "Save me, in the name of your mother, Lohipono. I am your father." *Kā-la-kāne-hina* returned to Waimea and built a house and invited his son. They suspected a trap when all the chiefs' men were sitting in a circle next to the wall while the mat in the middle of the room sagged. *Kāne-a-Lohi* barred the door and a rush to get out the chief and his men fell into the hold. *Kāne-a-Lohi* then set the house on fire. *Kāne-a-Lohi* became *ali'i nui* for a short time, married and had a son *Ka-lau-lehua*. He later took his mother and son back to the mountains he loved (Wichman 2003:15-16).

**Ka-lau-lehua** *Ka-lau-lehua* later became *ali'i nui*. For reasons not mentioned in the legends, *Ka-lau-lehua* wanted to dig a ditch leading from Wai'ale'ale to the cliff's edge so that the pond would be the headwaters of the Wailua River. *Ka-lau-lehua* sailed to the mythical island of *Kāne-huna-moku* to fetch the *Mū-ai-mai'a* (banana-eating people). He tricked four *Mū* men and three *Mū* women into coming with him from their homeland to build his ditch. They refused and asked to be returned home. *Ka-lau-lehua* wouldn't help them, instead he imposed a *kapu* forcing them to live in the Alaka'i swamp. They planted bananas wherever they found a suitable spot and slowly they grew in numbers. They were a shy people and even though they lived in the same area as the Menehune, they avoided them too, but watched unhappily as the Menehune sailed away from Kaua'i. The *Mū* had lost their knowledge of the stars that could lead them back to their homeland (Wichman 2003:16-17).

**Ka-iki-pa'a-nānea** Several generations later [after *Ka-lau-lehua*], *Ka-iki-pa'a-nānea*... became the *ali'i nui* of Kaua'i. His headquarters was on the small plateau on the eastern side of the Waimea river mouth. *Ka-iki-pa'a-nānea* had two major passions: sports and riddles. He was a champion wrestler and boxer who always tried to kill his opponent. Everyone feared and hated him...only his personal servant, *Kūkae'a* was ever in his company.... Worst still when every chiefess on Kaua'i refused to marry him after the death of his wife, *Ka-iki-pa'a-nānea* sent his messengers to O'ahu, ordering them to bring him a wife (Wichman 2003:1718).

### 3.3.3.3 Puna Chieftdom and Interisland Ali'i Nui Connections

*Ka-iki-pa'a-nānea's* men kidnapped *Mākolea* who was surfing at Waikīkī and took her back to Kaua'i where she too refused to marry him. So he locked her up until a time when she would agree. *Mākolea* was already married to a *Māui* warrior *Ke-paka-ili-ula*. He sailed to Kaua'i and befriended *Kūkae'a*. Eventually *Kūkae'a* gave him the answers to the riddles. *Ke-paka-ili-ula* challenged *Ka-iki-pa'a-nānea* to a boxing match, which he won and answered the riddles correctly. He then seized *Ka-iki-pa'a-nānea* and tossed him into a firepot. Earlier *Ka-iki-pa'a-nānea* had been so preoccupied with his riddles and athletics that he had allowed an ocean-traveler from Marquesas, *Puna-nui-ka-ia-āina* to settle with his entourage on the banks of the Wailua river where the Menehune had constructed their temples. Now there were two chieftdoms on Kaua'i - Puna and Kona (Wichman 2003:18-19).

**Nana'ulu and 'Ulu** More than three hundred years after *Papa-hānau-moku* and *Wākea*, a chief from Tahiti, *Ki'i* and his wife *Hina-kō-ula*, became parents of two sons, *Nana'ulu* and *'Ulu*. When they were grown *Ki'i* asked them to go on voyages of discovery.... *Nana'ulu* sailed north in his canoe named *Manō-nui* (Great Shark) and found the islands of Hawai'i...voyagers came in increasing numbers. Meanwhile the descendants of *'Ulu* spread out over the South Pacific. Among them were extraordinary people who lived such wonderful adventures that storytellers had rich material to develop into entertaining sagas [e.g., *Maui*, *Aikanaka-a-Mako'o*, *Puna & Hema*, *Kaha'i & Wahioloa* and *La'ka*].... There were so many astonishing ancestors like these that the genealogists added them all into the *'Ulu* genealogy. Today there seems no way to reconcile the short *Nana'ulu* and very long *'Ulu* genealogies (Wichman 2003:20, 23).

**Puna-nui-ka-ia-āina and Puna-kai-ōlohia** Two voyaging canoes set out from Tahiti fifteen generations after *Nana'ulu* and arrived on O'ahu and Kaua'i. *Maweke* and *Paumakua* settled peacefully on O'ahu and quickly became ruling chiefs of a district of that island. At that same time, *Puna-nui-ka-ia-āina*, whose genealogy has not survived, arrived on Kaua'i, having come, most likely from the Marquesas Islands. *Puna-nui-ka-ia-āina* arrived when the chief with the deadly riddles, *Ka-iki-pa'a-nānea*, was ruler of Waimea.... *Puna-kai-ōlohia* followed his father... as leader of his people along the banks of Wailua. Nothing is known of him or his reign, except that he had a son [**Puna-ai-koā-i'i**].... *Puna-ai-koā-i'i* had only one child, his daughter, *Hina-ulu-ā*...they called her *Ho'oiipo-malanai* (*sweetheart of the gentle breeze*) (Wichman 2003:23-24).

**Puna-ai-koā-i'i, Hina-ulu-ā and Mo'ikeha** *Puna-ai-koā-i'i* (Puna) urged his daughter to marry, but she couldn't choose from the many suitors who came to court her from many islands - they were all equal to her. Finally Puna and his *kahuna nui* devised a plan --a contest of strength and speed. A *lei palaoa* would be taken to *Ka'ula* island and the first chief to retrieve it would win her hand. All were pleased with the contest rules. Then on the evening of the contest a stranger arrived in a voyaging canoe on the shores and said he was *Mo'ikeha* and asked to participate in the contest. The competing chiefs said as long as he could recite his genealogy and that it was equal to theirs. *Mo'ikeha* chanted his own genealogy: "*Nana'ulu* the husband, *Ulukou* the wife...*Kekupahaikala* the husband, *Maihihea* the wife; *Maweke* the husband, *Naiolaueka* the wife...*Muli-ele-ali'i* the father, *Wehelani* the mother, *Mo'ikeha* the man, *Hina-ulu-ā* the wife." Everyone enjoyed the boast and the chiefs agreed to his participation (Wichman 2003:23-24).

The names of these chiefs' names and places of residence is slightly different according to Kamakau's (1991) version:

The chiefs of Kaua'i who lived at *Kapa'a* while *Mo'ikeha* was living there were **Puna-nui-kai-anaina**, **Puna-kai-ōlohe**, and **Puna-ai-koā'e**. A beautiful daughter of the Puna chiefs, *Ho'oiipo-i-ka-malani* - also called *Hina-ulu-ā* - lived at *Waimahanalua* because of the excellence of the surf of *Maka'iwa* there *Mo'ikeha* took her to wife, and they were united in a lasting union. When their oldest son was born *Mo'ikeha* gave him the name *Ho'okamali'i* for the skin of *'Olopana*

[Mo'ikeha's older brother]. Their second son he named Haulani-nui-ai-ākea for the eyes of 'Olopana, and their third son he named Kila for Lu'ukia, the wife of 'Olopana (Kamakau 1991:106).

**Mo'ikeha, La'amaomao and Haulani -nui-ai- ākea** Mo'ikeha's companion was La'a-maomao, his foster son and owner of a large calabash which contained all the winds of the world. Mo'ikeha was able to use the winds and beat the other contestants and win the hand of Hina -'a-ulu-ā. Later Mo'ikeha's youngest son went back to Raiatea to bring La'a -maomao to see Mo'ikeha before he died. La'a [also called La'a-mai-Kahiki because he came from Kahiki] went to O'ahu where he sired three sons by three different chieftesses at the requests of the *kahuna* of Kualoa, as La'a was a descendant of Paumakua and they were afraid this line was dying out.

According to Kamaka'u (1991) "La'a-mai-Kahiki became an ancestral chief of chiefs and commoners of O'ahu and also for Hawai'i and Kaua'i. You will find his chiefly descendants in the *mo'o kū'auhau* of Nana'ulu, Puna-i-mua, and Hanala'a-nui" (Kamakau 1991:110).

Mo'ikeha's three sons went different routes; the oldest son Ho'okamali'i became the ruling chief of Kona, O'ahu; the second son Kila went to Waipi'o on the Big Island [Kila later went to Kahiki]; and the youngest son Haulani -nui-ai-ākea stayed on Kaua'i where he became the *ali'i nui* after the death of Mo'ikeha (Wichman 2003:23-35).

### 3.3.3.4 Kona and Puna Conflict

**Haulani-nui-ai-ākea, Ke-oloewa-a-Kamaua and Ka'ili -lau-o-ke-koa** Haulani-nui-ai-ākea was not a good chief so he was dethroned by Ke-oloewa-a-Kamaua a Moloka'i chief married to one of Maweke's granddaughters. However Ke-oloewa-a-Kamaua refused the throne and Kila was sent for in Raiatea, but he too refused wishing to stay with his [foster] brother La'a -mai-Kahiki. Ka'ili-lau-o-ke-koa, a granddaughter of Mo'ikeha was asked to rule and to marry *Ke-li'i-koa*, a Kona, Kaua'i chief. However, she fell in love with someone else of Puna, Kaua'i. This created a rift between Puna and Kona. Ka'ili-lau-o-ke-koa's husband died after a few years and Ke-li'i-koa invaded Puna and the two armies fought at Kuamo'o ridge. With the help of the women, the Kona chief was killed and the army defeated. Ka'ili-lau-o-ke-koa died childless and the chieftdom of Puna was offered to Ahukini -a-La'a, a son of La'a -mai-Kahiki (Wichman 2003:36-39).

**Ahukini-a-La'a, Kama-hano and Lu'anuu** Ahukini-a-La'a...and Ha'i-a-Kama'i'o had a son, Kama-hano. Kama-hano lived with Ka'-auca-o-ka-lani...they had a son, Lu'anuu. It was at this time that the first warrior hero of Kaua'i appeared. The war between Kona and Puna flared up (Wichman 2003:40-42).

**Akua-pehu-'ale** Akua-pehu-'ale of Kona swept ashore at Wailua and the surprised Puna chiefs fled for the uplands. Akua-pehu-'ale was considered a *kupua*, a supernatural being who could take two forms...that of a man and that of a giant sea monster. He was greatly feared and hated even by the men on his side. Once he vanquished the Puna forces he settled at the seashore (Wichman 2003:42).

**Ke-āhua, Ka-uhao, Lepe-a-moa and Ka-u'i-lani** One of the exiled [Puna] chiefs, Ke-āhua, found refuge in a remote valley in the Wailua uplands, which today bears his wife's name, Ka-uhao, daughter of Hono'u Iuli and Ka-pā-lama of O'ahu. Their first child was Lepe-a-moa, a *kupua*, who could take the form of a beautiful woman or a...feathered chicken. She was taken at birth to be raised by her O'ahu grandparents. Shortly after their defeat, Ka-uhao gave birth to a son...named Ka-u'i-lani (Wichman 2003:42).

When Ka-u'i-lani grew up he became a great warrior and defeated Akua -pehu-'ale. After the victory feast he led the Puna people back down to the mouth of Wailua (Wailua -nui-hāno) river. He later sailed for O'ahu to find his sister, Lepe-a-moa whom he had never seen (Wichman 2003:42-44).

**Lu'anuu and Palila** Lu'anuu, grandson of Ahukini -La'a, was named after the grandfather of Ki'i, father of 'Ulu and Nana'ulu. He was a good chief and was greatly admired in spite of the continuing wars with Kona - references to him indicate a close relationship to Kona. During the time of Lu'anuu there was a great warrior named Palila, son of Ka -lua-o-pālena and Maihi-iki. He was taken at birth and raised by his grandmother Hina in a sacred temple of Alana -pō where he was trained very well. Later he helped his father defeat Kona chief Ka -maka-o-ka-lani on the plains of Kōloa. Shortly after, a messenger from the ruling chief of O'ahu arrived asking for Palila's help. Palila had many adventures on O'ahu and Hawai'i and later became the ruling chief of Hilo (Wichman 2003: 44-47).

### 3.3.3.5 Merge of Puna and Kona Chiefdoms

**Kūkōna, Makali'i -nui-ku-a-ka-wai-ea, Mano -ka-lani-pō and Palekaluhi** Kūkōna [son of Lu'anuu] inherited an island at war and left it united as one kingdom. From then on, the legends of the Kona kingdom were seldom told and the genealogies of the first settlers were forgotten.... Kūkōna's *ali'i wahine* was Lau-puapua-ma'a and they had twin sons, Mano -ka-lani-pō and Palekaluhi. When Kūkōna became *ali'i nui* of Puna, the Kona chief was Makali'i -nui-ku-a-ka-wai-ea. He had been at the royal court of O'ahu for many years and several times had fought in battles against Kama-pua'a.... Makali'i-nui-ku-a-ka-wai-ea had been sent by Kama-pua'a to the royal court with the bad news of defeat. Eventually Makali'i-nui-ku-a-ka-wai-ea returned home to Waimea and organized his own force. Makali'i-nui-ku-a-ka-wai-ea's army included the father and older brother of Kama-pua'a (Wichman 2003:47-48).

**Kama-pua'a, Limaloa, Kūkōna and Makali'i -nui-ku-a-ka-wai-ea** The Kona and Puna armies met at Kōloa Gap and the war became a stalemate until Limaloa and Kama -pua'a joined the Puna army. Limaloa was a giant and had become friends with Kama -pua'a when he first came to Kaua'i. Kama-pua'a dared Limaloa and Kūkōna to join him in one-to-one combat against any Kona champions. Kahiki -'ula of Kona was the first to step forward and was struck down by Kūkōna, but as he was going to give the finishing blow Kama-pua'a stopped him and said he would finish the job and to go and look for other opponents. Instead of killing the man, he whispered to Kahiki -'ula, who was his father, to go back to his family in Kalalau. Limaloa was engaging another warrior, Kahiki -honua-kele, whom Kama -pua'a recognized as his older brother. When Limaloa struck him down, Kama -pua'a told Limaloa he would finish up. Instead he whispered the same thing to his brother. Then Kama-pua'a faced Makali'i -nui-ku-a-ka-wai-ea who did not recognize his former enemy. Kama-pua'a chanted a list of all the warriors he ever defeated and when he was done Makali'i -nui-ku-a-ka-wai-ea replied that he was defeated (Wichman 2003: 48-49).

**Puna and Kona merger** The two kingdoms were merged into one with Kūkōna as the *ali'i nui*. To cement the new situation, Nae -kapu-lani, the daughter of Makali'i -nui-ku-a-ka-wai-ea, was married to Kūkōna's son Mano-ka-lani-pō. Meanwhile, on the island of Hawai'i, Ka -lau-nui-o-Hua dreamed that his hand was possessed by the god Kāne-nui-ākea...he dreamed that he would become the ruler of all the islands (Wichman 2003:49).

**Kūkōna and peace in the islands** Ka-lau-nui-o-Hua successfully defeated Maui's Ka-malu-o-Hua, Moloka'i's Ka-haku-o-Hua and O'ahu's Hua-i-pou-leilei. He took the three chiefs with him on his invasion of Kaua'i where they landed at Māhāulepu, Pā'ā and Weliweli with no opposition. What he didn't know was that Kūkōna knew of the invasion as the guardian watchers of Hā'upu had seen the fleet as it left O'ahu. Kūkōna ordered everyone to leave their homes, take all their food with them, and go to the center of the island. He had all of his warriors hide among the trees on all the ridges overlooking

Māhāulepu to Lāwā'i. He also ordered every canoe on the island to gather at Hanapēpē Bay. K ūkona surrounded the invaders by land and by sea. By nightfall K ūkona had all the rulers of the major islands as his prisoners. He took his prisoners on a tour of the island and while taking a nap had a dream that three of the four rulers tried to plot his death , but Ka-malu-o-Hua of Maui rejected the plan saying that K ūkona had been good to them instead of killing them all and taking over all the islands. K ūkona woke up to discover that his dream was true, but instead of putting them to death he said he only wanted peace. He freed the rulers except for Ka -lau-nui-o-Hua whom he kept for ransom, and made them swear that they or their descendants would never invade Kaua'i again. K ūkona ordered the *heiau Ka-umu-o-Hua* built near Alaka'i swamp and it was here that the rulers all swore to uphold their promise not to invade Kaua'i. This peace was called *Ka-lai-loa-ia-Kamaluohua* (The Long Peace of Kamaluohua), which lasted over five hundred years. The royal court was kept at Wailua, but a permanent home was also maintained at Waimea (Wichman 2003: 49-52).

### 3.3.3.6 Ali'i Nui and Hā'ena Connections

**Golden Age of Mano-ka-lani-pō and Nae-kapu-lani** The reign of Mano -ka-lani-pō was considered the “Golden Age” because it was so peaceful that warriors became athletes and people lived to an old age. Mano-ka-lani-pō and Nae-kapu-lani had three sons: Kau -maka-a-Mano, Nā-pu'u-a-Mano and Ka -ha'i-a-Mano. During the reign of Mano -ka-lani-pō, he eventually allowed the *Mū-ai-mai'a* people to return to their homeland, Kāne-huna-moku, which was seen by their *kilo kilo* offshore of Miloli'i valley. They left Kaua'i as the *Menehune* before them had done , from Hā'ena. Also during his reign, three goddess sisters came to Kaua'i from the west after visiting Nihoa, Necker and Ni'ihau, in huge voyaging canoes from their homeland in Sāmoa; Kapō-ula-kinau, who was the first to arrive on Kaua'i, followed by Pele and Hi'iaka-i-ka-poli-o-Pele. Kapō-ula-kinau married off some of her women attendants to the men of Kaua'i, such as Limaloa the giant and Kau -maka-a-Mano, son of Mano -ka-lani-pō, then she left Kaua'i in search of a husband for herself. Pele also landed at Mānā, seeking a new home and safety from her sister Nā-maka-o-ka-ha'i. As Pele toured the island she met Kama -pua'a and they traded insults. Kama -pua'a tried to rape Pele, but she was saved by her sister Kapō-ula-kinau. Pele then went on to K ūē, Hā'ena where she met Lohi'au, the brother of Limaloa [warrior who fought alongside K ūkona and Kamapua'a against Kona forces], and fell in love with him (Wichman 2003: 55-59).

**Kau-maka-a-Mano** Kau-maka-a-Mano reigned after his father Mano -ka-lani-pō died. He married Kapō-inu-kai and they had only one child, Ka -haku-a-Kāne. Nothing was known of the other sons of Mano-ka-lani-pō, Nā-pu'u-a-Mano and Ka -ha'i-a-Mano. Ka-haku-a-Kāne was named after one of the four sons of Mo'ikeha, the voyager from Ra'iātea (Wichman 2003: 59-61).

### 3.3.3.7 More Ali'i Nui Interisland Travels and Marriages

**Ka-haku-a-Kāne** Ka-haku-a-Kāne, like so many of his ancestors, made a grand tour of the windward islands. He was...*ali'i nui* of Kaua'i and had an impeccable genealogy. When he reached Maui, Kapō-nae-nae, sister of the ruler, the first Kahekili married him [Kahekili I was married to Haukanuimakamaka or Haukanimaka , a Kaua'i chiefess and was father of Kawaokohele and Keleanuinohoanaapii who married the O'ahu *ali'i* Kalona, son of Ma'ilukukahi; Kahekili I was the grandfather of Pi'ilani]. They had two children, Kahekili-a-Kāne and Kū-o-nā-mau-a-ino. When Kahekili-a-Kāne's granddaughter married Lono-a-Pi'i, the *ali'i nui* of Maui at that time, Maui chiefs were able to connect themselves to the ancient Kaua'i line leading backwards to La'a-mai-Kahiki. When Ka-haku-a-Kāne left Maui and returned to Kaua'i, he married Mano -kai-ko'o, like himself a grandchild of Mano -ka-lani-pō. They had a son, K ū-walu-paukū-moku (Wichman 2003: 61-62).

**Kū-walu-paukū-moku** His name indicates that the genealogy of the Kona kingdom had not been lost before this time. He was named after an ancestor, the son of K ū-walu-kini-akua, the first

settler on Kaua'i. This Kū-walu genealogy had been joined to that of La -a-mai-Kahiki when Kū-walu-paukū-moku's great-grandfather Mano -ka-lani-pō married Nae -kapu-lani, daughter of Makali'i-nui-kū-a-ka-wai-ea, last ruling chief of Kona. Kū-walu-paukū-moku was a good, wise, and liberal ruler ...married Hame-a-Waha'ula, a chiefess whose genealogy has been lost.... Waha'ula was the first *heiau* built by Samoan priest Pā'ao after he made his first landfall in the district of Puna on Hawai'i island.... Pā'ao left his homeland and brought his god Waha'ula to Hawai'i.... Within Waha'ula's enclosure was a sacred grove of trees said to contain one or more specimens of every tree growing on all the Hawaiian Islands. One of these trees was a *hame*, a medium-size tree with grapelike clusters of sour, but edible fruit used to dye tapa; its hard wood was used for anvils for beating *olonā* fiber (Wichman 2003: 62-63).

**Ka-haku-maka-paweo and Ka-haku-a-kukua-ena** There are no legends concerning the quiet and peaceful rule of Ka -haku-maka-paweo.... His wife was Ka-haku-a-kukua-ena, of whom nothing is known, although the name indicates they must have been closely related. They had three sons: Kaile -lālāhai, 'A'a-nui-kani-a-weke, and Ka -lani-kukuma. Nothing is known of the two older brothers (Wichman 2003: 63).

**Ka-lani-kukuma, Kū-a-Nu'uau and Pāka'a** During the time of Ka -lani-kukuma, two Kaua'i heroes, Pāka'a and Pikoi-a-Alalā lived, and their adventures became popular tales of the storytellers. When Keawe-nui-a'Umi, son of 'Umi-a-Liloa of Hawai'i, was born he was placed in the care of Kū-a-Nu'uau who was entrusted as the *kahu* (guardian) to raise and educate the royal youngster.... Kū-a-Nu'uau became the close advisor of his chief.... After many years, Kū-a-Nu'uau toured all the islands, leaving his charge behind. Kū-a-Nu'uau eventually came to Kapa'a where he met La'a -maomao, a descendant of the navigator of the same name who had helped Mo'ikeha, the traveler from Ra'iātea, win his wife many years before. La'a maomao had inherited the calabash of winds as well as the name of her ancestor. K ū-a-Nu'uau and La'a -maomao settled down on a bluff overlooking the sea between Kapa'a and Ke'elia. After six months, word came from Hawai'i that Keawe-nui-a'Umi wanted Kū-a-Nu'uau to return and take up his duties once again. Before he left Kapa'a, K ū-a-Nu'uau gave his pregnant wife a white *malo* and a cape woven of *kahukalu*, a grass that grew only at Kapa'a.... After Kū-a-Nu'uau left, La'a-maomao and her brother Ma'ilou, a bird catcher, raised her son. His name was Pāka'a.... When K ū-a-Nu'uau died, Pāka'a took his place as the favorite friend of Keawe -nui-a'Umi (Wichman 2003: 63-64).

**Ka-haku-maka-lina and 'Ili -hiwa-lani** The wife of Ka-lani-kukuma was Kapo-lei-a-kuila, a direct descendant of Haulani-nui-ai-ākea, the oldest son of the seafaring Mo'ikeha. This union of the two lines after ten generations increased the *mana* and aristocratic rank of their two sons, Ka-haku-maka-lina and 'Ili-hiwa-lani. Ka-haku-maka-lina became the *ali'i nui* after his father, but within a few generations, the *ali'i* of Kaua'i successfully searched for a ruler among the descendants of 'Ili-hiwa-lani. Unknown and unannounced to...Ka-haku-maka-lina, a well-known chief of Hawai'i island, Lono-i-ka-maka-hiki, arrived on Kaua'i. He had just defeated Kama-lāla-walu of Maui...Lono-i-ka-maka-hiki landed at Waimea.... [Later] Ka-haku-maka-lina made a grand tour of the windward islands. Everywhere he was greeted warmly. When he reached the island of Hawai'i, he was feted by 'Akahi-ili-kapu, a daughter of 'Umi-a-Liloa. When it was time for him to return home 'Akahi-ili-kapu sailed to Wailua with Ka-haku-maka-lina. There she gave birth to two children, Ke -li'i-ohiohi, a son, and Koihalauiwailua, a daughter. 'Akahi -ili-kapu returned to Hawai'i with her children, and eventually they married into the Hawai'i *ali'i* line, thus adding the Kaua'i genealogical mana to the descendants of 'Umi-a-Liloa. (Wichman 2003: 67-70).

**Kama-kapu, Kā-kuhi-hewa and Ka -hā-malu-ihī** Ka-haku-maka-lina also married Ka -haku-mai'a, a Kaua'i chiefess, whose name indicates that she too was a descendant of Ka-haku-maka-paweo. They had a son, Kama-kapu. [Kama-kapu married Pā-wahine and they had Kawelo-mahamaha-i'a.] When Kama-kapu became *ali'i nui* of Kaua'i, the ruler of O'ahu was Kā-kuhi-hewa, who had earned a fierce reputation as a warrior, statesman, and keeper of the most glorious court in all the islands. By this time he was an old man. For his fourth wife, he chose a young Kaua'i chiefess, Ka-hā-malu-ihī. She had an impeccable genealogy descending, on her mother's side, from 'Ili-hiwa-lani, second son of Ka-lani-kukuma. From her father, Kawelo-ehū, she was a direct descendant of Ahukini-a-La'a, this



giving her a double -looped genealogy, making her *mana* the strongest on Kauaʻi. She owned three powerful *kumukānāwai*... Ka-hā-malu-ʻihi came from the sacred sands of Waimea... and her lands there became a *puʻuhonua* (place of refuge) for those who had broken her laws (Wichman 2003: 70-71).

### 3.3.3.8 Kauaʻi - Oʻahu Aliʻi Nui Merge

**Ka-hā-malu-ʻihi and Kūaliʻi** Kā-kuhi-hewa died shortly after his marriage to Ka-hā-malu-ʻihi, then she married Kāne-kapu-a-Kā-kuhi-hewa, his son. They had Ka-hoʻowaha-o-ka-lani. Her great-grandson Kūaliʻi later became *aliʻi nui* of Oʻahu (Wichman 2003: 71) and Kauaʻi.

**Kawelo-mahamaha-iʻa and Ka-pōhina-o-ka-poko** It was Kawelo-mahamaha-iʻa, son of Kama-kapu and Pā-wahine, who made the fateful decision to create once again a child who bore the *niʻaupiʻo* rank.... Kawelo-mahamaha-iʻa and his wife Ka-pōhina-o-ka-poko had six children. Their last two were a boy, Kawelo-maka-lua, and a girl, Ka-ʻāwhi-a-ka-lani, both still young and still virgin.... As soon as it was possible, the youngsters were mated (Wichman 2003: 73).

**Kawelo-peʻe-koa, Kawelo-ʻai-kanaka and Kawelo-lei-makua** When Ka-ʻāwhi-a-ka-lani felt the first pangs of labor she was taken to the sacred enclosure of Holoholokū [birthing stone in Wailua, built by Puna chief for Moʻikehaʻs first child]. Ka-ʻāwhi-a-ka-lani had twins; her first born, Kawelo-peʻe-koa was taken by the priests to be raised in seclusion as the supreme *aliʻi kapu*. The second born was Kawelo-ʻai-kanaka, who was raised to be a ruler. As the children grew, the island prospered under Kawelo-mahamaha-iʻaʻs rule and peace prevailed. Kauaʻi became an island of plenty and its hospitality was renowned throughout the islands. Kawelo-mahamaha-iʻa had two *luakini heiau* constructed in Anahola where human sacrifices were offered. Ruins began to grow that Kawelo-mahamaha-iʻa was part shark and as deaths continued and sacrifices grew, fear turned into anger. One day as Kawelo-mahamaha-iʻa traveled back from Anahola he was stoned to death. Kawelo-maka-lua, father of the twins, was a thoughtful and considerate ruler in contrast to his father, Kawelo-mahamaha-iʻa and his son, Kawelo-ʻai-kanaka, but he didnʻt live long as a ruling chief. Kawelo-ʻai-kanaka or Aikanaka was afforded awesome power because of his *niʻaupiʻo* rank, but his cousin Kawelo-lei-makua (Kawelo) was not impressed. The rivalry between the cousins continued until Kawelo and his younger brother Ka-malama decided to leave Kauaʻi and join relatives on Oʻahu. They settled on land given them at Halemanu where they often crossed the pass [Kolekole] into Waianae to enjoy the ocean. While on Oʻahu Kawelo trained in many arts. One day Kawelo had a vision of his parents under duress. The following day two men from Kauaʻi brought him a message saying that his cousin ʻAi-kanaka had stripped his parents of everything and thrown them from the top of the mountain where they had sought refuge (Wichman 2003: 73-78).

**Kawelo and Kāne-wahine-iki-aoha** Kawelo borrowed a war canoe and twenty-four warriors from Oʻahu ruling chief Ka-ihi-kapu who waived payment and sailed to Kauaʻi with his wife Kāne-wahine-iki-aoha, his brother, his two foster sons, his uncles who had delivered the message, twelve Ulu warriors and his war god Kāne-ika-pua-lena. A great battle ensued and all the champions of ʻAi-kanaka were killed and he fled. Kawelo had avenged his parents and now Kauaʻi belonged him. He divided the island between his wife, brother, and his foster sons. His brother Ka-malama presided over the Kona district and Kawelo the Puna district with the help of one foster son, Ka-ele-hā-o-Puna. Peace came to Kauaʻi again (Wichman 2003: 78-84).

**ʻAi-kanaka and Kawelo** One day Ka-ele-hā-o-Puna decided to visit Mānā. He arrived at Wahiawa in the evening and was invited to spend the night. His host had another guest, none other than ʻAikanaka who had gone into hiding at Kōʻūla valley. ʻAi-kanaka immediately recognized Ka-ele-hā-o-Puna and invited him to spend the night in the company of his daughter Kawelo-ʻēha. Ka-ele-hā-o-Puna fell in love with Kawelo-ʻēha and the two were quickly married. Ka-ele-hā-o-Puna had little to give ʻAi-kanaka for his kindness and eventually gave him information that Kawelo did not learn to defend himself against an attack by stones. Huge cairns of stones were piled on the plains of Wahiawa. Kawelo heard

rumors and asked his brother Ka-malama to investigate. His brother did, an altercation broke out and Ka-malama was killed by Ka-ele-hā-o-Puna stabbing him in his back. Upon hearing this news of his brotherʻs death, Kawelo sent for his other foster son and his wife, but left before they arrived. He met up with Ka-ele-hā-o-Puna and ʻAi-kanaka who stoned him. He recovered three times, but the fourth time he laid stunned, assumed dead. His body was wrapped in banana stalks and taken to Maulili *heiau* in Kōloa to be sacrificed the next morning. The guardians of the *heiau* were Kaweloʻs sister and her husband. During the night they revived him and when ʻAikanaka came to the *heiau* he was killed by Kawelo. However, he spared his foster son Ka-ele-hā-o-Puna. His wife and other foster son arrived with their forces and killed the fleeing warriors of ʻAikanaka. They gathered the body of Ka-malama and demanded the death of Ka-ele-hā-o-Puna. Kawelo still refused until he was shown that his brother had been stabbed in the back. He killed Ka-ele-hā-o-Puna with one blow. The legends are not clear at what happened to Kawelo; one possibility was that he had been thrown off the cliff at Hanapepe by his men who feared his obsession to go after all of ʻAi-kanakaʻs relatives. However, not much time had passed between the death of ʻAi-kanaka and the arrival of Kūaliʻi as *aliʻi nui* of Kauaʻi, breaking the direct line of twelve generations of ruling chiefs from father to son beginning with Ahukini-a-Laʻa (Wichman 2003: 84-86).

### 3.3.3.9 End of Kauaʻi Direct Line Rule

**Kū-aliʻi and Pele-io-holani** In order to get warriors and a canoe, Kawelo had agreed to cede Kauaʻi to Kū-aliʻi in case both he and ʻAi-kanaka should die in the impending war. Kū-aliʻi had a good claim on Kauaʻi as any other *aliʻi* as his grandmother was Kawelo-lau-huki, daughter of Kawelo-mahamaha-iʻa. He had inherited the *kumukānāwai* of his great-grandmother Ka-hā-malu-ʻuhi who had been wife to both Kā-kuhi-hewa and his son Kāne-kapu-a-Kā-kuhi-hewa. As a young man Kū-aliʻi went to Kauaʻi to gather *kaula* wood for weapons and a war club and Kawelo-lei-makua (Kawelo) had been his guide. When Kū-aliʻi, who was now ruling chief of Oʻahu, heard that ʻAi-kanaka had been killed by Kawelo and he himself killed, Kū-aliʻi rushed to Kauaʻi to declare himself the *aliʻi nui*. He installed his son Pele-io-holani as governor. Under Kū-aliʻi Kauaʻi supplied men and arms to the wars that spread over the windward islands as Kū-aliʻi and his son Pele-io-holani established a multi-island kingdom with Kū-aliʻi *aliʻi nui* of Molokaʻi, Lānaʻi, and Maui. Kū-aliʻi lived to a very old age [some say 175] and at his death his oldest son, Ka-piʻo-hoʻokā-lani became ruling chief of Oʻahu and Pele-io-holani of Kauaʻi (Wichman 2003: 89-90).

**Pele-io-holani, Ka-naha-o-kalani and Ka-apuwai** Ka-piʻo-hoʻokā-lani immediately invaded Molokaʻi. Alapaʻi-nui heard this and went to Molokaʻi to avenge his relatives there and killed Ka-piʻo-hoʻokā-lani whose army fled back to Oʻahu where his son Ka-naha-o-ka-lani was now ruling chief. He sent a message to Kauaʻi to ask his uncle Pele-io-holani for help. Pele-io-holani left his daughter Ka-apuwai in charge while he was gone. The impending war on Oʻahu was averted as the cousins Alapaʻi-nui and Pele-io-holani decided to settle peace fully. Pele-io-holani remained on Oʻahu as ruling chief and his daughter remained as governor of Kauaʻi. Ka-apuwai was married to Kaʻume-he-iwā -- they were both descendants of Ka-lani-kukuma, giving their daughter Ka-maka-helei stronger *mana* than her parents. Ka-apuwai died before Pele-io-holani and the government went to her daughter Ka-maka-helei (Wichman 2003: 91-92).

### 3.3.3.10 Oʻahu-Kauaʻi-Maui Aliʻi Nui

**Ka-maka-helei, Kiha, Ka-neoneo and Ka-ʻeo-kū-lani** Ka-maka-helei ruled Kauaʻi with allegiance to her grandfather Pele-io-holani. She married a Kauaʻi chief Kiha and they had three children: two daughters, Lele-māhoa-lani and Ka-lua-i-pihana and a son Keawe. Pele-io-holani sent his grandson Ka-neoneo to Kauaʻi to check on things and Ka-maka-helei put aside Kiha for Ka-neoneo; they had a daughter Ka-puaʻa-moku. Kiha fled to Niʻihau and gathered a small army and raided Kauaʻi. He was

subsequently killed. Pele -io-holani sent for his grandson to help him with problems with Kahekili [II], leaving Ka -maka-helei vulnerable against her uncle K ūmuhana. Seizing this opportunity Kahekili sent his brother Ka'eo -kū-lani to Kaua'i to neutralize the kingdom and woo Ka -maka-helei, who named her son Keawe her heir. It was during this period that Captain Cook landed at Waimea in 1778. Ka -maka-helei presented Cook with gifts of hogs, chickens, bananas, taro, sweet potatoes, sugarcane, yams, fine mats, and tapa cloth. In return Cook presented her with cloth, iron, a sword, knives, bead necklaces and mirrors. Then Ka-maka-helei offered Cook her daughter Lele-māhoa-lani (Wichman 2003: 92-96).

**Ka-maka-helei, Ka-'eo-kū-lani and Ka-umu-ali'i** Ka-maka-helei gave birth to a son, Ka -umu-ali'i in 1780 and shortly after, Kahekili sent for his brother Ka'eo -kū-lani to help with problems on Maui. His son Ka-umu-ali'i was declared heir to Kaua'i with Inamo'o as regent. Kahekili died on O'ahu in 1793 and Maui, Moloka'i and Lana'i came under the rule of Ka'eo -kū-lani, who ruled for a year before becoming homesick for Kaua'i. On his way back he stopped on O'ahu. His nephew, Kalani -kū-pule, thought he was invading O'ahu and a battle ensued. The battle was called off and Ka'eo -kū-lani continued on his journey to Kaua'i. While in Wai'anae he discovered that his counselors were plotting to throw him overboard in mid-channel and return to O'ahu to conquer the island. Ka'eo -kū-lani decided to go into battle with them against Kalani -kū-pule rather than die alone at sea. Ka'eo -kū-lani was killed in 'Aiea in 1794 by rounds of gunfire from two foreign ships hired by Kalani -kū-pule; only the two treasonous counselors escaped back to Kaua'i. The following year Kamehameha I invaded O'ahu and Kalani-kū-pule ended up as a sacrifice to Kamehameha's war god (Wichman 2003: 96-98).

**Ka-umu-ali'i and Keawe** Ka-maka-helei's oldest son Keawe attacked Wailua and captured his younger half-brother Ka-umu-ali'i, who was made a privileged prisoner free to wander Wailua, but couldn't leave without Keawe. Keawe then declared himself *ali'i nui* of Kaua'i. Joining Keawe was Ki'i-kīkī, one of the treasonous counselors and *konohiki* of Wainiha. Ki'i-kīkī's brother Kāne-'ehu was *konohiki* of Hanapēpē. Keawe did well for a year. He collected all the muskets, guns and ammunition on the island as a symbol of power and put his trust in the brothers Ki'i -kīkī and Kāne-'ehu, as no one had returned from O'ahu to warn him of their treachery. They convinced him to take a tour around the island and meet his subjects. In Kapa'a Keawe went to bathe in the famous pool *Kupa-nihi*. While there Ki'i -kīkī got a rifle and shot Keawe. Kāne-'ehu advised his brother to return to Wailua and kill Ka -umu-ali'i, but Ki'i -kīkī refused saying he could control the young chief. Ki'i -kīkī took all the guns and went to Polihale, while Kāne-'ehu went back to Hanapēpē (Wichman 2003: 99).

**Ka-umu-ali'i, Nā-kaikua'ana and Kamehameha** Although now free from his brother Keawe and his regent Inamo'o, Ka -umu-ali'i knew that Ki'i -kīkī and Kāne-'ehu were very dangerous, so he turned to Nā-kaikua'ana, a member of his court and a close friend of Ki'i -kīkī. Ka-umu-ali'i bribed Nā-kaikua'ana with his wives. After some time Nā-kaikua'ana realized that he could also be in danger of losing his life so he swore allegiance to Ka -umu-ali'i. To prove his loyalty he offered a plan to regain the guns. When Ki'i-kīkī was out surfing one day at Ka -ua, Makaweli, Nā-kaikua'ana seized the guns. Ki'i -kīkī hurried to Hanapēpē to his brother; both of them fled to 'Ewa, O'ahu, but Nā-kaikua'ana followed them and killed the brothers. However, Nā-kaikua'ana returned to Kaua'i with disturbing news; Kamehameha, no ruler of the windward islands was preparing to invade Kaua'i. After two failed attempts, Kamehameha sent a message to the young chief to recognize him as sovereign. Ka -umu-ali'i realized that it was a matter of time and he didn't have the resources to beat Kamehameha, so he accepted. However, he refused the many invitations to go to O'ahu and make a public oath fearing the same fate as Ke ōua. After many more invitations an order came that he could not refuse. Ka -umu-ali'i left Kaua'i to meet Kamehameha on O'ahu. Kamehameha turned down the offer of the lands of Kaua'i and invited him to land where he was royally entertained. A few days later, members of Kamehameha's court invited Ka-umu-ali'i to a feast. On the way there he stopped to visit Isaac Davis who warned him that they were plotting to kill him there. Ka -umu-ali'i changed his plans. Before leaving he stopped by to see

Kamehameha and Ka-lani-moku who told Ka-umu-ali'i to "take care of the chief Liholiho who belongs to you and to your cousin Ka-'ahu-manu. Liholiho shall be the heir" (Wichman 2003: 99-104).

**Ka-umu-ali'i, Liholiho and Ka -'ahu-manu** Ka-umu-ali'i could only agree - he went to O'ahu as a ruler and returned to Kaua'i as a vassal, but he saved his kingdom from a bloodbath. Shortly after returning to Kaua'i he received word that Isaac Davis had himself been poisoned. The young chief's world was continuously changing as more and more ships came - whalers, merchants, including sandalwood merchants, and traders. The traders built a trading post at Waimea and a fort shortly after. With his new-found income, Ka-umu-ali'i purchased guns, ammunition and ships with hopes of someday getting out of the stranglehold of Kamehameha. This was never to be; in 1819 Kamehameha died and his son Liholiho and Queen Ka'ahumanu as his regent, took over.

They radically and forever changed the social structure of the Hawaiian society by extinguishing the *kapu* system. The following year Calvin Congregational missionaries arrived in Hawai'i to a society with a structural/religious void, as well as Humehume, oldest son of Ka -umu-ali'i who had been given up as lost. He had been placed in the care of a Yankee captain when he was seven, to be educated. The captain died and Humehume was turned out into the streets. He was later sent to the Congregational school in Cornwall, Connecticut where several other Hawaiian youth were. When the first missionaries left, they took Humehume (George) with them. Humehume and the missionaries were welcomed by Ka -umu-ali'i who gave the missionaries land to build a church and school; Ka-umu-ali'i was later converted.

In 1821 after spending over a month enjoying Kaua'i hospitality, Liholiho invited Ka-umu-ali'i to his brig for dinner. He quietly gave the order to set sail with Ka-umu-ali'i as his prisoner. Later that year he was "compelled" to marry his cousin Ka'ahumanu; she also married his son and heir. From then on the Kaua'i chiefs were kept at her side. In 1824, as Ka -umu-ali'i lay dying, his family were allowed to come to O'ahu, but they were not allowed to see him before he died. He was taken in state to Maui where he was buried next to Ke ōpū-o-lani [also his cousin], sacred queen of Kamehameha. (Wichman 2003:104-110); he was the last king of Kaua'i.

### 3.3.4 'Ōlelo No'eau

'*Ōlelo no'eau* or proverbial/traditional sayings usually had several layers of meanings. They reflected the wisdom, observations, poetry and humor of old Hawai'i. Some of them referenced people, events or places. The following '*ōlelo no'eau* were compiled by Pukui between 1910 and 1960 with both translations and an explanation of their meaning (Williamson, et al. in Pukui, 1983:vii), which are often more *kaona* (hidden or double meaning) than obvious; they refer to places or *ali'i nui* associated with places and people of Hā'ena and other places in the vicinity.

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| ' <i>Ōlelo no'eau</i> : | <i>Kīlīoe wahine i uka.</i>                                                                                                                                                                                                             |
| Translation:            | Kīlīoe, woman of the upland.                                                                                                                                                                                                            |
| Meaning:                | Kīlīoe was a <i>wahine mo'o</i> (lizard woman) famed in chants and songs of the <i>ali'i</i> . She belonged to Kaua'i and it was she who tried to prevent Hi'iaka from taking the body of Lohi'au from a cave at Hā'ena (#1799, p 193). |
| ' <i>Ōlelo no'eau</i> : | <i>'Ō'ili pulelo ke ahi o Kāmaile.</i>                                                                                                                                                                                                  |
| Translation:            | The fire of Kāmaile rises in triumph.                                                                                                                                                                                                   |
| Meaning:                | Said of one who is victorious over obstacles, this is the first line of a chant composed for Kamehameha II. In olden days, firebrands hurled from the cliffs at Hā'ena, Kaua'i, made a spectacular sight (#2392, p 261).                |

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| ‘ <i>Ōlelo no‘eau</i> :<br>Translation:<br>Meaning: | <i>Nui ka hanu o Limahuli i na Lehua o Lulu‘upali.</i><br>Heavily-sighed Limahuli falls over the Lehua blossoms of Lulu‘upali.<br>Said of a person in love who sighs over a sweetheart (#2347, p 255).                                                                                                                                                                                                                                                                                          |
| ‘ <i>Ōlelo no‘eau</i> :<br>Translation:<br>Meaning: | <i>Na Lehua o Lulu‘upali</i><br>The lehua blossoms of Lulu‘upali<br>Famed in songs of Kaua‘i were the Lehua blossoms of Lulu‘upali (#2251, p 246).                                                                                                                                                                                                                                                                                                                                              |
| ‘ <i>Ōlelo no‘eau</i> :<br>Translation:<br>Meaning: | <i>Ka laua‘e ‘ala o Kalalau</i><br>Fragrant laua‘e ferns of Kalalau<br>Makana and Kalalau on Kaua‘i were noted for the growth and fragrance of laua‘e (#1433, p 155).                                                                                                                                                                                                                                                                                                                           |
| ‘ <i>Ōlelo no‘eau</i> :<br>Translation:<br>Meaning: | <i>Ka pali ‘ōahi o Makana</i><br>The firebrand-hurling of the cliff of Makana<br><i>Pāpala</i> or <i>hau</i> wood was cut, thoroughly dried and carried up the hillside to where an <i>imu</i> lay ready to be lighted. When dusk descended, the <i>imu</i> was lighted and the logs placed in it. When the blowing of the wind was just right, the lighted log was hurled into the wind and borne seaward, high over the heads of the spectators, before dropping into the sea (#1532, p 165). |
| ‘ <i>Ōlelo no‘eau</i> :<br>Translation:<br>Meaning: | <i>Ka poli laua‘e o Makana</i><br>Makana, whose bosom is adorned with laua‘e ferns.<br>Famed in songs and chants are the fragrant laua‘e ferns of Makana, Kaua‘i (#1542, p 166).                                                                                                                                                                                                                                                                                                                |
| ‘ <i>Ōlelo no‘eau</i> :<br>Translation:<br>Meaning: | <i>Laua‘e o Makana</i><br>The laua‘e fern of Makana.<br>Famed in songs and chants is the laua‘e that grows everywhere at Makana on Kaua‘i. When crushed it has a scent similar to that of the <i>maile</i> and is often used with the pandanus fruit in making <i>lei</i> (#1949, p 210).                                                                                                                                                                                                       |
| ‘ <i>Ōlelo no‘eau</i> :<br>Translation:<br>Meaning: | <i>Ke ahi tele o Kāmaile</i><br>The soaring fire of Kāmaile<br>This refers to the firebrands hurled off the cliffs at Napali, Kaua‘i (#1669, p 180).                                                                                                                                                                                                                                                                                                                                            |
| ‘ <i>Ōlelo no‘eau</i> :<br>Translation:<br>Meaning: | <i>Na hala o Naue ‘au i ke kai.</i><br>The hala trees of Naue swim out to sea.<br>The hala trees of Naue, Kaua‘i seem to reach out to sea. This expression is used in songs and chants (#1212, p 242).                                                                                                                                                                                                                                                                                          |
| ‘ <i>Ōlelo no‘eau</i> :<br>Translation:<br>Meaning: | <i>Ka ua Makako‘i o Halele‘a</i><br>The adz-edged rain of Halele‘a.<br>A rain so cold that it feels like the sharp edge of an adz on the skin. Refers to Halele‘a, Kaua‘i (#1586, p 172).                                                                                                                                                                                                                                                                                                       |
| ‘ <i>Ōlelo no‘eau</i> :<br>Translation:<br>Meaning: | <i>Kaua‘i a Manokalanipo</i><br>Kaua‘i of Manokalanipo<br>Manokalanipo was a chief of Kaua‘i in ancient times (#1556, p 168).                                                                                                                                                                                                                                                                                                                                                                   |
| ‘ <i>Ōlelo no‘eau</i> :<br>Translation:             | <i>Ka moku kā‘ili lā o Manokalanipo</i><br>The sun-snatching island of Manokalanipo                                                                                                                                                                                                                                                                                                                                                                                                             |

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| Meaning:                                            | Kaua‘i, the northwestern most island of the group, beyond which the sun vanishes at dusk. Manokalanipo was an ancient ruler of Kaua‘i (#1488, p 161).                                                                                                                                                 |
| ‘ <i>Ōlelo no‘eau</i> :<br>Translation:<br>Meaning: | <i>‘Akāhi a komo ke anu ia ‘u, ua nahā ka hale e malu ai.</i><br>Cold now penetrates me, for the house that shelters is broken.<br>Fear enters when protection is gone. Said by ‘Aikanaka of Kaua‘i when two of his war leaders were destroyed by Kawelo (#90, p 12).                                 |
| ‘ <i>Ōlelo no‘eau</i> :<br>Translation:<br>Meaning: | <i>Ka ipo laua‘e o Makana.</i><br>The beloved laua‘e of Makana. (Refers to the famed variety of fern used in lei for its fragrance and grew near Pu‘u Makana)<br>Refers to a loved one (Pukui and Elbert 1986:194).                                                                                   |
| ‘ <i>Ōlelo no‘eau</i> :<br>Translation:<br>Meaning: | <i>Ka pali kā‘ili wahine o Kē‘ē.</i><br>The wife-snatching cliff of Kē‘ē.<br>Alludes to a tale in which the men of Kē‘ē fell in love with the women ( <i>wahine</i> ) of Nu‘alolo, went to that valley and scaled the cliff to reach it, threatened the men and took the women back (Pukui 1983:165). |
| ‘ <i>Ōlelo no‘eau</i> :<br>Translation:<br>Meaning: | <i>Kupopou ana i ka pali o Kē‘ē.</i><br>Going downhill at the cliff of Kē‘ē.<br>Said of a non-cooperative person and played on the place name's resemblance to <i>kē</i> (to object) and <i>‘ē</i> (elsewhere) (Pukui 1983:207).                                                                      |
| ‘ <i>Ōlelo no‘eau</i> :<br>Translation:<br>Meaning: | <i>Aia a Kē‘ē.</i><br>There at Kē‘ē.<br>Refers to the distance between Kē‘ē and other locales; figuratively it means something hardly worth looking for, it is so far away (Pukui 1976:105).                                                                                                          |

### 3.3.5 Place and Object Names

Hawaiians of old generally named everything; from winds and mountains, to rocks, canoes, taro patches, fishing stations, and “the tiniest spots where miraculous or interesting events are believed to have taken place” (Elbert in Pukui et al., 1974: x). They all represented a story, some known only locally, while others became legendary. The list below (Table 2) represents place names with an association to project lands in Hā‘ena and vicinity.

**Table 2.** Place and object names in Hā‘ena and their *mo‘olelo* and significance

|                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
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| <b>Hā‘ena</b>      | Tucked against the Nāpali cliffs is the ahupua‘a of Hā‘ena; “red hot” – possible reference to strong <i>kapu</i> that surrounded this place (Wichman 1998:125). Land section, village, point. <i>A Lohi‘au-ipo i Hā‘ena lā, ‘ena‘ena ke aloha ke hiki mai</i> ; and <i>Lohi‘au-ipo</i> at Red-hot, hot the love that comes (Pukui et al. 1974:34). Hā‘ena was always ruled by a chiefess who was independent of the <i>ali‘i nui</i> and who ruled for life. One high chiefess was Kekela who was alive during the Mahele and directed the people to file their land claims. Hā‘ena was also noted for the quality of dog grown here as food for the chiefesses who were not permitted to eat pork (Wichman 1998:126). |
| <b>Hala-aniani</b> | “Clear-pandanus” – the lake of fresh water within the upper wet cave of Hā‘ena; it was set aside for the <i>ali‘i</i> and commoners could not bathe in it. The waters were thought to be able to restore an ailing person back to health. The chiefs either drank from a calabash filled with the water or swam in the underground lake (Wichman 1998:129). Visitors in                                                                                                                                                                                                                                                                                                                                                |

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|                            | 1849 reported legends of <i>mo`owahine</i> and a white substance on the surface there, although it did not keep them from taking a canoe inside to explore (Alexander 1991:126-127).                                                                                                                                                                                                                                                                               |
| <b>Halele`a</b>            | “House of happiness” – cited in chants as the most beautiful place in all the islands. Moku or district on Kaua`i that includes Kalihiwai, Kalihikai, Hanalei, Wai`oli, Waipā, Waikoko, Lumaha`i, Wainiha and Hā`ena; the extent includes Wai`ale`ale to the sea, bordered by Nāpali on the west and Puna (the Makaleha Mtns) and Ko`olau on the east (Wichman 1998:105).                                                                                          |
| <b>ʻĪlio Point</b>         | “Dog” Point – may refer to the Polynesian-introduced canine or the seal ( <i>ʻĪhoholoikauaua</i> ) - “dog running in the rough seas” who have been known to beach themselves there (Major and Carpenter 2001:9).                                                                                                                                                                                                                                                   |
| <b>Ka`aulama-poko</b>      | A fishing hole near shore “light from a short-burning torch” because it can be fished at night using a <i>kukui</i> nut torch, which never burned for very long (Wichman 1998:125).                                                                                                                                                                                                                                                                                |
| <b>Kai-kua`au-o-Hā`ena</b> | “Lagoon sea of Hā`ena” – the only lagoon on Kaua`i – protects Makua Bay (Wichman 1998:125).                                                                                                                                                                                                                                                                                                                                                                        |
| <b>Ka-lua-`āweoweo</b>     | “ <i>Āweoweo</i> hole” is the fishing hole at the farthest point from land; the <i>ʻāweoweo</i> gather in this grotto – this fish was eaten raw, cooked or dried. A large school of young <i>ʻāweoweo</i> ( <i>alalauā</i> ) swimming into the bay was an omen of the death of a high chief (Wichman 1998:125).                                                                                                                                                    |
| <b>Ka`iwi-ku`i</b>         | A Hawaiian man and his wife used to steal from the fields of the Menehune farmers in Mānoa Valley; he was chased up the ridge toward Pōhaku-o-Kāne where he put up a fight, but the Menehune used their slingshots and pelted him with stones. Some were so large that the bones of his skull were shattered...in this form he was turned to stone – the ridge where he lies was named Ka`iwi -ku`i or “hammered bone” (Wichman 1998:126-127).                     |
| <b>Kānehunamoku</b>        | “Kāne’s hidden island” son of two cloud gods Manoiku(kiu)lani (“Male head of the clouds in the blue sky”) and Hihikalani (“Female head of the rolling clouds”) who lives on a floating island that is “sacred and shall not be seen in the light of day. It shall be seen only at certain kapu periods in July and August When it hovers near Hā`ena, Kaua`i, then he shall be near on the floating island of Kaonohiula” (Beckwith 1970:71).                      |
| <b>Kaonohiula</b>          | Floating Island that hovers near Hā`ena, Kaua`i in <i>kapu</i> periods of July and August (Beckwith 1970:71). Beckwith interprets references to invisible or floating islands and clouds as metaphors for the seclusion of high-ranking <i>ali`i</i> children raised under strict <i>kapu</i> and thus it may be inferred that Hā`ena was considered a sacred place...where <i>ali`i</i> children were raised and trained (Major and Carpenter 2001:6).            |
| <b>Ke-ahu-a-Laka</b>       | “Inspiration of Laka” – Hā`ena was famous for its schools where students came to study the sacred forms of <i>hula</i> or to learn the history and genealogies of the chiefs. Ke-ahu-o-Laka [ <i>heiau</i> ] was the school of <i>hula</i> , chanting and composing religious chants as well as songs. The student remained for seven years. The <i>heiau</i> and the student were dedicated to Laka, goddess of the forest and dance (Wichman 1998:132).          |
| <b>Ka-ulu-o-Pā`oa</b>      | “Inspiration of Pā`oa” – This <i>heiau</i> was the school for historians and genealogists. It was said that during the final examination a student listened to a genealogical list that lasted several hours and had to repeat it without error. Pā`oa was the <i>kahuna nui</i> and close friend of Lohi`au at the time of Pele’s arrival. He swore to avenge Lohi`au’s death and confronted Pele at her home on Hawai`i. Pele, assuming her most beautiful form, |

beguiled Pā`oa into living with her for three days. He drowned himself in shame for not having kept his oath (Wichman 1998:132).

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| <b>Ke-a`a-lewalewa</b> | “Dangling root” is a peak on the east side of Mānoa Valley; <i>a`a lewalewa</i> are aerial roots of the <i>ʻōhi`a lehua</i> tree of the forests or the pandanus tree of the lowlands. Kea`alewalewa was a Wainiha man who constantly stole food from the Menehune farmers of Mānoa Valley. They got so angry after a time that they chased after him and turned him into stone (Wichman 1998:126).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <b>Ke`ē</b>            | “Avoidance” – beach and cliff west of Hā`ena, Kaua`i (Pukui 1974:105). The beach and lagoon at the beginning of Nāpali District is Ke`ē, the site of the legend of Pele, Lohi`au and Hi`iaka. Pele came to Ke`ē when she was first looking for a home and safety from her sister Nāmakaokīaha`i. Once she found her home on Hawai`i Island she was lured back by Lohi`au’s drumming. She returned and found him and fell in love with him, but each time she dug a cave to make a home for them, she met with water. She left Kaua`i as she was in her spiritual body, promising Lohi`au she would return for him. After a long wait, Lohi`au hung himself in despair. His body was placed in a cave above Ke`ē and was guarded by two <i>mo`o</i> sisters Kilioe and Aka. When Hi`iaka and Wahine-ōma`o arrived as envoys from Pele they found Lohi`au dead. Hi`iaka killed the two guardians and with herbs and prayers restored Lohi`au’s life then took him to Pele, who in the meantime had destroyed Hi`iaka’s <i>Lehua</i> forest. The angry Hi`iaka embraced Lohi`au so Pele covered him with lava. Hi`iaka dug a tunnel from the sea to her sister’s fire pit and almost succeeded in killing Pele, but their brothers persuaded her not to. Hi`iaka returned to Kaua`i; her brothers restored Lohi`au’s life once more and sent him after Hi`iaka. They married and spent the rest of their life together at Ke`ē (Wichman 1998:130). Ke`ē probably also refers to the <i>kapu</i> of the place in light of Beckwith’s interpretation of legends as reference to seclusion of <i>ali`i</i> (Major and Carpenter 2001:9). `Īli of Hā`ena (Waihona 2010) |
| <b>Kilioe</b>          | The body of Kilioe became a furrowed rock beside the sea that is still used as a birth rock, a place for safeguarding the umbilical cord of newborns. In doing so, the child is placed under the protection of Kilioe. The ancients believed that the fate of the umbilical cord foretold the child’s life (Wichman 1998:130). When Hi`iaka went to find Lohi`au for Pele, she had to fight two supernatural lizard women (Kilioe and Aka according to Wichman 1998; Kilioa and Kalaimanu according to Kalākaua 1990; Kilioekapua and Kalanamainu`u according to Beckwith 1970). Kilioe was turned into a <i>pōhaku</i> that was used as a <i>piko</i> stone where the umbilical cord of a newborn infant was placed to be under the protection of the <i>mo`owahine</i> (Wichman 1998:130).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>Koa-manō</b>        | On the way to Kaua`i, Makani-kau, chief of the winds, god of love, was crossing the channel between O`ahu and Kaua`i in his wind form and saw some people being chased by a big shark. He landed on the canoe and told the frightened people he would play with the shark and they needn’t worry. He jumped into the sea and the shark opened its mouth to seize him but he climbed onto it and caught its fins and forced it to flee through the water into the rocks and became the great shark stone Koa-manō “shark warrior.” Kahuna Pa`ihulu would go to this rock and offer prayers and food to a shark. The shark would then carry him to Kalalau and back again (Wichman 1998:125-126).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>Limahuli</b>        | “Turning hand” – a deep valley in Hā`ena (Wichman 1998:125; Pukui et al. 1974:133).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>Makana</b>          | “Gift” – a triangular peak, prominent and unmistakable. Firebrands ( <i>ʻōahi</i> ) were thrown from the top of this peak. On the side of Makana is a storied stone, a reminder of a tale of friendship. Nou was a boy who saved the life of a Menehune who had fallen; in return the Menehune promised Nou that he would become a champion firebrand thrower. The other firebrand throwers became jealous of Nou and his prizes and killed him. The Menehune put Nou’s body into a cave and sat at the entrance and allowed himself to turn into stone                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |

to guard the bones of his friend (Wichman 1998:129). ‘*Ō`ahi* were thrown from Makana up into early historic times: during Queen Emma’s 1860 visit to Kaua’i; when Eric Knudsen staged a display in the early 1900s; and on Kamehameha Day in 1925(Knudsen 1946; Barrere and Kelly 1978In Major and Carpenter 2001:8).

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| <b>Makua</b>       | “Ancestor” – a large lagoon and bay in the <i>ahupua`a</i> of Hā`ena (Wichman 1998:125).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>Manini-holo</b> | “Traveling reef surgeon fish” – large dry cave on Ka`iwiku`i Ridge; Manini -holo was also the name of the head fisherman at the time the Menehune were leaving the island to return to their homelands. He brought his workers to gather food from the reef and bay of Hā`ena; during the night all the food disappeared, but Manini-holo saw the <i>e`epa</i> in the fissures of the pali and realized they were the thieves so they killed them. The Menehune gathered in the mountains, crossed Nāpali coming to the plain in front of Manini-holo where they boarded their canoes in Makua Bay. They sailed away and never returned (Wichman 1998:127-128). Historic visitors were told that a certain side room of the cave was used as a hiding place by <i>ali`i</i> during times of war (Alexander 1991:126) and construed that a stone wall at the rear of the cave was meant to block off a burial area (Lydgate 1991:139) ( <u>In</u> Major and Carpenter 2001:9).                                                                                |
| <b>Mānoa</b>       | “Thick” – a shallow valley in Hā`ena (Wichman 1998:125). Stream (Pukui et al. 1974:146). ‘Ili of Hā`ena (Waihona 2010)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>Naenae</b>      | “Congested” – wife of Hawaiian man who stole from Menehune farmers; they chased her into Limahuli Valley. She stopped to rest near the waterfall where the Menehune caught her and killed her. She was turned to stone and is called Naenae (Wichman 1998:126).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>Nā-hiki</b>     | “Many arrivals” – the bay beside the two <i>heiau</i> . At the end of their training students at the <i>hula</i> school had to swim in the lagoon, go out the channel into the ocean and come ashore at Nāhiki where even on calm days, the waves surge fiercely in and out. In so doing they passed the shark that was fed by the chiefess. Those students who had broken any rules were devoured by it. Those who were without fault came ashore safely (Wichman 1998:132).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>Nā-Piliwale</b> | “Clinging ones” or “the emaciated ones” – a stone formation on the Mānoa ridge looks like two running figures with skirts flying up behind them. It was the custom of the four Piliwale sisters to visit a chief’s court and remain until all the food in the area had been consumed. There fore their appearance heralded a forthcoming famine. They had extraordinary appetites; their favorite foods were freshwater shrimp and snails and the fiddlehead fern ( <i>hō`i`o</i> ). Two sisters came to Hā`ena and because they were <i>kupua</i> and could not tolerate the sun, Lohi`au and his sister Kahua nui built them a shelter in Maniniholo Cave and one on the ridge so they could enjoy the view. They were fed their favorite foods at night and entertained by every <i>hula</i> dancer at the school at Ke`e. One night they forgot the time and raced down the ridge to the cave but the sun’s rays caught them and turned them into stone; they remain there as a warning to the other two sisters not to visit Kaua`i (Wichman 1998:127). |
| <b>‘O`o`a`a</b>    | “Fast-rooted one” – a boulder formerly on Hauwā reef that now lies in the depths. ‘ <i>Ō`i`ā`ā</i> came to Kaua`i with her two brothers in the form of rocks; after their long journey she rested on the sea and became a guardian of the reef. She was moved from the reef in the 1946 tsunami where she is still waiting for her brothers offshore. She can be seen by snorkelers (Wichman 1998:128).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>Pā-ka-moi</b>   | “Enclosure of the threadfin fish” – a boulder near the base of the upper wet cave (Waiakanaloa); also connected to the story of Pele and Lohi`au. When Hi`iaka and her companion Wahine`ōma`o reached Hā`ena they asked Pakamoi a fisherman to find them a place to sleep for the night. He mistook the tenor of their request and after watching                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |

them loosen their clothes in preparation for sleeping, he attempted to fulfill his desires on Hi`iaka who was saved by Pā`ū-o-Pala`e, a friend and servant, who changed places with her. Pakamoi was turned to stone where he lay (Wichman 1998:129).

|                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|-------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Papaloa</b>          | “Long reef” – (Major and Carpenter 2001:9)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <b>Pōhaku-o-Kāne</b>    | “Stone of Kāne” – brother of ‘ <i>Ō`ō`ā`ā</i> who tried to climb to the peak above but because he was round and the cliff was sheer, he would roll back to the bottom where he would start over. The god Kāne took pity on him reached down and placed the rock on the peak. It is said that when Pōhakuokāne decides to leave his perch, Kāne will raise the waters of the ocean to his level (Wichman 1998:128).                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>Pōhaku-loa</b>       | “Long-rock” – the other brother of ‘ <i>Ō`ō`ā`ā</i> who rested on the top of the sand dunes (Wichman 1998:128).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>Wai-a-Kanaloa</b>    | “Water made by Kanaloa” – Kanaloa was one of the four major Hawaiian gods and brother of Kāne. They were known for digging sources of drinking water as they toured the various islands. The upper wet cave (Wai-a-Kanaloa) in Hā`ena was dug by Kanaloa. Other legends say it was Pele who struck the cliff here with her staff <i>Pā`oa</i> when she was searching for a home, but was met by water instead (Wichman 1998:129).                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>Wai-a-ka-Pa-la`e</b> | “Water of the lace fern” – the lower wet cave in Hā`ena. In the olden times, the water in the cave had a brownish hue, which was said to be the hair of a beautiful <i>mo`o</i> maiden who could usually be seen sitting near the entrance of the cave combing her hair. A chief from Wainiha fell in love with her and the two disappeared for several months. Then the mermaid reappeared with a baby at her breast. When asked where the chief was she drew her finger across her neck to indicate that he was dead. In revenge, his friends tried to kill the <i>mo`o</i> but she dove into the water and escaped. Her long hair spread out in the water giving the pool its color. As she grew older the brown tint turned gray. For this reason the cave was known either as Wai-a-kapa-lae - “water of terror” or Wai-a-kapa-la`e – “water of shiny tapa” (Wichman 1998:129-130). |

3.3.6 Winds

3.3.6.1 Winds of Halele`a

Halele`a is cooled by *Kaiālulu*, a pleasant and gentle trade wind; and sometimes the forceful Ko`olau trade wind *Hao-Ko`olau-o-Halele`a*.

3.3.6.2 Winds of Hā`ena (Poepoe 1911 In Pacific Worlds).

*He Kalahale ka makani o Hā`ena*  
*He Limahuli ka manaki o Hā`ena*  
*He Kolokini ka makani he`enalu o Kahuanui a Lohi`auipo, i Hā`ena*  
*He Unukupua ka makani lawe leo a Lohi`au-ipo i Hā`ena*  
*He Kanaenae ka makani kaili aloha a Lohi`au i Hā`ena*  
*He Kilauae ka makani kaili aloha a Lohi`au i Hā`ena*  
*He Leoikua ka makani lawe aloha a Lohi`au-ipo i Hā`ena*  
*He Ipo noenoe lauwa`e ka makani ki`i wahine a Lohi`au ipo i Hā`ena*  
*Aloha wa`e o Lohi`au-ipo i Hā`ena e--!"*

Wichman (In Pacific Worlds) expands on the winds of Hā`ena below:

**Kalahale** refers to a house gable, but was also name of a chiefess of Iā`ena.





### 3.4.0 Historic References

By and large “Historic References” pertain to notable historic events, overviews of important place names and land tenure within the project area and districts. One of the most significant practices in the history of the Hawaiian people was their concept of stewardship of the land. However, over time, these practices were replaced by more western methods of land tenure and use, as the lands of Kāuaʻi went from the domain of the *aliʻi nui* to the domain of the monarchy to various individuals and corporate entities.

#### 3.4.1 History of Land Divisions

It was during the time of Kūkona (ca. 1400s), father of Manōka-lani-pō (ca. 1405 -1455AD) that the division of lands is said to have taken place (Wichman 2003:53 -54). The islands were portioned into districts, sub-districts, and smaller divisions, each ruled over by an agent appointed by the landlord of the next larger division, and the whole under control of the ruling chief over the whole island or whatever part of it was his to govern (Beckwith 1970:383). Each island was divided into *moku* or districts that were controlled by an *aliʻi ʻai moku*. Within each of the *moku* on each island, the land was further divided into *ahupuaʻa* and controlled by land managers or *konohiki*. The boundaries of the *ahupuaʻa* were delineated by natural features such as shoreline, ridges, streams and peaks, usually from the mountain to the sea, and ranged in size from less than ten acres to 180,000 acres (Moffat and Kirkpatrick 1995:24 -29, see also Chinen 1958:3). But sometimes “only the line of growth of a certain tree or grass marked a boundary; and sometimes only a stone determined the corner of a division” (Chinen 1958:1). The ideal *ahupuaʻa*, from mountain to the sea, enabled a chief and his followers to obtain fish and seaweed at the seashore, taro, sweet potatoes and bananas from the lowlands, and forest products from the mountains. However, this more often than not, was not the case (Chinen 1958:3).

Each *ahupuaʻa* was often divided and subdivided several times over (i.e., *ʻili*, *kuleana*, *moʻo*, *pauka*, *koele*, *kiha pai*), answerable to *aliʻi* where the lesser division was located. However the *ili kupono* or the *ili ku* was “completely independent of the *ahupuaʻa* in which it was situated...tributes were paid directly to the king himself” (Chinen 1958:4). Some *ahupuaʻa* did not have any *ʻili*, while others had as many as forty, “each with its own name and carefully defined boundaries” (Chinen 1958: 3). *Moʻo* or *moʻo ʻāina* were the next size of land division; these were set for cultivation purposes only. *Moʻo* were subdivided into *pauka* which were also for cultivation only. Patches of land cultivated by tenants for their chiefs were called *koele* or *poʻalima* because they were worked only on Fridays. A *kihapai* was cultivated only for the tenant and his family. Rights to lands were mutable or revocable; a ruling chief or any “distributor” of lands could change these rights if displeased, or as favors –usually after a victorious battle, and after the death of the *aliʻi nui* (Chinen 1958:5).

During the period between 1839 and 1855, several legislative acts transformed the centuries-old Hawaiian traditions of *aliʻi nui* land stewardship to the western practice of private land ownership. In the first stage King Kamehameha III (Kauikēaouli) divided up his lands among the highest ranking *aliʻi* (chiefs), *konohiki* (land managers), and favored *haole* (foreigners) (Chinen 1958:7 -14; Moffat and Fitzpatrick, 1995:11, 17). This historic land transformation process was an evolution of concepts brought about by fear, growing concerns of takeovers, and western influence regarding land possession. Kamehameha III, in his mid-thirties, was persuaded by his *kuhina nui* and other advisors to take a course that would assure personal rights to land.

In 1846 he appointed a Board of Commissioners ‘To Quiet Land Titles’ - commonly known as the Land Commission, to “confirm or reject all claims to land arising previously to the 10<sup>th</sup> day of December, AD 1845.” Notices were frequently posted in *The Polynesian* (Moffat and Kirkpatrick, 1995). Kamehameha III formalized the division of lands among himself (one-third) and 245 of the highest-ranking *aliʻi* and *konohiki* (one-third) between January 27 to March 7, 1848. He acknowledged the rights of these

individuals to various land divisions in what came to be known as the *Buke Mahele* or ‘sharing book.’ These lands, however, were all “subject to the rights of native tenants” or *kuleana* lands, with reversionary rights to *ahupuaʻa* and *ili kupono* claimants if the tenant died without heirs (Chinen 1958: 29-30). The *Great Mahele* marked the end of the feudal system in the kingdom (Chinen 1958:15).

However, the legislature did not acknowledge this act until June 7, 1848 (Chinen 1958:16; Moffat and Kirkpatrick, 1995:48 -49). “The mahele did not actually convey title to the various *aliʻi* and *konohiki*; it essentially gave them the right to claim the lands assigned to them –these lands became known as the *konohiki* lands. The *konohiki* chiefs were required to present formal claims to the Land Commission and pay a commutation fee, which could be accomplished by surrendering a portion of their land to the government.” The government could later sell these lands to the public. Upon payment of the commutation fee, the Minister of Interior issued a Royal Patent to the chief or *konohiki*.

The last one-third was originally designated to the *maka ʻāinana*, but not acted on –instead it was set aside to the government, “subject always to the rights of the tenants” (Moffat and Kirkpatrick, 1995:41 -43; see also Chinen 1958:15 -21). *ʻIli kupono* were the only *ʻili* (parcel) recognized in this process, all the *ʻili* and lesser divisions were absorbed into the *ahupuaʻa* claim (Chinen 1958:20).

In 1892 the legislature authorized the Minister of Interior to issue Royal Patents to all *konohiki* or to their heirs or assignees where the *konohiki* had failed to receive awards for their lands from the Land Commission. The Act further stipulated “that these Royal Patents were to be issued on surveys approved by the Surveyor General of the kingdom” (Chinen 1958:24; Moffat and Fitzpatrick 1995:41 -43).

#### 3.4.2 Hāʻena Ahupuaʻa

The *ahupuaʻa* of Hāʻena is located in the *moku* of Haleleʻa. Its valleys are not very deep and the *ahupuaʻa* is relatively small (1500 acres) compared to adjacent *ahupuaʻa* of Hanakāpāʻai on the west and Wainiha on the east. However, Hāʻena does include extensive, well-watered agricultural areas along two main stream valleys of Mānoa and Limahuli, as well as flat land along the coast making it suitable for both agriculture and habitation. The broad sand beach with its protecting reef would have provided a useful canoe landing and nearshore marine resources. Hāʻena is the westernmost *ahupuaʻa* in the district of Haleleʻa with easy access to the bountiful deep-sea fishing grounds of neighboring Nā Pali district (Major and Carpenter 2001:13).

Griffin (1984:6-7) concluded that the occupation of Hāʻena was divided into four phases, each with particular characteristics of cultural adaptation that focused on economy or sources of energy, residence or loci of domicile and task performance. His four phases are (1) Early Occupation, (2) Mid-millennium Stability, (3) Historic Transition and (4) Twentieth Century Adjustment.

The Early Occupation Phase is poorly known. Along the front of Keʻe beach two profiles have revealed deep strata as yet undated, yet suggestive of transient beach use. The data suggest a generalized strand looping adaptation, probably by parties of collectors -fisher people camped a few days at a time. No evidence of agriculture was found, nor is there any reason to argue its necessity. The origins of these hypothetical transients is unknown. Only by archaeological explorations in locations and environments favoring early and simple subsistence systems may we learn of centers of sedentism and population concentration.

The Mid-millennium Occupation Phase is well documented as to presence, duration, concentration, and general adaptation. This phase extends from the 1000s into the 1700s, and marks a shift of increased dependence on taro production and less on collection of marine fauna. The latter never was abandoned, yet as the human population rose, providence of marine resources seems to have diminished somewhat. We suggest that by the time of European arrival, most of the taro

pondfields were completed, the *heiau* built, and the importance of Hā'ena as a social, political, and economic center established.

The Historic Transition Phase, lasting from about A.D. 1800 to 1900, is exciting in what we do know, given excavation results and archival data, yet remains poorly developed. The land award testimonies are suggestive, but no excavations have sought the claimants' houses and fields, nor have the materials likely still hidden in written records and photographs yet been perused. Major anthropological questions remain: were Ha'ena and its people marginal to the colonial activities going on throughout the kingdom, or did Ha'ena play a role as a reservoir of economic and population strength linking Na Pali to Hanalei, Wailua, and other foci of political activity? When and how did Ha'ena lose population? How did the Hawaiian people of the area adapt to changing conditions and cultural systems?

The Twentieth Century Phase cannot be said to be without interest. To an anthropologist the variety of adaptive changes and new people utilizing Ha'ena make the phase one of the most interesting. Hā'ena between 1900 and 1950 saw the end of a land-and-sea focused adaptation, and the withdrawal of the last of the Hawaiian people. Only transient campers, again collectors and fishermen, used the beaches. The Taylor Camp "hippy" occupation was brief and, so far, a bit variant, but is heuristically useful in understanding the range of variations in adaptation to northern Kauai and the nature of American "counter culture" efforts to build alternative life styles. In fact, as we move into the late twentieth century, we are seeing new, diversified uses of Ha'ena. A new form of permanent residence is appearing, in the guise of expensive beach homes of our culture's socio-economic elite. At the same time continued transient occupation by both mobile (vacationing) elite and "squatting" lower class members of society is present. Most distant on the horizon, but still there, are the Hawaiian people, looking toward regaining the land once theirs, for farming, fishing, and residence.

The *mo'olelo* depict Hā'ena as a special place for a very significant chiefly class who interacted with deities such as Pele and her sister Hi'iaka. It was a sacred place where in traditional times Lohiau, lover of Pele and Hi'iaka, was once a chief of Hā'ena. He had a brother Limaloa and a sister Kahuanui who was the actual *ali'i nui* of Hā'ena, which was always ruled by female chiefs who ruled for life. The chiefess was also not under the control or whim of the paramount chief or *mō'i* of Kaua'i, but rather independent (Wichman 1998:126). Lohiau and his sisters paid tribute to Laka and perpetuated the hula in a *halau* (school) whose significance is still honored to this day by *kumu hula* (teachers) and their *haumana* (students). Hā'ena as a chiefly residence continued into the nineteenth century with the Mahele Award [LCA 10613] of Hā'ena lands awarded to *ali'i* Abner Kuho'oheihēpahu Pākī, husband of L. Konia, granddaughter of Kamehameha I and father of Princess Bernice Pauahi Bishop.

| <i>Ahupua'a</i> | <i>Number of Claims</i> | <i>Number of Awards</i> | <i>Ali'i Claimant</i> |
|-----------------|-------------------------|-------------------------|-----------------------|
| Hā'ena          | 34                      | 25                      | A. Pākī               |

Accompanying these chiefs and chiefesses were retainers and favored tenants who provided for the immediate needs of the chief's household.... Hā'ena has limited *kula* lands (flat, open fields/pastures) being that the cliffs drop so sheerly to the shore. Premium *kula* lands would be dedicated to those uses which sustain life—*auwai*, taro cultivation and residence (Silva 1995:18).

As an *ahupua'a* chief Pākī was entitled to select a *kapu* fish and produce of the land (generally taro); Pākī claimed that the *he'e* was the *kapu* fish of Hā'ena and had at least 12 *koele* that were cultivated for him (Silva 1995:25). Abner Pākī informs that *he'e* (octopus) is the *kapu* (restricted) fish [sic] of Hā'ena (Kingdom Konohiki Records 1852; 1854; 1857 In Maly 2003:19).

3.4.3 Konohiki of Hā'ena

*Ahupua'a ali'i* were allowed to have a *konohiki* or land manager and about 1837, Esetera Kekela was appointed as Hā'ena *konohiki* making her one of very few women who held this position; she too later claimed Mahele lands [5 parcels] in Hā'ena LCA #5477 [Ili of Kalole]. Kekela was the last known *konohiki* of Hā'ena.

3.4.3.1 Mo'olelo of Kekela, Konohiki of Hā'ena

Kekela'akalaniwahikapa'a (Kekela) had married Kamehameha I half-brother Kalaimamahu in 1804; five years later in 1809 she is widowed and in 1810 she is given [by Kamehameha I] to Kamaholelani [nephew of Kaumuali'i, king of Kaua'i] and returns with him to Kaua'i to live. Kamaholelani and Kekela settle at Lumahai, an *ahupua'a* not far from Hā'ena, which Kaumuali'i had given to both of them (Kamakau 1992:195; In Silva 1995:28-29).

Kamaholelani is sometimes referred as Kaumuali'i's cousin and his son. It was said that like Kaumuali'i and very few other chiefs of this time (early 1800s), Kamaholelani was adept at speaking and reading the English language (Kamakau 1992:244-245). He apparently was a court favorite and was well-respected among his peers. In 1820 Kamaholelani dies. Kekela remains at Lumahai until 1824. In that year, Kaumuali'i passes away, civil strife results and control of the Kaua'i dominions is given to O'ahu and Maui chiefs. Kekela returns to O'ahu and either forfeits Lumahai or is disposed of it. Further, not only is Kekela well-spoken for in the courts of Kamehameha and Ka'umuali'i, she is also the sister of Abner Pākī's own mother. Hence, her close association to her Hā'ena claim, Pākī's claim to the entire *ahupua'a* and her management of Pākī's Hā'ena holdings (Silva 1995:29).

Land records reveal that Kekela had arrived there [Hā'ena] in 1839 and had probably become settled with her entourage and tenants by 1847 [see missionary census below]. Kekela's obituary indicates that she was born about 1778, making her 69 in 1847 (Silva 1995:22).

3.4.3.2 Konohiki Privileges

Konohiki E. Kekela claimed that the *he'e* (octopus) was her *kapu* (restricted) fish of Hā'ena; and the *lehua* the special plant of Hā'ena.

| Interior Department Doc No. 11 (1850) (In Maly 2003:20): |                 |                     |                       |
|----------------------------------------------------------|-----------------|---------------------|-----------------------|
| <i>Aina</i>                                              | <i>Konohiki</i> | <i>'Ia Ho'omalu</i> | <i>La'au Ho'omalu</i> |
| <i>Hā'ena</i>                                            | <i>Kekela</i>   | <i>He'e</i>         | <i>Lehua</i>          |

Kekela also listed among the usual *konohiki* responsibilities, the management of 12 *ko'ele* whose names she gave as: Pākī, Kaho'okumaka, O'ahu, Kapala'a, Akole, Kaluahine, Ka'ili'ili, Pe'ekaua'i, Kalaole, Ko'i, Kanaele and Keokea. Soon after settling in Hā'ena, testimony reported that she made three *loko* or ponds within the *ahupua'a*. Native testimony does not reveal the names, locations, sites or nature of these ponds or whether these ponds are the *loko kalo* which she claimed in her application (see LCA #7949) (Silva 1995:26).

Kekela died in Honolulu in 1865 without issue. Her obituary read:

Death of an ancient woman. On Thursday, May 15, died at Honolulu, KEKELA, an aged Hawaiian female, believed to be eighty-seven years old. She was a nurse or *kahu* of the late high chief Pākī, and through a long life of upright conduct and fidelity, she has enjoyed the respect and esteem of the chiefs and all who knew her (Hawaiian Gazette June 17, 1865 p.5 c.4; In Silva 1995:29-30).

### 3.4.4 Mahele Awards in Hā'ena State Park Lands

With the exception of *kuleana* lands awarded to individual tenants, Abner Pākī was awarded the entire *ahupua'a* of Hā'ena in name only, which means that the land was not surveyed at the time. As *ali'i*, he held ultimate control over the resources within the *ahupua'a*, including water sources and products from the mountain and seas. He had twelve *ko'ele* (parcels) in Hā'ena. Eight LCA claims for Hā'ena (Figure 4) were within the Hā'ena State Park boundaries and included Pākī and Kekela as well as these below (Silva 1995:30-33):

**Haole** – LCA #7998: 8+ Lo'i 100 (f) X 25 (f), bound by Makana cliff and other cultivated lots; given to him by Mokuohai. This parcel was formerly cultivated by an older Hā'ena tenant Ho'oleali'i whose claim was not supported by Kekela who said Ho'oleali'i had returned his taro land in 1834 because he suffered poor health and was unable to maintain it [Ili of Kē'ē]

**Kanehakili** – LCA #7996: His land was given to him by Kekela in 1839; his lo'i measured 50 X 35 (f) and was surrounded by lo'i on three sides and by the beach on the other side...his house was located in Kekela's lot where he lived since 1839. [Ili of Kapihae]

**Mokuohai** – LCA #8200C/RP 7091: Mokuohai acquired his awards (house lot and pond field adjoining Loko Naia) from Kekela in the 1840s; in c. 1844 Mokuohai received Loko Kē'ē; his holdings totaled 4.25 acres 25 rods which was considered a sizable holding for Hā'ena. Upon his death, his award descended to his grandchild and heir, Kaenaku. [Ili of Kē'ē and Hā'ena]

**Naiwa/Naiui** – LCA #10941/RP 6388: Naiui received his taro lands from the *konohiki* prior to 1839 [prior to Kekela]. These lands contained 10 lo'i, a house lot adjoined them – the house lot was given to him by Kekela in c. 1839. These parcels appear to be situated in the midst of extensively watered taro lands. [family cemetery front of house cared for - 1964 photo (Major and Carpenter 2001: 19)] [Ili of Kamo'okahi]

**Poa** – LCA #10674/RP 7638: Pea was a tenant from the days of Kaumuali'i [but] his claim was supported by Kekela; he claimed a house lot, 3 large taro pond fields and 10 smaller ones. His parcel was surrounded by well-watered taro lands, bound on the seaward side by sand hills. Pea died in 1849 and his widow claimed and was awarded the parcel under his name. [Ili of Pa'akala]

**Nanahu** – LCA #8200B: Taro lands measured 20 X 15 (f); they appear to be situated between Loko Naia and Loko Kē'ē and his house lot is seaward of Loko Naia. Nanahu testified that his

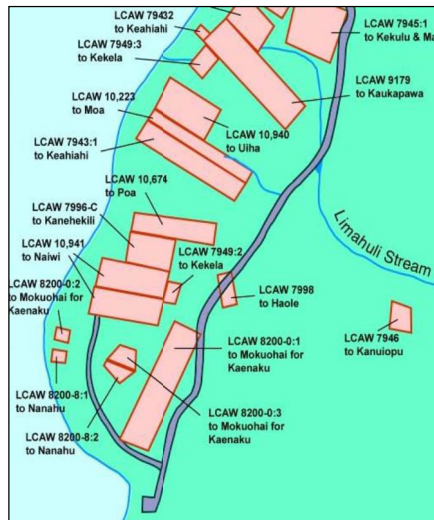


Figure 4. LCA Claims in Hā'ena State Park (Pacific Worlds).

claim descended to him from his relatives from the days of Kaumuali'i (pre-1824). He had received the land immediately from his brother who died in c. 1839. In c. 1840, Mokuohai arrived at Hā'ena, asking for a place to set up residence and plant taro. His lot was considered one of the most attractive and fertile parcels in the area. Nanahu and Kekela allowed Mokuohai use of part of the land, no gifting, however Mokuohai who may have been associated with Kekela claimed a part of Nanahu's land and was awarded this parcel. Mokuohai gave Haole land to cultivate in 1846; this land was formerly cultivated by Hoolealii although Haole claimed them in LCA 7998. Ho'oleali'i had maintained his house lot in Nanahu's parcel, thus Nanahu's *makai* parcel contained both Nanahu and Ho'oleali'i's house lots.... Mokuohai and Haole may have had an affiliation with Kekela as they both arrived in Hā'ena after 1839 when Hā'ena was under Kekela's management. Kekela testified supporting both Mokuohai and Haole claims and discredited Hoolealii. [Ili of Naia]

### 3.4.5 Hā'ena Land Transfers (Post 1855)

Royal Patent # 3596, Land Commission award 106.13, apana 6, to Abner Pākī. This is the same land conveyed by deed of William Kinney, dated January 5 1875, to Kenoe D. Kekaha and 37 others as tenants in common, owning the said entire tract of land in 38 equal shares" (Silva, 1995: 25). Abner Pākī died in 1855, his wife Konia in 1857. Their only child Bernice Pauahi Bishop inherited their lands and in 1858 sold Hā'ena to W. H. Pease (Silva 1995). The Hā'ena lands were transferred several times including to a *Hui* (co-op); the Robinson family obtained an interest in the Hā'ena Hui lands. In 1955 the Hā'ena Hui was dissolved and the State later acquired the beachfront property held by the Robinsons for use as a public park. In the late 1960s the brother of actress Elizabeth Taylor, Howard Taylor, acquired a parcel of land and a community known as Taylor Camp was established and populated by transient residents. This parcel was condemned by the State in 1975 and added to the public land bank later becoming the Hā'ena State Park (Major and Carpenter 2001:16).

### 3.4.6 Kē'ē, 'Ili of Hā'ena

Kē'ē is located at the end of Kūhiō Highway and includes the beach, canoe landing, trail to the *heiau* and *hula* platform, sand dune, comfort station, Kalalau Trail Head (foot/livestock trail) and Lohiau's house site, taro and sweet potato cultivation and at least one fishpond (although it could have been a *loko i'a kalo* – a pond for both taro and fish cultivation). The abundant resources of the area, both *mauka* and *makai* once supplied a good sized population in pre-contact times, most likely a permanent settlement, as indicated by archaeological cultural remains (Major and Carpenter 2001:16).

However, historic human activity and natural disasters such as the 1946 and 1957 tsunamis greatly modified these lands and destroyed settlement evidence. The traditional oral histories (e.g. Lohiau, Laka, Pele & Hi'iaka, etc.) of the area illustrate that Kē'ē was once a very sacred and special place, a *wahi pana*, where deities and *ali'i* co-mingled and where sacred rituals (e.g. *'ōahi*, Laka's *hula pā*, *hula halau*, *heiau*) were conducted. For some reason by the 1930s when E.S. Craighill Handy visited, much of the cultivation of the greater Hā'ena had been scaled back with limited terraces in Kē'ē still functioning.

The sloping and flat lands east and west of Limahuli Stream between the sand dunes and the mountain sides were developed in terraces irrigated by ditches from Limahuli Stream. About a dozen of these terraces are now under cultivation in taro. The rest are used as pasture or abandoned under brush and grass (Handy 1940; Major and Carpenter 2001:18).

By the mid-1960s Loko Kē'ē and Loko Naia were abandoned and only a few taro *lo'i* were still being cultivated. However, by 1967 the last taro crop was harvested in Kē'ē. The taro terraces would remain fallow until 2000 when a group, *Hui Maka'āinana O Makana* began to restore old taro *lo'i* (Major and Carpenter 2001: 19).

Today Kēʻē is a tourist destination where as many as 10,000 tourists visit in any given week (Major and Carpenter 2001:19). They come for the scenic drive, but mostly for the great snorkeling at its protected lagoon and its sandy beach. They also come for the hiking adventures to nei ghboring Kalalau Valley (11 miles) and visits to the wet caves (Waiakanaloa and Waiakapala'e).

Photo 18. Kēʻē Beach and Kai-kua'au-o-Hā'ena Lagoon



### 3.4.7 Other 'Ili Names of Hā'ena

The following 'ili names of Hā'ena are based on the database of *Waihona 'Aina*: Ha'aheo, Hāli'i, Kahakaheana, Kahau, Kaia/Koia, Kaia 'aimokua, Kalokomaikai, Kaloli/Kālole, Kamo'oloa, Kanulau, Kaoneana, Kapihae, Keleke, Kiwaa, Kupapaululu, Lalaole, Mahau, Makanaulua, Mo 'olalaole, Naia (fishpond), Pa'akala, Pahole, Pe'ekaua'i, Pu'ukahua, Puukoka, Waikapu.

### 3.5.0 Hā'ena State Park Land Resources and Use (Traditional and Historic)

The following map (Figure 5) depicts some of the traditional and historic resources in Hā'ena.

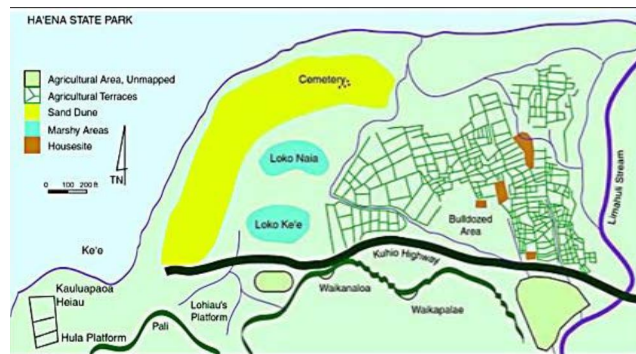


Figure 5. Map illustrating resources within Park boundaries (Pacific Worlds).

#### 3.5.1 Hā'ena Pu'uone (Dune-banked Ponds)

Among the significant natural features in Kēʻē are the *Pu'uone* (dune banked ponds), called Loko Kēʻē and Loko Naia. The ponds, referenced in *kuleana* claims, 8200 B and 8200 C, were modified for cultural subsistence uses in antiquity, and remained in use through the early 1900s as fishponds and taro pond fields (In Maly 2003:34). One claim in the area generally is known as Kēʻē; specifically, the area of Loko Kēʻē (Helu 8200 C) (In Maly 2003:8).

**8200 B Nanahu** at Hā'ena, Kaua'i. House lot, kula and *Loko* "Naia". *Loko Naia* (Naia Fish Pond) is bounded *mauka* by *Loko Kēʻē* and *makai* by sea beach.

**8200 C Mokuohai** at Hā'ena, Kaua'i. *Loko Kēʻē* in the *ili* of Kēʻē; bounded *mauka* by *Waiakapalaie pali*; *Napali* by sea beach; *makai* by sea beach (In Maly 2003:18).

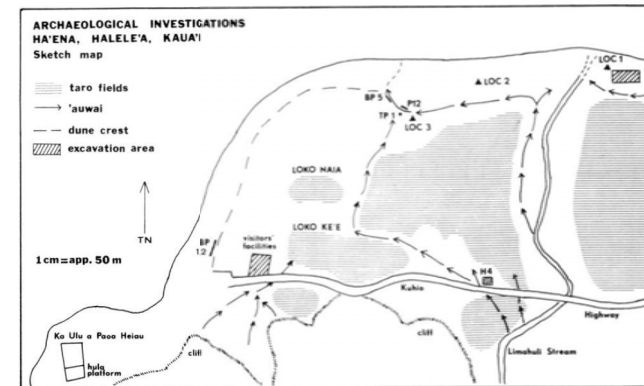


Figure 6. Map of dunes, fishponds, taro pondfields and 'auwaisystems (Griffin 1984: 9)

#### 3.5.2 Sand Dune Habitation

Previous studies revealed the presence of household floors, hearths, *imu*, post holes and an array of midden and artifacts in the dunes and in the flat land between the bay and Loko Kēʻē (Griffin et. al. 1977, Hammatt et. al. 1978 In Major and Carpenter 2001:131).... It appears that habitation was concentrated along the dune crest (i.e. *makai* of the present unpaved access road to the poi mill area), spreading out at the west to occupy the whole flat area between Loko Kēʻē and the bay. Habitation of this area did not cease with the dissolution of the Hā'ena Hui, although the population did change radically (Major and Carpenter 2001:134).

#### 3.5.3 Taro Lo'i

Land registry and testimony numbered well over 150 taro pond fields of varying sizes and shapes in Hā'ena. Of these 40 or so were situated within the Park site. That Hā'ena was well -developed and productive is unquestioned. Its water resources and available cultivable lands appear to be utilized maximally (Silva 1995:35). Lo'i restored in 2000 by Hui Maka'āinana. [See below 3.7.14]



Photo 19. Taro Lo'i in Hā'ena State Park





Photos 20-22. Evidence of burials on Parks lands

### 3.5.4 Burials

In August of 1994, the Hawai'i DLNR Division of State Parks conducted a community meeting to gather input for a proposed Hā'ena State Park Master Plan. At this meeting, concerns were expressed regarding the neglect of known burial sites within the park. These burial areas are known to local lineal families who formerly lived in what is today Hā'ena State Park. Some of these areas were formerly landscaped and maintained, leading to their slow deterioration. Some of these burials are as recent as 30 to 50 years old. The family burials are concentrated in one area within the boundaries of the park identified as a cemetery (State site #50 -30-02-1892). Also the coastal dune system, a portion of which runs through the park, is a known burial area: some burials were located during previous archaeological testing and others have been exposed as a result of erosion. This pattern suggests a high potential for additional burials to be exposed in the future. The descendant families requested that a joint effort between the families and the Division of State Parks be initiated to stop further deterioration and natural destruction, and to restore a sense of respect to these sacred areas (TKCH 2001:1-12-13).

#### 3.5.4.1 Dune Burials

Sand dunes were considered "the most reasonable place for internment" for the Hā'ena commoners other than within the family house lot. "Hā'ena's fairly sizable resident population through time would be reflected in more than moderate burial activity in the sand dunes.... Tidal and human impacts have negatively affected these dunes and will continue adversely unless policy, planning and enforcement measures are established" (Silva 1995:18-19).



Photo 23. Part of Dune System in HSP

#### 3.5.4.2 Hā'ena Cave Burials

Given Hā'ena's physical environment, one would expect customary royal internment in hidden or inaccessible areas on the steep cliffs. Numerous caves pock-marked the cliffs of this coastline thereby providing natural tombs for the chiefly class. Mythology verifies this practice in Hā'ena; Prince Lohiau was entombed nearby in a cliff cave until revived by Hi'iaka. It is possible and even likely that others of chiefly status have found a final resting place within these cliffs (Silva 1995:18).

### 3.5.5 Hā'ena Caves as Places of Interest in 1800s Literature

The editor of "*The Hawaiian Kingdom Statistical and Commercial Directory and Tourists Guide*" (1880) George Bowser, wrote about various statistics and places of interest around the Hawaiian Islands. The

following excerpt from "An Itinerary of the Hawaiian Islands" offer descriptions of the communities and various attractions of the Halele'a region (In Maly 2003:35), especially Hā'ena.

From Hanalei I rode out to Hā'ena, which is at the northeast corner of the island, and is distant from Nawiliwili about forty-four miles. The land in this neighborhood is very sandy, and does not seem likely to be turned to account for any purpose but pasture. Two curious caves have been found near here. One of these, called by the natives Kanaloa, which means "the wife of the devil," has no floor except the water which lies in it, the depth of which no one has yet succeeded in fathoming. At its mouth this cave is about sixty feet wide and twenty feet high, and from these dimensions the sides and roof gradually draw in, with a gentle curve, until there is only six or eight feet either way above the surface of the water. The full extent of the cave has never yet been explored. Its walls are perfectly smooth, and their curved surfaces are so perfect that they might have been cut by the hand of man. The other cave is dry, and is not far from Kanaloa. It is called Maninihola, and is about forty feet long, twenty feet high at the entrance, and gradually diminishing to about six feet at the inner end. The natives used to have various stories about monsters which inhabited these caves, but it is now impossible to find any connected story in what they tell you.

The editor of the *Hawaiian Gazette*, Henry M. Whitney, published a "Hawaiian Guide Book" in 1875 and 1890. The publication was produced as one of the early promotional guides to encourage visitation to the Hawaiian Islands, and included descriptions of the islands, agriculture, plantations, scenery, climate, population, commerce, and places to stay while visiting. His publications provided readers with commentary on traveling the old road ways through Hanalei and Nāpali and included several "traditions" of storied places on the landscape (In Maly 2003:36-38).

The wonderful caves, Waiakanaloa and Waiakapala'e, are about ten miles from Hanalei. In the early days of Hawaiian history, it is said, a brother and sister came from a foreign land, in order to supply the people with water, of which there was a great dearth. They came to a mountain, and determined to dig into its side until water would be discovered. Kanaloa, the brother, selected a spot where he thought he would find water, and after digging a long time detected a lake, whose waters he caused to flow over the land, and to this day the taro patches are irrigated from this source. Visitors are escorted into the arched entrance, and to the lake within. Here the natives light torches, and take the tourist for a row upon the water, which is cold and clear and fresh. At the entrance the depth of the water is forty - two feet, though further in it is said that no bottom has been found.



Photo 24. Waiakanaloa Cave

A strange sensation, a combination of awe and fear, creeps over one as daylight is left behind, and the frail bark glides into the blackness of night, and seemingly into the very bowels of the earth. The black waters reflect the ruddy glare of the torches, and the flickering flames throw strangely contorted shadows upon the rocky sides and ceiling of the cavern, while the half-nude forms of the rowers look weird and unearthly. Even the most frivolous scarcely speak a word, and then only in the faintest whisper, and it is with a long-drawn breath that the traveler steps out of the darkness into the light, but also with an impression that lasts for life.



Photo 25. Waiakapala'e Cave

The other cave, which was dug by Kapalae, has also an arched entrance, and though much smaller than the first cave contains a lake whose waters are ever covered by a thin film. There is a third cave, known as the "Dry Cave," which one can enter and walk through, or can ride into on horseback. A few seconds walk into its depths brings one beyond the reach of daylight, and no one has ever ventured further within its gloomy recesses. A foreigner could not find his way out, and a native could not be persuaded to enter, because it is said that a gigantic moo (dragon) guards the cave. We are told that the ancient high chiefs of Kaua'i were buried there, far under the mountain, and that many priceless feather cloaks and feather helmets might be found. In speaking of the largest cave, the *Hawaiian Spectator* said: "Its entrance is gothic, from twenty to thirty feet high, and as wide. The entrance to the second compartment (or lake), is also gothic, and one half as large as the other opening. The first chamber is about 150 feet long, 100 feet wide, and sixty feet high, the whole forming a beautiful arch."

3.6.0 Hā'ena Demographics of mid-1800s.

The missionary census of 1835 and 1847 a disproportion between the number of children and adults (Schmitt 1973:46 In Silva 1995:21):

| 1835      |     | 1847*     |                   |
|-----------|-----|-----------|-------------------|
| Adults:   | 100 | Adults:   | 108               |
|           |     | Male      | 46                |
|           |     | Female    | 62                |
| Children: | 16  | Children: | 54 [up to 20 yrs] |
|           |     | Male      | 30                |
|           |     | Female    | 24                |
| Deaths:   | 4   | Deaths:   | 10                |
| Births:   | 1   | Births:   | 2                 |

\*At this time [1847] Hanalei's adult population was 376 and children 146; Kalihiwai was 156 and 54; Wainiha was 153 and 63; and Kalalau was 115 and 16 (Silva 1995:23).

3.7.0 Previous Archaeological and Other Studies: Hā'ena and vicinity

As early as 1931 Bennett voiced this observation: "Unfortunately the continuity of culture on the Island of Kaua'i is broken. The older natives who still remember heiau (temples) are fast dying, and the younger generations are no longer interested" (Bennett 1931:3).

At the western edge of Halele'a, just on the border with the Na Pali District, lies Hā'ena, also the scene of considerable intensive archaeological study (Griffin et al. 1977; Hammatt et al. 1978; Griffin 1984). Earle (1978) mapped several large irrigation complexes that lie just inland of a large sand dune fronted by Kē'ē Beach. Excavations by Griffin, Hammatt, and others have revealed that these dunes incorporate well -stratified occupation deposits, with many superimposed cultural strata. Unfortunately, no radiocarbon dates are available, but a series of hydration -rind age determinations on volcanic-glass artifacts suggests occupation as early as the tenth century and continuing up until historic times. A number of relatively early artifact types were also recovered, including porpoise-tooth pendants and incipiently knobbed two -piece fishhooks. Hammat et al. (1978:168) outlined a tentative sequence for the Kē'ē Beach site. They believe that the first phase consisted of a 'transient marine-oriented' fishing settlement. By about A.D. 1200 there was a 'population increase with a broader resource base,' and settlement expanded inland. The 1400s witnessed 'the development of intensified irrigation agriculture in inland areas with a continued use of the littoral environment,' a pattern that evidently continued up until the historic period. The archaeological potential of the Hā'ena area, with both the stratified Kē'ē Beach deposits and the extensive irrigation systems inland, has just begun to be tapped and future work in the region may reveal much about the development of Hawaiian society in this part of Kaua'i (Kirch 1985:101 - 104 In Silva 1995:14).

3.7.1 Thrum (1907) "Tales from the temples" In *Hawaiian Annual for 1907*.

3.7.2 Stokes (1908, 1909, 1927) Various studies.

3.7.3 Emory (1929) "Ruins at Kee, Hā'ena, Kaua'i: Famous Court of Lohiau" in the *Hawaiian Annual of 1929*, Emory provided the descriptions for many of the sites listed in Bennett (1931) below.

3.7.4 Bennett (1931) *Archaeology of Kaua'i*. Bennett conducted his field work of Kaua'i archaeology in 1928 -1929, "supplemented by a study of available collections, of published literature, and of manuscript notes on file in Bernice P. Bishop Museum" (Bennett 1931:3). Bennett (1931:60-69, 95) notes that various artifacts found are unique to Kaua'i such as the curved adze, gouged stone implements, polished stone knives, and Kaua'i pounder (ring, stirrup, and block), block grinders, the broad tapa anvil, makaloa sedge mats (Ni'ihau and Kaua'i ), and decorated gourds or ipu (Ni'ihau and Kaua'i ). [Hā'ena sites cited above].



Photo 26. Entrance to Hula Terrace



Photo 27. Ke Ahu a Laka



Photo 28. Kauluopā'oa Heiau



Photos 29-31. Views of Heiau Site

|          |                                     |              |                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|----------|-------------------------------------|--------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Site 154 | Kauluopā'oa Heiau                   | Kē'ē, Hā'ena | Unenclosed stone terrace 100X60X20 at highest corner; top of heiau is divided by different levels                                                                                                                                                                                                                                                                                                                                      |
| Site 155 | Lohi'au's dancing Pavilion & shrine | Kē'ē, Hā'ena | Above the heiau and against the base of the cliffare two wide and low terraces; the halau was on the upper terrace where dances were performed before the <i>kuahu</i> or altar to Laka, a simple frame decorated with leaves; the eastern end of the lower earth filled terrace slopes down...faced with four foot wall; a few feet back of level terrace is a bluff...a small rough platform stands against it, possible a grave.... |



Photos 32-34. Views of Lohiau's House Site covered with vegetation

|          |                      |                                                                                                                                 |
|----------|----------------------|---------------------------------------------------------------------------------------------------------------------------------|
| Site 156 | House site of Lohiau | End of government road; stone faced, earth and stone Filled, unpaved terrace 80 feet long and 8.5 feet high at highest part.... |
|----------|----------------------|---------------------------------------------------------------------------------------------------------------------------------|

### 3.7.5 Handy & Handy (1972) *Native Planters in Old Hawai'i: Their Life, Lore, and Environment.*

Almost certainly the first settlers chose protected bay and beach areas where fresh water was available and there was good inshore and off shore fishing...it would seem, if we accept the evidence of the story of P'ele and her clan, that this (Kaua'i) was the first landfall of at least one group of early settlers (Handy & Handy 1972:268).

### 3.7.6 Griffin et. al. (1977) *Preliminary Archaeological Investigations at Hā'ena, Halele'a, Kaua'i Island*

The first survey and testing program began in 1977 under the direction of the author (Griffin et al. 1977). The most westerly portion of the dunes and back dune areas, and the terrain west of a transect running from the east edge of 'Iloko Ke'e to the outlet of the 'auwai (ditch) by BP5 was closely examined on the surface. In addition, test excavations, coring, and profiling of seaward dune faces was completed. Several backhoe trenches were placed where stratigraphic data might be retrieved. Since complex stratification was apparent in the dune, special efforts were made to understand the depositional history and geoarchaeology (In Griffin 1984:2).

### 3.7.7 Earle (1978) *Economic and Social Organization of a Complex Chiefdom: The Halele'a District, Kaua'i, Hawai'i.*

### 3.7.8 Hammatt et.al. (1978) *Archaeological Investigations at Hā'ena State Park, Halele'a, Kaua'i Island: Phase II: Excavations of Beach Localities and Visitors Facilities Area.*

### 3.7.9 Riley and Ibsen-Riley (1979) "Taylor Camp, Hawaii: The life and death of a hippy community" *Field Museum of Natural History Bulletin* 50, 18.22

### 3.7.10 Riley and Clark (1979) *Archaeological Testing and Excavations at Hā'ena, Kaua'i.*

During the summer of 1978 a combined University of Hawaii-University of Illinois (Urbana) Field School was held at Hā'ena. Griffin coordinated the project, while Thomas Riley directed the effort (Riley and Clark 1979). Riley worked at three "localities", each in beach deposits (Fig. 1). Two, localities 2 and 3, are in eastern and central portions of the park. Locality 1 is to the east of [6] Limahuli Stream, on the property of Mr. Barlow Chu. Riley and Clark opened horizontal test excavations as well as test squares and profiles (In Griffin 1984:2).

### 3.7.11 Hammatt and Meeker (1979) *Archaeological and Ethnohistorical Investigation at Hā'ena, Halele'a, Kaua'i Island.*

Riley's work on the Chu property was followed by further excavations in the high dune beside the stream and by surface mapping and ethnohistorical study (Hammatt and Meeker 1979a, 1979b). The work of Hammatt and Meeker was especially interesting, given its richness in data of historical archaeology. Hammatt, building on maps by Earle (1978) drawn in 1973, further mapped the historic remains of the Chu homestead and adjacent taro fields. These features ranged from the present road *makai* to the dunes (In Griffin 1984:2).

### 3.7.12 Yent (1980) *Preliminary Archaeological Testing of House 4, Hā'ena State Park, Halele'a, Kaua'i.*

Martha Yent (1980) conducted emergency mapping and salvage research of a *mauka* house platform, house #4, found near the road among the taro fields. While her project was necessarily limited by salvage constraints -- a simple assessment of damage done by laying water pipe -- her report has important implications for the Hā'ena settlement and agricultural systems (In Griffin 1984:2).

### 3.7.13 Yent and Ota (1983) *Field check of dune erosion and exposed cultural materials at Hā'ena State Park, Hā'ena, Kaua'i, TMK: 5-9-08:18.*

### 3.7.14 Griffin (1984) "Where Lohiau Ruled: Excavations at Hā'ena, Halele'a, Kaua'i." *Hawaiian Archaeology* 1(1), 1.18

### 3.7.15 Silva (1995) *A Historical and Cultural Report of Hā'ena State Park, Halele'a, Kaua'i.*

### 3.7.16 Major and Carpenter (2001) "Supplemental Archaeological Inventory: Hā'ena State Park, Kaua'i TMK: 5-9-06:14 and 5-9-08:1 through 19." Map below of sites inventoried (Figure 7).

Much of the archaeology done in Hā'ena has been on buried sites in the coastal flat, primarily because this is where houses have been built in the last two decades. Surface features are common in the valleys (Mānoa and Limahuli -- agriculture and habitation), but the coast has very few. Archaeologists have not dwelt upon this pattern and it is not clear whether the lack of surface features reflects the original settlement pattern (post structures without rock walls), post abandonment deposition of sand that has buried features, or historic removal or disturbance of surface features.... Archaeological excavations have failed to demonstrate that walls or platforms were common in the coastal area. Instead, it appears that although stone lined pits and pavements may have occurred, above surface features may not have been a major part of the coastal settlements. What has been recorded numerous times is the presence of fire pits, refuse pits, and one or more strata rich in charcoal, midden and artifacts. These appear to be present...in the Kē'ē dunes [pg 23].

Unfortunately, the archaeology that has been done is in response to development of particular private parcels; therefore the overall distribution is not known and what we have to go on are sporadic glimpses. Although the general opinion is that habitations were dispersed along the shore, rather than clustered in villages, burials seem to be concentrated in certain locales and had yet to be demonstrated that clustered habitations did not exist [pg 25].

Cultural deposits in coastal sands vary in age, but there are enough dates to show that Hā'ena *makai* was occupied by about A.D. 1300-1400. The earliest date (AD 252-549) fits the belief that Hā'ena would have been an attractive area for early settlement, but even the authors suspect the date's bias.... The A.D. 900-1100 dates for Kē'ē (Hammatt et al 1978) are invoked as justification for assuming occupation of the rest of Hā'ena, despite the fact that Kē'ē dates are based on volcanic glass and derive from a different valley catchment. There appears to be a strong willingness to accept the model proposed by Hammatt in 1977 saying that transient fishing camps began before AD 1000 and coastal settlement occurred in the 1200s [pg 26].



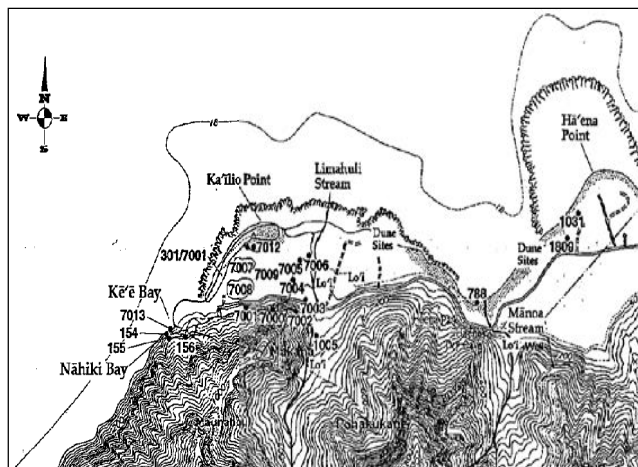


Figure 7. Recorded Archaeological Sites in Hā'ena (Major and Carpenter 2001:24)

Earl (1978) described the general settlement pattern in which inland *lo'i* complexes used all available land down to just behind the coastal dunes, with habitations occurring on and just behind the dunes. Historically, Land Commission data indicate a pattern of [pg 26] habitations dispersed amid the *lo'i*, but still with the majority of habitations located closer to the coast than to valley interiors [pg 27].... Field terraces immediately *makai* of the main road and on the west side of Limahuli Stream were mapped and tested, [and] showed evidence of both wetland and dryland cultivation. Three *mauka-makai* divisions of the project were identified, based on historical *kuleana* boundaries, morphological differences in features, and modern vegetation patterns. On either end, excavations revealed *lo'i* sediments, whereas the middle section lacked such a layer and contained an *imu* indicating at least temporary habitation.... Charcoal from the *imu* suggested occupation as early as AD 1050, well before the AD 1400-1500s dates from other excavations that were interpreted as beginning the wetland field system (Calis 2000:3132, 35) [pg 29].

The Phase I *lo'i* e complex [Figure 8] consists of 42 features, the majority (38) of which were irrigated pond fields; Features 1 and 40 are *'auwai*; Features 41 and 42 are habitation features. Feature 1 at one time brought irrigation water from Limahuli Stream to System A, while Feature 40 is a large ditch that drained System B with runoff flowing into the ocean on the north/northeast preventing stagnation and flooding of the coastal dune habitation system. System A is bordered by the *'auwai* (Feature 1) on the north and by the main road on the south. The original construction of the road (ca. early 1900s) most likely impacted this *lo'i* e complex [pg 51]. The terraces within this Phase I are not the entire system; there were more terraces westward eventually draining into Loko Kē'e (65 meters west), a combination agricultural/aquacultural feature with no apparent outlet. System B is bordered on the south by the *'auwai* (Feature 1) and on the north by *'auwai* (Feature 40). Remnants of a Poi Mill (Site 7014), is just outside of this Phase I survey area [pg 53].

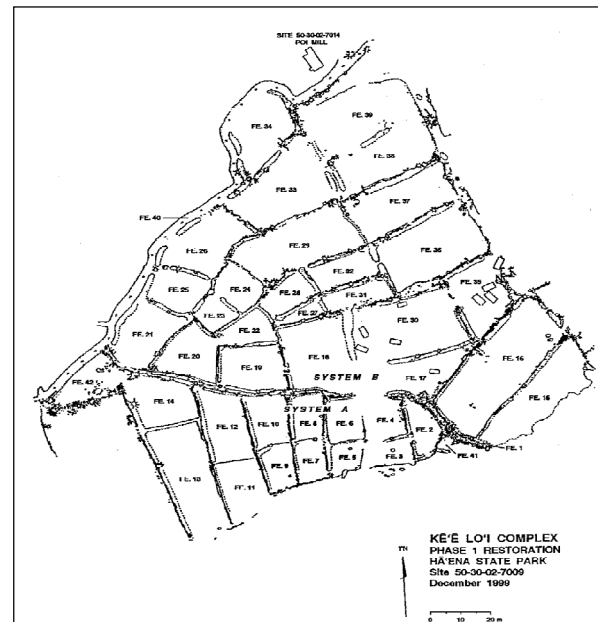


Figure 8. Kē'ē Lo'i Complex, Hā'ena State Park (Major and Carpenter 2001:52).

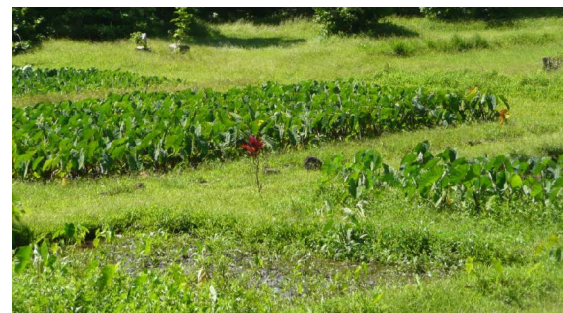


Photo 35. Part of Restored Lo'i System in Hā'ena State Park.

Subsurface testing included test units, stratigraphic trenches (6), a backhoe trench (near the extreme of the project), and shovel probes [pp 49 -50]. Several charcoal samples were submitted for dating. The results yielded several date ranges: AD 1270 -1410; AD 1320 -1350; AD 1390 -1440; AD 1440-1480; AD 1440 -1640; AD 1470 -1660; AD 1490 -1600; AD 1520 -1590; AD 1620 -1680; and AD 1730-1810 [pg 112-113].

Fishing and canoe-making artifacts recovered on the surface provided evidence of marine subsistence activity. Prismatic blades, basalt flakes and an adze fragment all indicated that work occurred amid the fields, but without sufficient resolution to interpret specific activities.... Together, the artifacts yielded the unsurprising information that non-agricultural activities occurred in or near the western edge of the project area [Phase I - lo'i].... But since excavations were not performed in the middle of [the] field, it would be unfair to say that such artifacts cannot also be found away from the banks. Blades and flakes would be useful tools for preparing *huli* (propagative cuttings) and cleaning harvested corms, so their presence should not be interpreted as evidence of non-agricultural activity [pg 138].

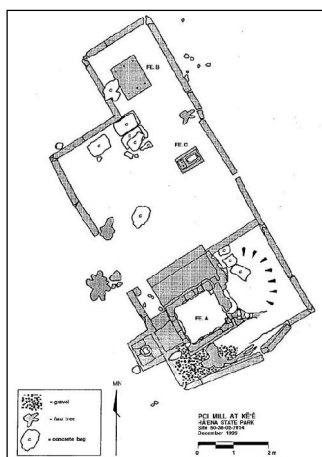


Photo 36. Remnants of Poi Mill Foundation

Figure 9. Poi Mill Foundation, Site 50-30-02-7014 (Major and Carpenter 2001: 54)

### 3.7.16.1 Chronology of Kē'ē Site 7009 [Agricultural System] [pp 148-149]

- |              |                                                                                                                                                                                                                                                                            |
|--------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| AD 1300s     | Irrigated agriculture begins at Kē'ē as early as the late 1200s... "intensive" irrigated pond fields are the first form of agriculture here                                                                                                                                |
| AD 1500s     | Existing fields at Kē'ē are overhauled. Large fields are subdivided and the current <i>auwai</i> is constructed. Activity appears to be system-wide and appears to differ from simple repair and rebuilding of fields that have been inundated by flood or wave sediments. |
| AD 1830-1875 | Boundaries of fields change and water flow is probably rerouted and managed differently as Kekela, a non-Kaua'i chief, becomes <i>konohiki</i> . Several land claimants in the area arrived during her tenure.... Abner                                                    |

- |              |                                                                                                                                                                                                                                                                                                                                              |
|--------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| AD 1875-1955 | Paki received all portions of Hā'ena not otherwise claimed<br><br>Most of the <i>ahupua'a</i> of Hā'ena is sold to a Hui of native tenants in common. Parcels now correspond to shares in the Hui.... By the 1930s, farming has declined and the tsunami of 1946 kills many residents and causes others to stop farming.                     |
| AD 1955-1967 | Members of the Hashimoto <i>'ohana</i> are the last to farm the fields of Site 7009. Although some modern machinery is used for certain tasks, cultivation methods are essentially the same as those used traditionally. Hui parcels are sold off in a piecemeal fashion by many owners.                                                     |
| AD 1968-1975 | Taylor Camp commune, a hippie settlement, occupies what is now the central area of the park. No further cultivation of taro, and the <i>auwai</i> is abandoned. Population fluctuates and farming consists of small, unirrigated gardens on the old terraced fields. Perhaps for the first time, residents do not rely on local subsistence. |
| AD 1975-2000 | The State of Hawai'i condemns land west of Limāhuli Stream, evicting Taylor Camp residents so that the land can be developed as a State Park. Parking and restroom facilities are built and other land use is limited to squatter camping, fishing and recreation, all of which are oriented to the shoreline.                               |

### 3.7.16.2 Significance Evaluations

Aside from modern additions... all of the features within the project area [Phase I] are significant under NRHP and SRHP criterion D and certain features are significant under Criterion E of the State of Hawai'i criteria due to their cultural significance to Native Hawaiians [*auwai*] [pg 150].

### 3.7.17 Dye (2002) "Archaeological Assessment for a Residential Lot at Hā'ena, Kaua'i (TMK:5.9.02:62)"

The assessment included a brief field check of the parcel to document existing conditions and an extensive review of maps and other documents to determine the likely presence or absence of unrecorded historic properties. Information on historic land-use patterns before, during, and after the *māhele* is presented, as are the results of archaeological surveys at Hā'ena Point and in the vicinity of the residential lot. The archaeological information is synthesized and used in conjunction with information on land-use patterns to formulate expectations for inventory survey results.



#### 4.0 ETHNOGRAPHIC SURVEY

The Ethnographic Survey (oral history interviews) is an essential part of the Cultural Impact Assessment (CIA) because they help in the process of determining if an undertaking or development project will have an adverse impact on cultural properties/practices or access to cultural properties/practices. The following consultant selection criteria were initially considered:

- ❖ Have/Had Ties to Project Area
- ❖ Known Hawaiian Cultural Resource Person
- ❖ Referred by State Park staff
- ❖ Referred by NTBG-Limahuli staff

Both State Park and Limahuli Garden staff had names of *kuleana* land awardees, lineal descendants, cultural practitioners, well-known historians and long time residents of the project area and vicinity. An effort was made to contact people from each category.

The consultants for this Cultural Impact Assessment were selected because they met the following criteria: (1) consultant grew up, lives or lived in the vicinity of the project area; (2) consultant is familiar with the history and *mo'olelo* of Hā'ena and vicinity in general; (3) consultant is a known Hawaiian Cultural Practitioner in the project area/vicinity; (4) consultant is a lineal descendant of *kuleana* lands; and/or (5) consultant was referred by Staff of Limahuli Garden or State Parks (see Demographics Table 3 below). Copies of signed "Consent" and "Release" forms are provided in Appendices H/I.

##### 4.1.0 Research Themes or Categories

In order to comply with the Scope of Work for this cultural impact assessment, the ethnographic survey was designed so that information from consultants interviewed would facilitate in determining if any cultural sites or practices would be impacted by the implementation of the proposed *Hā'ena State Park Master Plan and Environmental Impact Statement* (Job No. F74C664A). To this end the following research categories or themes were incorporated into the ethnographic instrument: Consultant Background; Land, Water, Marine and Cultural Resources and Use; Anecdotal Stories; and Project Concerns. Except for the 'Consultant Background' category, all the other research categories have sub-categories or sub-themes that were developed based on the ethnographic raw data or responses of the consultants. These responses or clusters of information then become supporting evidence for any determinations made regarding cultural impacts.

##### 4.2.0 Consultant Background

The project and the CIA process was explained, then after signing the consent form, each consultant was asked to talk about their background; where they were born and raised, where they went to school and worked, and a little about their parents and grandparents. This category helps to put the person being interviewed at ease, establishes their connection to the project area, their area and extent of expertise, and how they acquired their proficiency. In other words, how the consultant met the research consultant criteria.

The consultants either have family ties to the project area and vicinity and/or are familiar with the history of Hā'ena State Park and vicinity. Six people were interviewed; all are part Hawaiian. Four were interviewed in their homes (one in Hanalei, one in Wailua, one in Kilauea and one in Honokua, South Kona); one was interviewed at Limahuli Garden and one was interviewed at NTBG office in Kalāheo. Efforts were made to interview three more, but there were no responses to emails or telephone messages.

Table 3. Demographics for Hā'ena State Park CIA Interviewees (all are part-Hawaiian)

| Interviewee        | YOB  | B/R           | Lived/Lives/Works | Connection to HSP                                 |
|--------------------|------|---------------|-------------------|---------------------------------------------------|
| Alquiza, Kapu      | 1954 | O'ahu/Anahola | Hanalei (CP-H)    | Ke Ahu a Laka – cultural practice                 |
| Hashimoto, Thomas  | 1934 | Hā'ena        | Hā'ena (CP-F)     | Fishing; <i>lo'i kalo</i> ; <i>ohana</i> history  |
| Medeiros, Clarence | 1952 | Kona          | Kona (CP-T/LD)    | Descendant of Mokuohai ( <i>kuleana</i> land)     |
| Wichman, Chipper   | 1957 | O'ahu/Kaua'i  | Hā'ena (M)        | Limahuli; Hā'ena <i>lo'i kalo/mo'olelo</i>        |
| Wichman, F. Bruce  | 1927 | O'ahu/Wailua+ | Hā'ena (M)        | Limahuli; Hā'ena <i>mo'olelo</i>                  |
| Wichman, Randy     | 1957 | Wailua/Hilo+  | Hā'ena (CP/M)     | Limahuli; Hā'ena <i>mo'olelo</i> , cultural sites |

CP = Cultural Practitioner; H= Hula; F Fisherman; T=Taro Farmer; LD = Lineal Descendant; M = Mo'olelo (history expert)

##### 4.2.1 Kapu Kinimaka Alquiza (Kumu Hula)

[This interview was disrupted when Kumu Kapu had to leave to pick up a grandchild; the follow-up scheduled interview did not work out.] I don't know why my parents named me this but my mom and dad both married twice, my mom had ten children and my dad had from his previous marriage had six, so they had sixteen children...we were all raised together. My mom had three children from her previous marriage, and then came us 7 kids after that. My dad had the six children before the second batch came around. I'm from the second batch. That's how we distinguish ourselves with each other, first batch and second batch. But anyway, I was actually born on O'ahu, and at a very infant age my parents moved to Kaua'i - I was the youngest at the time, so my [younger] brothers and sisters...four of them, were born on Kaua'i. I was the youngest at that time moving from Honolulu to Kaua'i, so I knew nothing of Honolulu, actually. My dad inherited the first batch of children, and when he met and married my mom, she raised the first batch of his and her children. When my parents moved to Kaua'i (1954) they lived down at Nawiliwili, near the Marriott - that's where we were raised; and the rest of my brothers and sisters were born there.... I think it was 1963 or 1962 when we moved away from there to go to Anahola - in 1963 my mom got awarded a Hawaiian Homestead in Anahola...we stayed there until we all graduated from high school, married, and left the home. Prior to St. Catherine's I went to Immaculate Conception School in Lihue from kindergarten to fifth grade and then St. Catherine's from sixth grade until eighth, and then Kapa'a High School from ninth to graduation. Gee I'm amazed I can remember those days. Of course some of the kids came after, so we never had all sixteen children in the house at the same time. Some grew older and went off to their specific destinations, and others came and took their spot. Life has really passed for my mom and my dad.... My mom is Ellen Pai Kinimaka. My great great grandfather's name was Keawemahi Kinimaka; he married Kawahine Pai is what I know her as, I don't really know her first name, but she was from Borabora.



My dad, Joseph Kamanua Kinimaka, was a glaze tile setter; he was one of the first here on Kaua'i, which was really cool at the time, but of course we really didn't know it yet. Then for his recreation he was a falsetto singer, and a steel guitar player. So his first batch of sons became great entertainers in Honolulu.... We have a cousin who's been doing the family genealogy for over ten years. I was just amazed when we all came together as a family and she busted out this chart, and generations going far back to Umi and Liloa and so forth and I'm like 'holy cow!' My great-grandfather was David Leleo Kinimaka; he was commander in chief to King Kalakaua's guard; he was a Lt. Major. We have documentation on his life too. I don't know my grandpa or my grandma, but my cousin found a lot on his father; so our great-grandfather and great-great-grandfather, and great-great-great-grandfather! My last grandson is named after my great-great-grandfather. Anyway, my dad is from Kona and he was raised in an orphanage, so I don't know much about my grandpa and grandma. He met my mom there in Kona, and moved to O'ahu and living in some really poor districts of O'ahu.

After high school - I was kinda active in high school stuff and did a lot of traveling during high school for Aloha Airlines and Ala Moana Hotel -- we were promoting both the airlines and the hotel during my four years of high school. My kumu was a great kumu and he was asked to take on this responsibility of promoting the islands, and so he selected a few of his dancers within his halau - he was Manu Gonzalves. I was really young, but I was always told I looked old kind a - like mature looking, so I guess I was fortunate that that happened because I got to see the east, west, and Midwest of the mainland; Canada, New Zealand, Australia, all those beautiful places. I know I would never have been able to see these through family travels because of our situation of having so many children, you know how that goes. So I was so blessed- not only me - I had other sisters; there were five of us, so all five of us had the privilege of going to different parts of the world through hula, through promotion of our islands etc....all the way through high school...some of us after high school. I went to college and another went off to continue dancing and traveling, and stayed with our kumu until he moved away. We started out with Auntie L. Ovey Apana when we were little, and she did get a few promotions but we were babies then, but we did most of the island kind of performances. Then when we got bigger and moved to Anahola, my mom took us to Uncle Joe Kahaulelio who was in Kapa'a, so we went to Uncle Joe when I was in the sixth or seventh grade, we stayed with him until we were all out of high school. He was the one that actually took us around the world. It was a good thing that my mom pushed us to keep hula because she just believed that we needed to be part of hula. My mom was a kahiko dancer and to her it was important that we did hula...she danced *auana* too.

I danced at age five with my sisters. I went to high school, got married at age 20, my first son at age 21, my second son at age 24, and my daughter at age 27 I think. I started teaching when I was part of a halau here on Kaua'i that was going to enter the Merrie Monarch Festival, they asked me to come and be part of it and I did. My daughter was two years old at the time, and so I did what my mom did, bring her along and get her to find some interest in the dance. Lo and behold as I was practicing for the whole year with this halau, she was two years old and I sat her in the back, and I said okay mom is gonna practice, you stay here and you watch or dance. She ended up dancing in the back at age two.... Kumu Lake became my kumu at one point, and then he passed away. I called him my kumu although he wasn't officially my kumu, but he took me into his home and shared mele, history, and stories.... And there was this other gentleman, he wasn't my kumu, he's a haole guy that was raised by a Hawaiian family on Lanai, my dearest friend, Kepa Maly. And he is sooo knowledgeable; I love him dearly. Today, I'm so happy because he was here on Kaua'i, married a Kaua'i girl and they lived here and then he moved to Big Island. But when he was here on Kaua'i, he worked with me in my halau. And it's that kind of people that I like, Kumu John and Kepa, that kind of people we get drawn together. They're just all true, real people. When he was on Kaua'i, he educated me on so many places on our island. He got me interested in reading more about Kaua'i, our home. I said wow I've been missing out on all these things! And then he moved away.

\* \* \*

**4.2.2 Tom Hashimoto** I'm Tom Hashimoto and I was born (1934) and grew up in Ha'ena with my mom and dad and my brother Joe Hashimoto. My mother was Dora Poe Hashimoto; she was born in Makua on O'ahu, and my dad was born in Napo'opo'o on Hawai'i. I lived in Ha'ena 41 years. Actually I bought this house [in Kilauea] and moved away in 1973 to Princeville, and moved up in this area [Kilauea] in the 1970s when I bought this house. My father worked for the County and my mom worked in the cannery during the summer months...Hawai'i Food Packers. I went to school when we came to Ha'ena -- think we were the last class in Ha'ena -- you don't know the area so it's kinda hard for me to explain. The place is all *kamani* bush. Well, right in between there from Kapuhi to that one near Kuhao, it's right between there that's where the school is...on the mountain side, right where you know that big open lot, that nice open



lot down after you pass Kapuhi and the houses, it's right next to that, but they all covered with *kamani* trees that area. After that to Kapa'a High School, but I never graduate because I went to work to help support the family because my two brothers were in Korea at the time, was war time eh? And then for the Army not taking me, I went to join the National Guard in 1950 to help support my dad. I went to work here and there like the cannery, indoor kind...at the time job was scarce in 1950 and then I worked for McBride for five months in 1954 I think, and then after that I worked for Julia Wichman -- I worked at their house property in Ha'ena. I would be asked to do all kinds of work by Mrs. Wichman and doing all that because I was employed by her. I worked for her and then in 1968 we were called -- the Unit and they took us to Honolulu because we got activated. So I went away for two years. And then while I was in the service, because Mrs. Wichman was paying me my wages while I was away, I figured I owe her something so I came back and worked for her, although my mind was so in the career, in the service because I had 18 years, but because of that I came home and then I was working at the Hanalei Plantation Hotel (overlooking Hanalei River mouth) - worked over there until 1962 until the time that place closed. [Club Med] that's the place and we worked the club too.

I worked for Mrs. Wichman and then I planted some taro down in where the State lo'i is right now, down by the cave. But my pastime was fishing, so that's the reason why I learned it well. My dad was the best fisherman; he go throw net fishing. And of course we fish with old man Hanohano Pa; he was a good fisherman too. And of course I fish with my father-in-law Henry Tai Hook. I still do that now -- throw net, making net, everything, like most fishermen. The only net we had at the time and then we had to go pitch *kala* and then we had *nenu*, that's the only kind of net we had, nothing heavy duty. And the other kind of fish we just throw net on 'em like moi and all that. Bang-bang net is about 500 mesh across with floater and lash too like the time we using *aho*, and *aho* had 96 -- no more this kind rope now you know. That's how we use to rig the net with the *aho*. Twine, that cotton twine, you call them *aho*. We use to use the *hau* floater because you don't have to go buy. You only buy the *aho* and weave and of course the twine -- another *aho* to lash the net down to the length. We use to do everything for the bang-bang net; in fact we use to do everything for the throw net too. We use to sew our own net and we learned it very young. When I was 12, I started to make nets because we were interested in throwing net because my dad catch all the fish, so we learned that time. The other thing we use to catch too was the turtle; that was our meat. So what we use to do was catch the turtle and give every Hawaiian family over there a turtle, one each house. Even at that time the jobs were kind of scarce and the wages no good. Like the County use to pay \$30 a month. So my dad when kinda lay off from the County for a little while in the 1940s I think and worked for Dora Eisenberg and had better wages. At that time the wages Mrs. Eisenberg paid \$55 a month, which was good money. And then of course my dad use to ask her for car like that and then she use to go Garden Island Motors and buy the Model A and give to my dad. My dad would pay back slowly and all of a sudden she tell my dad just to keep the car and stop the payment. She just gave him the car. And we had several cars from Mrs. Eisenberg. My dad use to take care all the properties out here like we use to take care up to across the pond down by Limahuli, we use to take care all that. That was Eisenberg's. And then where Mrs. Wichman owns, they had house made for us, and we stayed there part of the time and where my sister lives, that's where our property was so we use to live there too. We lived there for many years, all my teen days.

My dad use to work *sailamoku* on the boat, you know, deck hand. They call it *sailamoku* at the time. He use to work for the *Wai'ale'ale*, they had I think 3 or 4 ships that ran between the islands to haul cows and rice and whatever. He use to work over there on that boat partly and then go back to the big island when the coffee season harvesting time to help his dad- his dad was a coffee farmer. See, what happened, my grandfather came here- I guess he had a family back in Japan, he came from Japan and married a Hawaiian woman over here. That's where my dad was born and then us guys. He had my dad and one sister; I think there was five of them. My grandma was full blood Hawaiian. My grandfather came from Fukuoka, Japan. My dad's name was Joe Mahi'ula Hashimoto. He came here because...well his grand uncle Keoni - that's what brought him over here. He [Keoni] came to this island when he was 80 years old in 1910, that's why he knew this island all over the place because after my grand uncle passed away, he lived with old man David

Pa. Old man David Pa...this is a complicated story. The old man was 17 years old, he married my grandma who was my grand uncle's wife that came from the big island, and my grand uncle married David Pa's sister, just like switching over. When my grand uncle passed away, he (my dad) lived with David Pa, because David Pa married my grand uncle's wife – my grand aunt. And then we stayed with the Pa family too because the connection was there because my grandfather married the old man's sister, who was Kaihilani. And all these people were born and raised in Kalalau, the last family to come out from Kalalau – the Pa family yeh. So when I was growing up Hanohano Pa's mom who was Wahinekouli, she was in her late 70s when I was in my teens. We got all acquainted with these people because my dad use to live there part of the time, live over there, live in Waimea, live in Hanapēpē, that's why he knew people that lived on this side of the island and in Waimea, Kekaha and Hanapēpē. Like the Akuna, the Malama, all those Hawaiian families. He lived over there. And my dad was very good in Hawaiian - fluent Hawaiian. I don't know why my dad didn't want us to learn the Hawaiian language. Even Japanese, that time they had Japanese school. But war time they went close the school because the Army took over all those places. I understand Hawaiian when people talk, but to converse, no. Now we kinda older and it's hard to learn than the young people. I know my granddaughter, five year old, she good in Hawaiian because she go to the immersion class. Now they get school for that. You just let em go because that's the only way they going learn the language.

I was young, my dad when he was around with people he always talk the language, you gotta talk it every day and that's what happened. Like they would talk funny kind stories that we no can hear or understand, that's the reason why maybe because they talk that kind. So that's what happened. After we grew older we kinda know what the hell was going on he would explain to us. Like he use to tell us...oh you know he use to listen to the music from Alohikeya, you know who that is? He was a composer, a cracker-jack composer who lived in Waimea, I think he came from the big island. He used to write songs about how he used to handle a woman. So when the song is sung, so beautiful but the meaning of the song is nasty! And my dad use to explain to us but we were older already. We were married when he use to do that. We use to go sing that song and he laugh because we don't know what the hell's going on. He gotta explain to us what the song was all about. That's how we knew.... My dad never go high school, he went grammar school, but actually it's learning with the people in this difference areas, that's how he learn that. My dad knew his Hawaiian, nobody touch him. Even the name places of this whole island, when you ask him, he tell you what the name of that place like how these activists and all that he tell em the name. Even the other side Waimea side, he going tell you because he lived all over this island, that's how he knows. Like from the old people, the Hawaiians. I was real stupid I never go sit down with my dad because at the time I had family, I gotta go work. I use to work for Julia Wichman during the day and at 5 o'clock go work hotel til 2 o'clock in the morning, bartender. I did that for what 35 years. And then quit 1994. steady go work. And then go work only Limahuli. But I did plenty things in my life.

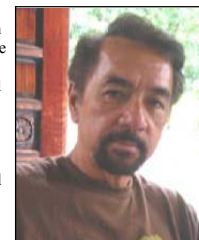
I think they (mom and dad) met over here because my grandma had three families - grandma Martha had three families. One was my mom folks - my mom and her sister - and then they had another family, Saffery. She was for Leonard Saffery. And then she came here and she married Kimokeo Kanehe, so that's how my mom moved over here. And that's how I think my dad got involved. My grandma was Martha Ka'aiakamanu from Maui - the family still there. That was her maiden name. And then she has two sisters in their 80s and they still living in Maui, I think in Lahaina. And they look exactly like her, the smile everything, reactions. That's what my cousin told me because they went down there, they had one reunion so that's how they met these people. And we were thinking about it because last year we went down for my granddaughter's baby luau in Makawao, but we never even think about it because we got so involved but by the time we came home was too late already. So we didn't have any time to go run around the island. [With Saffery] they had two; I think one girl and one boy. My uncle's name was Jack; now I forget what my aunty's name was... ah Sarah - Jack and Sarah Saffery. Kimokeo Kanehe, that was her third family; she had three children with Kimokeo Kanehe.

I don't have that much education, but in my own way, I see all around the way these guys act and that's what made me try.... Where my sister's living in Hā'ena that's my house. I went build that house as my memorial for my dad...but you know what, my dad wanted me to get the property but I wish I didn't get it. My sister, in fact, when my mom died my sister never go put that probate in court, because we were asked to; myself, my brothers Joe, Jack and George who lives in the mainland, and we got two acres in Hā'ena – that's what she got. She tells my brother George 'that's my property, my property' - til today. And you know what happened, she never realize today computer eh? My daughter Dancit can go in too, go find out who own the property; my daughter Leilani own the property - only her name on there. My sister went change um.... I paid the inheritance tax since my dad. Our property value was 40,000.... That's why the Hawaiians sell all their property in Hā'ena because they couldn't handle the tax. Like you know the Chu family they own below Limahuli, Barlow Chu – retired, worked with me. They had to sell um, forced to sell. No can handle the tax. All over there. With that kind price behind over there, no way.

I get a little over 20 when I got married in 1954 I was 19. I got married young. 54 years we were married. We had one reunion, on our 50th anniversary we had one party, my girl went throw one party for us at the Raddison, and that one they went surprise us they went catch us really off guard!

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**4.2.3 Clarence Medeiros, Jr.** My name is Clarence Medeiros Jr. of Kona, Haleki'i and Kanāuee, North Kona. I also reside in Honokua, South Kona. I went to school in Kona, from first grade to sixth grade at 'Alaē School, South Kona. Then I went to Ho'okena School, South Kona. When we -my dad and I- moved to O'ahu – he was working on O'ahu with some other cousins. We stayed in Kalihi, and I went to Lanakila School. We also stayed with my great grandmother over there. She was Mary Pacheco Costa Pimental, on my father's Portuguese side. She lived on Birch Street. Then we moved to Kalihi. Then we moved back to Kona, and I finished school at Ho'okena School until eighth grade. Then I went to Konawaenā High School. I joined the U.S. Army in 1969 until 1972. After that I went work but I also went back to school - masonry apprenticeship school in adult education classes at night and earned my journeyman certificate and worked as a journeyman mason as block setter, cement finisher, stone mason, and doing masonry skills such as layouts and estimates. I continued my college education at UH Hilo that included the requirements like English, math, and took up blueprint reading, structural engineering, Hawaiian language, Hawaiian history, ceramics; and I took some fun courses like golfing. I worked in the construction industry for a couple of years, and did some heavy equipment operator jobs too, because when I was in the military I went to engineering school and got a certificate from the military. I worked at the Kona Hospital in the engineering department and took care of all the electrical, nurse's call systems, etc. throughout the facility. I had to stop working because my injuries that I got in Vietnam was getting really bad and I get hard time move around to do my job because I would fall off the ladder when my legs would buckle and my injuries kept me in the hospital as a patient a week at a time. So I was asked to stop working and got disability income. I then stayed home and took care of my farms: macadamia nut, coffee, dry -land taro, a big banana operation, avocado, cattle, and horses, but coffee and macadamia nuts were the main money -maker for my farms; and I also grew produce for the house. I did that from the late 1970s all the way up until 2007 when I decided to let the pigs enjoy my farms because price for the macadamia nuts went down significantly and it was not worth the effort. We haven't harvested the nuts for almost a year now. The coffee is okay. I still plant the taro, and give the huli to my children and grandchildren to work, pass em on to the next generation to learn aboutem so they can continue.



So now we talking about Hā'ena. But since I'm talking about the taro, I wanted to say how I got involved with Hā'ena because Nellie, my wife, had a seminar on Kaua'i. She was there for three days, and during the day I was by myself and I had this rented car, so I went gallivanting. In preparing for the trip, I had to drive quite a ways to find this place where our relatives had property. In doing genealogy thirty years ago, somehow we get family over there by the name of Mokuohai. I did more research, looked through books and listened to stories from our elders that kinda pinpointed the family to Hā'ena. Then I got the book from State Preservation, Dorothy Barrere - she made this book that was an Ali'i Awards book about the *konohiki* that were awarded properties from the king. That name Mokuohai was in that book, the probate. This was all probates. It showed the genealogy; and then my genealogy was in this probate. It looks like since this probate was done, he had property on Kaua'i and it was in Hā'ena including three kuleana that were located across from the wet cave by the end of the road. Awarded was half of Honokoa Ahupua'a on the Nāpali Coast of Kaua'i.

So, during that trip I left the hotel and went on an adventure and came across this hill - ad for tourists located on top of the hill on the way to Hā'ena. So I went to inquire how or if I needed to make an appointment to go on the helicopter that was available, and how long it would take to go where I wanted to see; so the tour people said it would take about two hours, so I paid them and went. We flew along the coast, we flew around Hā'ena, Limahuli, and at that point I still didn't meet anybody yet; but I saw smoke by the wet cave area. We flew in a circle, looking down, seemed like people were opening up the land yeh, cleaning and burning rubbish and stuff. So, we made a couple of passes there and then we went along the coast, but while we were flying somebody was giving us the "birdie," maybe we were irritating them, tourists or what. So after I got off the helicopter and drove the car down and I seen people working there. So I parked the car, walked across, and talked to this guy who introduced himself as Carlos Andrade, Chipper Wichman, and his wife Hauoli. As we got talking it appeared that Hauoli was a relative of mine on my mother's side and she was related to the Leslie family etc. from Kona. They invited me and showed me what they were doing and they asked me what was my interest over there. I had my genealogy documents with me and the paperwork that talked about Mokuohai kuleana. They were really happy because they met me, a relative, who was interested. So they asked me if I wanted to come back and help them and join the organization, a nonprofit group. Since then I went back at least three times to help them with the lo'i, planting and clearing; but I haven't been back there for maybe six years or so, because I've been busy and had to take care of some health problems. I got to know Chipper and stayed at their place the second time we went.

The last time we went back Halau Hula O Maiki had a hula uniki there and we were invited to go because Nellie is with the halau, and they asked me if they could have a black pig because whoever they tried to get it from they couldn't come up with it. It had to be a black pig that was big for the occasion so they can eat the whole thing - as part of the uniki, the people had to eat everything, all of the pig, the whole thing. I went to my friend and he got the pig, it was about 80 lbs, and it was really down to the wire like they were gonna do it on Saturday, we got it on Friday and got em to Kaua'i. When we got there they had prepared the imu but it had rained so heavy that they had hard time getting the imu lighted. We had hard time making the water hot because everything was wet; but we got it done. The uniki went on and it was something that I was really impressed with - how they did their customary uniki. I was asked by Coline Aiu to sit with the kupuna on top where they had all the guests but I stayed down with Chipper them because I was talking with them about all of the work and stuff so anyway I felt too young to be sitting up there with the kupuna, and they respected my wish that I stay down and help with the work.

After the day I went on the helicopter and met with everybody, I still had two days left. So the next day I went to the real property tax office and met this guy named John Kruse who was working there. He made me all the maps that I needed, the areas that I was concerned about. Even Ni'ihau, he made some maps of over there. He gave me the tax map keys. I went to see the County guys the next day about any archaeological stuff down there, and they gave me this report and I was looking for the burial of Ka'aumoa - na Moa Niau, my great-grandmother who moved from Kona to O'ahu and then to Kaua'i under the name Moa. When I looked at the public notice

that they were looking for descendants of these people, I knew exactly who was there and who I was looking for, and that was the Moa family from South Kona - Kalahiki Ahupuaa, and I found my great-grandmother; she was buried over there. Alongside the Mokuohai family was family on my father's side; so I hit two birds with one stone and that fulfilled my search when I was looking for my mother's grandmother - my great-grandmother. So I found the link and made the connection. When I went to the census records I found some of our other family that moved from Kona and lived over there in Kapa'a and Waimea areas under the name Moa that came from Kona.

My great-grandmother was married to a Chinese; my great-grandfather was from China. Zen Sing. When I looked in the ship's manifest, I looked for Zen first - Man Sing that was his first name. But then my grandmother was born they did em just like the Hawaiian way, they drop the Zen and they used Man Sing. That's why her name was Annie Man Sing. Sometimes they would use Zen in the end, not all the time. The first name became the last name- same way in Hawaiian. The first name became the last name. A whole bunch of them came on the same ship, all cousins. I found all of the cousins that came the same time. Was good, because when you look back on the ship's manifest, they tell who the parents were and on the mother's side - Soong family. Sometimes it was Soong depends who wrote em yeh. Other times was Sun, but they were related to Sun Yat Sen.

The Mokuohai genealogy, the one that was awarded the kuleana in Hā'ena and part of Honokoa comes from here in Kona and also in Ka'u. They left Kona when Kamehameha's fleet went over to fight or take care of business with Umiumi; and he never came back here in fact he came back but he was awarded some lands and then had children over there [Kaua'i] - a different batch of children from the ones that were left here. That Mokuohai, his first cousin is Puhalahua that I descend from, who married Kanika. Mokuohai married to a La'a, and he had a batch of children that stayed in Ka'u. With another wife that was in the probate, they had a bunch of children that stayed in Kaua'i. Then he had another wife in Kona that would be the Ka'ahanui line from Kona and Ka'u, so there's a whole bunch of descendants of that Mokuohai. When I was on Kaua'i I met one of my cousins at the same time when I met John Cruz, I went to the OHA office and met one lady named Francine something. She was working at the OHA office in Kaua'i. I just went in there to ask her if anybody by the name of Mokuohai was registered or who come in to inquire of the genealogy to call me, and I gave my telephone number. So when I went back to the hotel waiting for Nellie to get off work so we can have dinner, my phone rang and it was Francine. She said you know had one lady came in here and said she was from the Mokuohai line just after you left that was registering at the office but her last name was Daniels, and she lived someplace in Kapa'a close to town. So she gave me the number, I called her and we met at her house, we had lunch and she had a nursery and was shipping all kinds of plants like ginger etc. to the mainland - really, really nice kind plants, good flowers. I helped her and gave her some of the information I had. She was going share some stuff with me of her line, and she told me that the Fernandez living in Kaua'i who was a state forest enforcement officer, the boss was from the Mokuohai line - a descendant from the William Mokuohai family that was living there, and his mother who was a daughter, married a Fernandez. There are other relatives but I never had a chance to meet any of them. She was gonna get back to me about stuff but she was in the Hawaiian Kingdom movement, and she asked me my opinion, and I think that might have turned her off when I answered her.

As far as the Mokuohai line, that was the only person that I met on Kaua'i. I still have to go find out about the Fernandez family and whatever other families - their names. The Mokuohai was the *konohiki* for that area, the kuleana. I think more at the Honokoa area along the coast. There's a big valley in that area. When I walked in quite a ways I seen some remnants - look like people planted coffee in there because I seen some coffee trees. That's some terrain for wet and steep. La'a was one of his wives. Another wife he had was Ka'ahanui, and that wife was from down in Napo'opo'o. And I also seen records of her with him. He had some other wives and had children from them. One of the wives was Kaikai. We come from his cousin. So if we go back to their parents, I descend or Puhalahua descend from Keli'iuwela or Keli'iuwelawela and Kuwahu; where Mokuohai descend from the brother of Keli'iuwela and the mother is 'Aukai; but his wife is just

La'a. [Mokuohai's father was] Kekoa and then the grandfather is 'Aikanaka. 'Aikanaka with Kama'i Keohokalole - that's where Kalākaua and Lili'uokalani them come from. But I come from 'Aukai, the second wife - that's where Keli'uwela and Kekoa come from. [Kekoa's grandfather was] 'Aikanaka. His second wife was 'Aukai yeh, sometimes known as Keli'i'aukai. I seen in different books, Keli'i'aukai, like at the Bishop Museum, it's Keli'i'aukai. In this probate, it's 'Aukai. Z. P. Kalok ʻŌukamaile's genealogy, it's Keli'aukai. But I saw on record where he had another wife - Kaiohūa or Kaiāha. And then they had one daughter named Liliha. Liliha, when they were doing the sandalwood trade 'Aikanaka was kind of involved in that; I'm sorry, would be 'Aikanaka's sister not daughter - Liliha. They had a fort someplace on O'ahu; they were bringing all the sandalwood down, and she was there. I think it was in Kamakau's book.

[ 'Aikanaka's parents were] Kepo'okalani and Keohohiwa. And Kepo'okalani descends from Kame'eiamoku and Kamakahekui. Kame'eiamoku is one of the royal twins; his twin brother is Kamanawa. But Kalākaua's father is Kapa'akea who married Keohokalole - he descends from Kame'eiamoku's brother; so they marry family down here yeh. [The twin's parents were] Keawepoepoe and Kanoena. That's where Alapa'i comes in yeh. Pi'ikoi. That's where all the Kawanānakoā descendents come in, from this Pi'ikoi line. David Kawanānakoā them, they all come from the Pi'ikoi line. Keawepoepoe is the common denominator coming down.... This is old stuff. But we were very fortunate that they had good lines and were easy to find. Once you find one everything, connect back to. That's why every time we get into some civil action kind stuff, especially with land titles, we most likely can get our native rights because of 1778 and when Kamehameha conquered all the islands, we can link ourselves back to almost every place where 'Aikanaka was, or Kepo'okalani, all the way back where they either fought or lived there or was in control of battles and stuff so we can pretty much be successful and in most of the cases in fact every one, we get our native rights, not just because of the third generation back but we can go back all the way to prove that in Makalawena or in Maheula or in Ka'u, each chief was in all of that area or buried over there or something. We are very fortunate we can get the proof with all this kind documents, archival records, we can connect to them. Most cases, hard to beat other people that have been on the land for a long time but they cannot beat our native rights, then we can use the old trails or practice some of the things that were done in the past yeh. [Mokuohai had a kid there also named Pu'uhalahua Mokuohai] he died, and then Pu'uhalahua named his child Mokuohai. That's the one I showed you the picture. You see this one here, Kauhewa, Mokuohai he get one sister and she was named Kauhewa. So both sides used each other's names so they no lose the name. So, when we name our grandchildren, we brought the names back, like Kapa'akea; my brother David, he carry Mokuohai; my grandson Lincoln, we named him Kawehe because of Kamae's father; and then my granddaughter we named her Analea, which is another version of Ana Keohokalole's first name; the young one with the curly hair, his name is Na'ea. Kanika, this one here, her father's name was Na'ea and he descends from Keaweheulu; so we named him Na'ea Keaweheulu.

One day, when my dad was still alive back in the early 1990s, we went and met with one of the Kawanānakoā grandsons, his name is David, and his brother was running for office- Quentin. He lives in Kona, he has an 11 acre coffee farm up in Holualoa - hard working guy. So we met and then we talked and shared, and we now know we're family; real humble guy, hard working. Eventually, I try meet as many people as I can and go meet the families, and then show em how and make the connection- find the missing part, and everything connect.

# # #

**4.2.4 Chipper Wichman** I'm Chipper Wichman and I was born on O'ahu (1957). Our family is from Kaua'i here; raised both on O'ahu and over here on Kaua'i because every summer we'd come and spend our summer with our grandmother who lived in Fā'ena. That's how I really got to appreciate and get to know some of the people over there. Around 1972/73, I came to live over here with my grandmother. Since 1976 I've lived here full time. My wife father's side, my grandmother is Juliet Rice Wichman, and her husband...well, my Tutu Man is and I were married in 1984 and we raised our kids in Hā'ena. I graduated from Roosevelt, then UH.



My father is Charlie Wichman, and my mother is Jean Wichman. My father was born here on Kaua'i and my mother, Oklahoma, I think; she came over here on the Lurline. I think my dad was working that time as Assistant Attorney General for the State, and he met her - my dad is an attorney. My grandparents on my -actually [my grandfather was] Holbrook Goodale. My grandmother [Juliet Rice] had two children from Holbrook Goodale -- Uncle Holby Goodale and my father. Then he died in a plane crash, and she married Frederick Wichman. And she had a third son, Uncle Bruce...he'd be my dad's half-brother. Then all of them - the two previous sons were adopted so they changed their names to Wichman, but Holby when he got older ...when he became an adult he changed his name back because...the Goodale line was going to die out.

To me it's [Hā'ena] a very special area. Very significant for the fact that...when you go back and look at how our *kupuna* looked at the world and their traditional life style, the way that they lived and their cosmological beliefs and relationship to the 'āina...it was all so very integrated. It was dependent upon their ability to have a personal relationship with the land and live a subsistent lifestyle to be able to have access. Much of that was factored throughout our *pa'e āina* when western style of land ownership and looking at the world came to be, starting with the Mahele and the creation of actual land ownership. The Mahele was really the beginning of the demise of the traditional Hawaiian way of life because of the factoring of that system.

**4.2.5 F. Bruce Wichman.** I am Frederick Bruce Wichman. As it turned out, I was born in Honolulu (1927) but the first seven years of my life were in Upper Wailua on this island. Then my father and mother moved away to Oregon, so I didn't get back here until 1945. And this has been more or less home ever since, I've always considered this home even though I've been all over the world. My interest in the Hawaiian stories and place names because as a child we had no electricity so the family always got together in the evenings and there were always stories told, especially up at Kokee or Kipu Kai. And it was just part and parcel of growing up with all of these stories. When I got back here, although when I got back in '45 I worked for the Garden Island newspaper for one summer under Charlie Fern, and he gave me a column to write on, 'Kaua'iana' it was called. So I began to put down certain things, and he would put me on to certain kind of feature article stuff ... like when the *aweoweo* came in by the thousands into Nawiliwili. It's always been of interest. When I got back here after I retired, I found that no one was using the Hawaiian place names; nobody knew the old Hawaiian stories, and so I started collecting both. So my 'Place Name' collection for the entire Hawaiian Islands is around 5,000 words now. I've got four books out with eighteen stories each, and I have two others already in manuscript.



I went to Menlo School in Menlo Park, California for junior high school and junior college. Got my AA degree out of that.... because we were shifting...I was put into boarding school in September of 1941...but of course with no chance to come home. So I just stayed in the school



campus through the summer...instead of just sitting around doing nothing, I took all the courses I could to keep busy, so by the time I was sixteen I had my AA degree. Then I got back to Honolulu before the war ended, finally got permission to come back. And then I went to the University of Hawai'i for one year, but got kicked out over whether I wanted to go to school or play bridge...couldn't do both! By that time I had no problem so I went to the University of Oregon and graduated from there. That was just when all the GI's were coming out...you could get on the waiting list but with no guarantee that's why I went to Oregon.

[My major] ended up being English Lit...it was easier to do. Perfect for what I'm doing now. Then the Korean War broke out....I had missed World War II by twenty days, and I volunteered and was in the first volunteer group in Hawai'i. Got down on to the pier to go to Korea and the officer came down and said, 'You, you, you...step forward...you're going back to Schofield.' The draft had just come in and they needed people who could man typewriters. And because I had a college degree, they figured I could type. I volunteered for Korea five times and ended up in Germany! But during that Germany experience I ended up being -- I was a Private First Class ...and because they had nobody else who had, they thought, any kind of qualifications they wanted to put through One -Star Generals and Colonels into 'public speaking', but they wanted them to be trained so they put me in charge of them. And you talk about a PFC -- telling a General what he was doing wrong and in public speaking! But that's when I really realized I enjoyed teaching. I could do it...I mean I didn't get court martialed by these guys! After I got out of the army, I took a year and Gladys Brandt had Kapa'a -- she gave me all but two days of the school year as a substitute teacher. So I taught everything from kindergarten through all of the highschool courses...so when I got to the university to get my life-time certificate I knew where I wanted to teach, which was the four, five, six -grade level. I was a pain in their neck because I already had practical experience and I was older than the other students in the class...and would tell the teachers that some of the theory that they were expounding was a bunch of whatever! Gladys never really forgave me for that year of teaching because I walked off with her daughter! But, I was a teacher and then we moved to Switzerland. It was our dream to be in Europe for a year, and we ended up staying eight. I did technical writing for a lot of small American engineer firms, which kept us there...happily. We raised our six kids there and then we came back to Massachusetts...finished my teaching career and came back...and now have started a whole new career. So that's basically the story of my life.

My dad is Frederick Warren Wichman. He was in the Legislative House in Honolulu from '31 to '33. He was part of the Massie Case that took place and he accompanied my grandfather, Charlie Rice, to Washington to try to persuade the powers that be that the Navy should not take over the islands. The Navy wanted to put Marshal Law on the Islands and run it. They almost got there but... I think that's one of the reasons why he wanted to leave. In his old time -- his father had come to Honolulu in the 1880s -- he answered an ad that King Kalākaua wanted an engraver and jeweler. My grandfather answered the ad and got the job! He was H. F. Wichman; he had a store on Fort Street at one time.

My mom was Juliet Rice. Her father was Charlie Rice, the senator ... from Kipu Ranch. Her grandfather was William Hyde Rice, and of course he is the one that wrote the book on Hawaiian legends....Bishop Museum Bulletin #63. It's called *Hawaiian Legends*, I believe. And he was fluent in Hawaiian, his father had come out as a teacher to the Wichman Mission in Oregon, but he and the Harris' were put up in the home of Mr. Hall, who had just set up the printing facilities in Oregon, and he persuaded these two couples not to go because the situation was so bad, so they stayed here. William Harrison Rice taught at what is now Punahou, the Royal School. Then he was the manager for the Lihue Plantation. And an even older branch is my grandmother, Grace King -- Grace King Rice, [my mother's mother]. Grace's grandmother had come from Mo'orea to here to Hanalei. A German ship came into the harbor, this was in the late 1830s, and the First Mate on board lay dying. The Captain had asked him what his last wish was, and he said he wanted to die on land. And so they dropped him off in Hanalei and she ended up taking care of him, nursed him back to health and they had six children! So part of the family has been here since 1830s. Her grandmother was Ann Mo'orea Henry, married Freidrich Wundenberg. And he is the

one who blasted out the Kalalau Trail. This was in the 1860s. He did not want to endanger any of the men that were working with him clearing this trail, so he himself set all 400 charges of dynamite that they blew up along the trail ...because he was the Superintendent of Roads for this district and for the Monarchy.

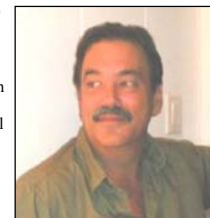
I had one wonderful time being a chauffeur...that was at the Constitutional Convention time when they were electing people for that. And I drove grandpa to all the different political rallies that there were... My grandfather was part of the militia in 1896. And her [my wife's] grandfather was put in prison for being part of the Hawaiian side of the attempt to put Lili'uokalani back on the throne. William Hyde Rice was a member of the Cabinet, I believe -- he was the Governor of Kaua'i. The family story says that when Lili'uokalani was deposed, before she abdicated, that he wrote her and asked her to come to Kaua'i and declare her 'kingdom' there. The center of her kingdom would be there. And evidently so did the Maui governor. Because she trusted the American word, she didn't...all she had to do was walk down the bloody steps...if she had gone and confronted those sixteen marines, they never would have fired on her. They wouldn't have dared. Or if she had gone down the back steps -- and taken a ship to either island, and then said, 'Here is my kingdom'....it would have been so different. There had been Lahaina, there had been Kailua, no reason why she couldn't have set up back in Lahaina, or our own Lihue.

When I grew up at Pihanakalani....do you know where the Hindu temple is now... That big house there...my father built it...that was my childhood home. My wife's grandfather was raised in Kaupo -- family name Kanuha...[Hana] -- that's like Ha'ena used to be. When my mother first moved out here when you got to the Powerhouse Road, after the haw hedges...then you came up over that Kaumaka Point and around, from there on ... narrowly, was just a track through the grass...sandy...double track...that's all there was. The nearest telephone was Mama Nakatsuke's store in Wainiha. As far as we were concerned that was the first electric line too. My mother got a phone call when John Hanohano would jump over and tell her, 'You have a phone call. Here it is. Call back.' But in those days you cranked the phone and the operator answered and you'd say that you were trying to get a hold of so-and-so, and they'd track them down, 'Not at home, but I think they went visiting somewhere.'

# # #

#### 4.2.6 Randy Wichman I was born at Wilcox Hospital (1957)

-- I was delivered by Dr. J. Kuhns. My father was a schoolteacher. We also lived in Hilo, as he taught school there. When I was six -years old he packed up the whole family and moved to Lausanne, Switzerland. From kindergarten to seventh grade I was in the Swiss private schools -- Swiss public and private schools. Coming back into the U.S., I went into a Naval prep school on the East Coast, Taber Academy, and put to sea when I was fourteen. Graduated at eighteen, came back home and then delivered yachts all over the world -- did the Atlantic, Pacific, and Indian 'till I was about twenty-one or twenty-two. Came ashore, now that I had all the experience I needed, but I wasn't rich enough to afford my own boat so I went to work with Grace Guslander at Coco Palms. Well, first I started at Hanalei Bay Resort...Hurricane Iwa knocked us out...right after Iwa I worked for Coco Palms as the Assistant Manager for Grace Guslander.



That was 1982 to '85. Then I moved into the museum. I was a curator for the Kaua'i Museum for four years or so. Then I opened up my own business, photography...the eight by ten glass plate work for various institutions and private collections. I accessioned private collections all over the State, and worked on the big public catalogs. In 1992 I was in a position to afford my own yacht. Purchased a sailing yacht, a fifty foot Swan from the East Coast, sailed her out to Hawai'i. And did five trips across the Equator, to Tahiti, Marquesas, Cook Islands, Tuamotus. Got married when I was forty -five, and have been ashore since. Numerous trips to Paris ...to Europe....as we go back and forth...numerous trips to the South Pacific...traveled extensively for thirty years or

more on my own...all over the world. I am the president of the Kaua'i Historical Society. I'm on the KHPRC, County of Kaua'i Historic Preservation Review Commission. I've chaired it several times over the years; I've been on it eight or nine years now. I think I've been Chair three times. I was a member of the Office of Hawaiian Affairs Historic Preservation Council. We dealt, at that particular time, with all the various issues that were going on at the time...repatriation, things like that.

My background is in this particular aspect, I grew up in a family that each generation made significant contributions to the history of Kaua'i. As my father has done all the place names and the legends, as my grandmother's done many of the botanicals and some of the pre-contact prayers. My great-grandfather made huge contributions, as well as William Hyde Rice, with the Kaua'i legends...and Harrison. So it's a multiple generational thing. Every meal -- three meals a day...it's the only thing that we talk about every day...all day. A lifetime of that...this is where we're at. And then I've been buried in the library several times. My grandmother had one of the finest Hawaiian collections. By eighteen I was already fluent in all of the material, and in many private journals that are in the family. Since then I've been through her library again and the Historical Society Library twice, which constitutes years...around three or four years solid when you add it all together...reading in the libraries. So I must be on my fourth time going through all the books.

Now Hā'ena, having been raised in Hā'ena...my parents were living...we owned the Ahupua'a of Limahuli and the adjoining five thousand acres to it. My ahupua'a is Hā'ena, my mountain is Pōhaku Kane and Makana. My chief is Lohi'au. I am currently on loan to the Wai'aleale Complex of Heiau, because as past president of -- I've worked on the *heiau* now for a good twenty years...have been chair or *po'o* of the *Na Ka Hui*.... I am currently the vice-president Nā Pali Coastal Hā'ena also; we've been doing the Nualolo Kai for twelve years...that particular one.

Hā'ena is the center of the Universe to me...especially Kē'ē - the very end of the world. We have a very unique responsibility...my grandmothers, both my grandmothers, Gladys Brandt and Juliet Rice had a love affair. Naturally being in my front yard this is the one place on Earth that I'm the most familiar with. The earliest stories that I knew were the Hā'ena stories. Over the years I've seen Taylor Camp come and go.

[Ohana]...Kanuha, Lawa'a, Kamakakuokalani, of course, and from the Kona side -- Kohala to Kona -- they were the first architects of Pu'u Honaunau over there. We can trace our ancestry back into the main charts, and even to a direct ancestor that actually started the Pu'u honua. They were the third banner carriers for Ku-ka-ilimoku during the time of Kamehameha, and that's why we happened to be on his side of the fight and naturally made it. They were generals under him. They fought, killed, and died for him. And in return Kamehameha gave our family extensive war prizes on all islands, except for Kaua'i. Our lands can be easily traced through us. My grandmother ended up with Ka'anapali. She sold it in the 1960s, but clearly Ka'anapali was a war prize for services. We ended up...we had Pelekunu; it was another war prize of our services to Kamehameha on Moloka'i. Our lands on O'ahu were also services from the battles there. My grandmother was Gladys Kamakakuokalani Ainoa Brandt. My grandfather was also part-Hawaiian from the Kapuna'ai and Naele from the west side of this island. So I have both moku old Hawai'i and old Kaua'i also in the line. Although I suspect that my particular line here on Kaua'i were occupation soldiers after the Hume Hume Rebellion. I'm just suspecting it, that they were occupation soldiers. My grandmother [Gladys Brandt], of course, was a matriarch -- as both my grandmothers were. I'm a matriarch male and real proud of it...our men are strong but our women are even better. So I was guided by many very potent and powerful women....I can take it! Don't stand close to the fire if you can't take the heat...and I always could. So Grandma Brandt...was my mother's mother. My mom is Loretta Kuuleialoha Brandt - 'Ainoa-Brandt. Nawa'a also Kanu'u - Nawa'a and 'Ainoa are -- we suspect was a name change by my great-grandfather after he was jailed for his role in the Overthrow. But I believe more the story that said he hated his father and that he wanted to break the *kapu* that came with the name, Kanuha, and that's why the name Ainoa is there because that's the lifting of the *kapu* - that it is free, so I suspect that more.

Yes, he was jailed and all that, but I think it's because his relationship with his father was...he needed to break the *kapu* or the stigma. The Provisional Government [jailed him] for his role; he was right there next to John Wise - they were really good friends. It's an old family related to John Wise side of it too. He was right there with Prince Kūhiō also.

On my father's side they arrived here on the ninth company of missionaries. They started Punahou School...1840s. By 1850 they were here on Kaua'i. That was the Rice's. So they were here by the 1840s. He started Lihū'e Plantation...started all the agricultural ditches...really revamped all the sugar production...hated it, got out, and got into purveying. So for the next four generations we did all the beef, the horses, the milk....for Kaua'i. My great-great-great-grandfather, William Harrison Rice, was the governor...the first governor after the massacre...after the wars....was Ka'hala'ia...and right after that was Ka'iki'o'ewa, after Ka'iki'o'ewa was Paul Kanoa...well, Ka'iki'o'ewa...his wife Keaweomahi took over just for a little bit then Paul Kanoa comes in and for a very short period there's another one...then William Harrison Rice is governor...then William Hyde Rice is governor...he takes it through the Overthrow...and then Charlie Rice...my great-grandfather was the senator....but each one of their brothers - William Harrison Rice's brothers, William Hyde Rice's brothers, and Charlie Rice's brothers, were the sheriffs and judges. Go figure that one. But I think the history books are real clear, they were fair. But you can make up your own mind on that aspect of it. The 'Wichman' comes in from H. F. Wichman who Kalākaua really admired, and brought him to Hawai'i. He was the one who did all the metals and all the jewelry, and all the things that you see in all the photographs that these Ali'i's are wearing. After the Overthrow they started the jewelry shop, H. F. Wichman, both in downtown....

I think the last part of it essentially is that I'm *po'olua*, child of two fathers, my second father is Thomas Hashimoto. I do belong to the Thomas Hashimoto School of Rock Wall Building. I also belong to the Thomas Hashimoto School of Fishing and Fishing Resource Managements. I belong to the Thomas Hashimoto School of Ethics and Hard Work. His training has helped me in my life and a great deal in all of my heiau work, and so I'm deeply appreciative to his training and nurturing my whole life. [Growing up, going to Hā'ena]...absolutely. All over, all the time, especially out to the *heiau* area, to the dry caves, to the wet caves also. I spent a great deal of time working in Limahuli. I was with Thomas Hashimoto learning how to fish, throw a net on these whole areas. I'd be there early morning, mid-day, afternoon, even at night I'd shine my spotlight over the reef just to see what the fish were doing. I very rarely fished on my own; I always carried net for Thomas Hashimoto. But I always kept an eye on it...as he trained me to watch the fish...but I always kept an eye and would report to him every time I saw the black cloud. For him he called it 'black spot'...but because of the *kauna* we needed to use in all our fishing activities, we had our own separate language. He had the names of all the different houses...for instance, the *moi* that was in front there watching through the net, he knew exactly the next house they would run to. And all the way up from Kē'ē at the end of the road, all the way up into Wainiha he knew all the houses of all the fishes there. He knows them.

A *kapu* is a *kapu* and to me there's no exception. I've been *kapu* to bananas for thirty years because it's Kanaloa's *kino lau*. Being a navigator, a deep ocean person, out of respect for Kanaloa I didn't eat any of his *kino lau* forms. It was important for me when I was eighteen years old to know what it was like to live under *kapu*. And after thirty years of it, I can tell you, it's not a big deal. It's very simple. No is no, there's no such thing as any exceptions so don't be tempted by anything. I'm sure I'm not under the real serious *kapu*'s that once existed prior to the lifting of the *kapu*. But it was important for me to understand - to have *kapu* in my life and to learn to live with it. I make no requirements on anyone else, this is just me.

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#### 4.3.0 Land Resources and Use

Land resources and use change over time. Often evidence of these changes is documented in archival records. Occasionally cultural remains are evident on the landscape and/or beneath the surface. However oral histories can give personal glimpses of how the land was utilized over time and where the resources are or may be. Oral histories also provide confirmation of cultural practices. Based on archival documents and subsurface studies the pre-contact uses of the project lands were ceremonial, burials, habitation, marine subsistence and agriculture. Based on archival and ethnographic data the cultural and/or historic use of the land in the project area was agriculture, recreation, subsistence fishing, and hula activity.

##### 4.3.1 Hā'ena in Halele'a

[Hā'ena] in Halele'a, but when you look at it [on the map - 1901] it's in Nāpali really, yah you know, that's why they went put that like that because it's in Naāpali. But now just like they been move em around so now stay in Halele'a, - Hā'ena. See Hanalei is way down here. But you know what they did now, they been put Halele'a and Nāpali together now because nobody go represent this place, Nāpali, so we the ones stay take care of this too. This and this. Because me the moku rep for over here...for the fishery and for the moku too [like the *konohiki*] [TH].

Hā'ena is an ahupua'a. The boundaries are kind of unique. It's real interesting during the Mahele, they were arguing over where the boundary between Wainiha and Hā'ena actually fell. They ended up creating a point. It's actually ...there's a small *papa* kind called Haki (?). That is the eastern most boundary of Hā'ena, and from there it runs kind of an angle up towards Mānoa right behind where the Hashimoto's property is. And then from there it goes more inland up towards Mānoa. It includes upper Mānoa Valley and upper Limahuli Valley, and then it comes down by Hanakāpī'ai, it includes all of the Limahuli watershed and then it comes down by...there's a peak called Maunapuloo and from there it goes down by Hanakāpī'ai. So most of the first two miles of the Nāpali Trail are still within the Hā'ena ahupua'a [CW].

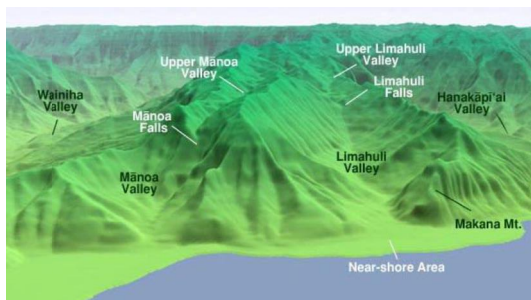


Figure 10. Valley Systems of Hā'ena (Pacific Worlds)

1901. Yeh, this is old map. It's not a new kind, - this is when was Territory yet. But you can get it in Honolulu this map, I think, because this came from Ilei [Beniamina]. Ilei went give me this map. She said "Uncle, you keep this one, this is an old map" and she like one of mine. But I say I don't think so I going give you mine. They wish they could do all their papers of the moku just like mine eh. Get all the names along the coastline. But no more people that know that - they all gone already [TH].

Because Halele'a goes way up to Namahana over here. Shee, Namahana way over here you know. I see em over here. It's past Kalihiwai, that's the boundary for Halele'a. But now stay mark different, the map now, the color [Crown Land = Yellow; Government Land = Green; Nāpali and Hā'ena were "green" or government lands] [TH].

The actual ahupua'a of Hā'ena was not formally partitioned until the partition process began in 1955, it was concluded in 1967. It wasn't until the conclusion of that that the land was really truly cut up and divided and distributed. It was really from that point on, 1967 that we began to see real change in Hā'ena. So change, in my mind, change really began after 1967 when people could buy and sell and develop property. The other thing that changed in 1967 with the completion of the Hā'ena Hui Partition was the fencing of the cows. The Hui allowed the cows to run unrestrained over the common land in the ahupua'a, once the partition was completed the cows had to be controlled or locked up. Most people didn't have large enough acreage to have cattle, so the cattle began to disappear [CW].

##### 4.3.2 Park Lands: Former Residents

What's really interesting was that *maka'ainana* were able to purchase that *ahupua'a* back - I think it was 1875 when they formed a Hui, Hui Kū'ū'ai'āina o Hā'ena. That purchase enabled the Hawaiians living in that area to continue their traditional lifestyle. And if you think about it, in 1875 there were still many *kupuna* alive who had been born prior to Contact [pre 1778]. There was still a lot of knowledge of the old ways. And being that Hā'ena was so rural, it was isolated, and being able to more or less recreate their traditional land stewardship model through the purchase of this and the ownership of it in undivided interest, it allowed Hā'ena to really move forward into the modern era in a much more traditional way [CW].

In the Hā'ena Hui [my family] originally purchased as they were doing the Hā'ena Hui because my family had been living already right there on the flats, on the side of Kē'ē Beach where the Morays are and others. But the family had been living there in Hā'ena for quite a bit, so it was just across the river, right across Mānoa Stream. So they were there when the Hā'ena Hui [formed] [RW].

The Provisional Government immediately after the Overthrow banned everyone from Kalalau and dumped them on the beach right here at the end of the road. And there they made their way in through Kaua'i, some stayed in Hā'ena; others moved on, others moved off island and went elsewhere. But the entire Nā Pali Coast essentially came in on the beach right here and then entered into the new society, if you want to call it that, from Kē'ē Beach [RW].



Photo 43. Kē'ē Beach at the end of the road.

So I was there as one of the original members of Hui Maka'ainana. And I was there with Carlos [Andrade], Chipper [Wichman], my father, and others...in the initial conceptualizing. I was there when the master plan originally, in the '90s, was being talked about. I was there when it was pulled off the shelf and put to bed. I'm aware of some of the recommendations in that particular plan. Photographically, as president of Kaua'i Historical Society we have quite a photographic data bank in our society. We have all the original Hā'ena Hui materials, so I'm familiar also with that particular aspect of it. But my expertise is more pre-contact. Let's say Chiefess Kekela on back [RW].

[From the Park stream all the way to Kēʻē Beach, before the tidal wave, was] nothing. The only house, you know the road going inside, was the old man Hailama. Only the old man Hailama use to live inside there, where \_\_\_ own now - that was the only house that I know of that was down in that area. Had that house and get the State house that was Montgomery house where the State get now. Get one house down but you no can see em from the road. From Kekuhi to Kalinakaui and below Kēʻē behind the point, then get come Kauila. But anyway, now gong back to this, it's some place in this area - the Montgomery house is on this side - you gotta drive past the stream and before you go down the hill get one road going down there on the other side of the river, I think this is it, because this is the parking lot. Yeh, this is the place, the clearing, that's where that house is. You kinda halfway down to the ocean. [ and] that's where that lady, that redhead lady she get her house, and I think this is past this place right here -- this bushes over here. But this belong to the haole, and this one over here. This over here I don't know who own this house over here, and then this is the Moore's, that's their house. And then this is the road, and then the black boy, the one went marry Kana's granddaughter, Birdy Birdy, that's his place right here, clearing right by the pear tree right around that bend, now he been clean em all , he went build one little house down there, but never clean when this map was made[TH].

Mahuiki was one of the families that you can trace all the way back to the formation of the Hui Kū'ā'āina. Their name...you see it in different variations...but I think originally it was Mahu and then it became Mahuiki [CW].

Well, there was Francis Brown who originally bought it. My grandmother before she passed away deeply regretted that she didn't buy up all of it...and she could have. She thought the people that would come into the area would recognize its cultural and sacred significance and not build. But she lived long enough to prove herself absolutely dead wrong on the subject. People moved into the area had no connection whatsoever, did whatever they wanted to as if it was some piece of property on the mainland somewhere with no history. She deeply regretted it [RW].

All I remember....by the time I was growing up over there Mr. Allerton owned that house and then he traded it to the State. I think that trade was right about the time the partition was complete, about 1967. I think before Mr. Allerton was E. E. Brown... Allerton's house burned down. It was like his tool house or something like that. And I think it's okay to leave that up there, I think it's not really that visible in terms of impacting the ancient cultural use. Back like twenty years ago we were working with the *halau* and stuff to try and figure out...sometimes they need a staging area and a place to get ready. We were looking at what was going to happen to the place where the Allerton house was after it burned down, so I think its important [CW].

They [Allerton cottages] were all there when we were growing up. The workmen house were all there...the workmen use to live there yeh [TH].

It was in the early 70s that I got to come and actually live out there in Hā'ena with my grandmother. Those were really amazing years because it was still very undeveloped, still rural. The hippies had caught on and they had found Taylor Camp, which came really out of the partition process and the State's desire to acquire that. Howard Taylor had that conflict with the State and so he opened his property up to the hippies. And so it was kind of an era of change, it wasn't only Hawaiians and locals over there now, you were getting hippies and you were getting surfers...it



Photos 44-45 Allerton Estate

was kind of the beginning of a wave of newcomers that were coming there. But it was a time where there was still a lot of, how would you say -- among the local people -- still really traditional. The families were so closely knit and inter-related...there was still that real sense of aloha and mahele...helping and sharing with each other...it was a wonderful period of time [CW]. Barlow's [Chu] property was right across from Limahuli. That's where he would come out and clean over there. That was their family's property until they sold it. You know who used to live with Barlow...and live down there, was Carlos Andrade [CW].

Most people, they don't call it "Taylor Camp" already. The whole lo'i restoration probably...to me we call it Kēʻē...but to me Kēʻē is more down here. The *lo'i* is not necessarily, like you said, there would have been a more specific name to that [CW].

This place right here right by the Taylor Camp was Kuakala and Kuahiwi but that name Kuakala was the one right near the shore that's why went put em like that and Pulimukeiki is a little deep water over here and then this is Laikohola because that's where old man Kalei Kelau went get lost and they go send men down there in 1946. That's where we use to go fish down there. But he went die in that tidal wave. And the only house down there had was old man Kelau's house, was down in this area here. That's the only house had down there...down inside this area, below the parking lot, because over here get taro patch. That's where the taro patches are right in this area, this is the meke. All of these places get iwi over here, all these places. Only the old man Kila and like the old man Kila's house, the old man use to live over here the old man Kalei and Kila right next to each other. You gotta look back -- to back here. Right here, that's where they use to live in the back here at Laikohola. You see had different people planting over there. But you see at the time when the people were planting there was undivided interest. So you go claim wherever you like, and then if you had shares to cover what you had, that's yours. Because they went choose taro patch and house lot eh. That's how they did it. That's why some of the properties where they owned like for example like the old man Kila, what he did he took property right next on the side of us and that property use to be my grand uncle's property, use to be five acres but because my grandma went go marry him he gained that half because my grandma died young, so he went get the property was 2.5 acres too. So what he did , he went go take acre and half down the lo'i and one acre where the house was to make up his share. That's what happened. Was right inside here. Below where our taro patch area is right now. Inside here, was close to the kind he was planting all inside this area here right below the parking lot. All inside here, where all the lo'i use to be him, the Maka the Kelau families and that's about it and us, but we were planting on rice land at the time. Adjacent to us was Kinney [TH].

The Kinneys owned property out there [Hā'ena] too. I think they come from Kalalau too. That's why they been own land over there and they get *kuleana* over there. The one house went buy in the back of us Limahuli Garden, that's from Kinney. That's Kinney kuleana. So they own that place because get royal deed, the *kuleana*. So they been own that place. And you know where that place stay? Right inside here. Up across the river. Up inside here. Gordon Haas and Roberta Haas own that place. You know that place windy, that place stay right in the wind channel [TH].

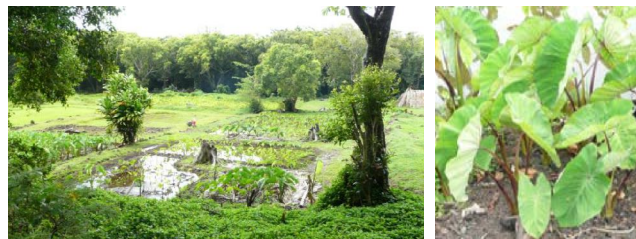
Some of the old families that I know are still hanging on to *kuleana*'s right there - the Wann family, Presley Wann, Lei - the Wann family - W-a-n-n. And recently having gone over the *kuleana* claims and then re-familiarizing myself with the names - some of these families are still running around too, and I would imagine, if give a chance, they would take certain *kuleana* in this too. And the other one is Keahi that I know o, that's also in there [RW].

#### 4.3.3 Park Lands: Taro Agriculture

I planted all on old man Kila's place. I planted all over here in 1959, after the 1957 tidal wave until 1966. I pulled my last crop from here in 1966 because the State like buy em because of the hippies. That's why all the landowners been sell to the State, that's why the State been own these. But you know what? That was fine. The State went go buy em with federal funds. You would think that's federal place not State. By that time Kila wasn't here already. Too old already, he



was on O'ahu with his daughter. By that time maybe the old man went die. Because I went to Honolulu go see the old man for the land so I can plant taro in 1959. No I seen him in 1958, 1959 I been go plant over there because I went clean all the sand in the taro patch from the tidal wave before I went plant that place[TH].



Photos 46 and 47. Restored *lo'i kalo* in Hā'ena State Park

[We plant] what the ground can handle. Not every variety. The variety we had was *nukea*. That's the dark green one. And then we had *peali'i*, *lehua*, *piko*, get the black and the green — *hapu'u*. *Hapu'u* get the black and the green kind, dark stem on the bottom. Either *nukea* or — that's the best [for poi]. White, when you bag the poi just like sour poi, but *ono* that poi when *poha*. *Ono* that poi! That's what I like, in fact, we all like that. We go pound the poi it still white just like sour poi, but *ono* this poi when *poha*. But now they get more *lehua* now eh. *The hapu'u* is good, the *hapu'u* grow like the Maui taro because he grow big eh. Because before, you can tell the *hapu'u* because he going grow higher than any other taro. The *hapu'u*, the black one or the green one. That's the way it is, just like the Tahitian kind now. They grow like that and the *huli* big like this, big just like one coconut. Like when I went plant the Maui one here in Hā'ena, that buggah was just like one coconut. Nine taro for one bag. Big, enormous — the taro was big like this! The first time I went plant that, when I went to throw fertilizer, I had to go underneath the leaf to throw the fertilizer because was big like this. The first time I went plant the Maui one down in Hā'ena in 1969...that's when the *huli* came around eh. I had some for my friends, that's how we went plant. [Nukea] that's what I like. The other *ono* poi, well, all the poi is *ono*. You see, like the *hapu'u* and the *piko*, the poi is gray, it's not white, it's gray. And then the *lehua*, the poi is red. And then you get the *peali'i* is maroon the poi, on the dull side the color — maroon, just like the purple potato, something like that, the taro. So when you going make em and the buggah come *poha* he going come maroon, like the *lehua*, little different. That's the pure, not all mix up kind [TH].

Well, when we were growing up it was being actively farmed. Fred Fuji was growing *kalo* down there. Uncle Tom was growing *kalo* down there, Uncle Jack, his brother. There may have been a couple of others, but they're the ones that I remember [CW].

[For leaves] any one. But you see, the Maui is the best because no itchy. The one real itchy is the red *lehua* one, but nobody get today. They get all the Maui. So all the other taro even the Tahitian, it's good the leaf and the stalk. No itchy. But the *lehua* you gotta cook em good, you gotta cook em overdone, and still you going feel that little bite. But before the people eat em. Depends what we got. But then of course we get that other one, what they call that, the one that grow in the valleys like that, sweet one, you get that because the taro small like that eh, and the *huli* and the leaf, but sweet that one. I forget what the name that was. And everywhere we get spring, river, or ditch, that thing grow. Like down above I could see em from the ocean, growing in the stream. Because it's kinda high on top where get the house, I forget the place, in fact before is it Hanako? Or right after Hanako? Get that place, you can see on top eh. People use to live in that valley, still get that taro on the side of the river. In fact Kalalau, only place get. You can go take the whole stalk and eat em[TH].

Like up here get all kind, even some from the South Pacific. In Palau, they eat taro. They don't know what ulu is because we get one student come from Palau, they eat taro and fish. That's what they eat down there, that's their staple. Not like the Samoan, the Samoan's staple is ulu eh. But the south Pacific people, theirs is taro. We get taro over here that come from Palau. They no like em for poi, I don't know something's wrong with it. The Palauans no like that, but for go eat like that regular, it's good [TH].

[Poi Mill], that was old man Kina, he had that thing over there. The two places that had that was there and Rice. You know where the pasture is, right across the pasture get that gate over there? Right inside there, in fact the house get one houseright there with one white fence on the roadside, use to be right in there. Long house, one long roof house, but only get one two-cycle engine to grind the poi. And Kina had the same thing. Only few people owned that kind machine and of course old man Alohikea had one machine. Sanborn had one in Hanalei, that's the only places that I know had the machine, the kind mounted on a regular basis, they grind. Although my grandfather had, he went go make with the model A, the tire. Start the motor and put the belt on the tire and turn the grinder, that's what he had with the model A. The Kalaaua's had the same thing, with the model A. Some had em on the drive shaft, Some had em on the tire with the belt. I seen that that's why I can talk about it eh. When I was planting taro down there, the thing was in the storage. Was inside the place where I store all my tools. And everything was all intact eh. After the State went buy em, everything went, and we had two hurricanes so everything went [TH].

We have the connection of Limahuli Valley itself which is where a lot of the food was grown that cared for the community that lived out here full time. So I believe you had some of these taro patches right here along the edge of the Limahuli Stream, but also Limahuli Valley was really the entire bread basket that fed the religious center at the end of the road [RW].

At the end of the road here used to be functioning taro patches. And they have started that *lo'i*. Of course the State Parks should never have allowed them to go out of use at the beginning anyway. And there's no reason why that can't be put back and turn it into a sort of a place where people can come and see certain of the stuff growing. Would have to replant the *hala* trees....but I don't see why you can't allow some place where people can come in and do *hala* weaving....fish netting...fish hook making. There's a lot of stuff that can continue the culture; that would go along with the eventual plans for Kanehameha Schools for Lūmahāna....because their idea is to turn it back into a functional *ahupua'a*....but of course that's going to take years of planning and lots of money [FBW].



Photo 48. Broad-leaf *hala* at Kē'ē Beach

When we went in originally with Hui Maka'ainana o Makana [1998 or 1999], was there when they founded it, was there when they first went in and they opened up the *lo'i*, worked it and got at least three to four of the *lo'i* up and planted and operating. I was there with Todd Musashimoto -- he did all the inital clearing of the land and subsequent planting .... I think one can easily vision the areas that Hui Maka'ainana o Makana can expand to taro patches. I think we can begin to envision what the experience of our visitors is going to be when they arrive there. That immediate connection into the taro patches to begin with, I think is going to be important. Having a trail that actually loops around the ocean front and actually makes a full circle from the internal parking lot, which we know is going to have to be expanded and is not enough [RW].

They were talking about that way before that guy you know that guy that went go draw the plan and then they went run away go mainland. Run away go home -- that's when we started that project. That's when we go open all that taro patch for the archaeologist go inside there go map



em. They had all this drawn up already, but like I told Chipper, you guys go do the paperwork, we go do the tackling part, which I did go clean up all that place [TH].

#### 4.3.4 Park Lands: Other Vegetation

All these guys who plant *hau*, the *hau* do damage. Where I was planting down Kē'ē no had *hau* before you know. That hippies went bring over there go make the kind shed that's how that thing went grow all inside there; before no more *hau* down there - only had palm trees and *kamani*. After 30 years I been go back inside there, I went kinda lose my bearings eh because everything is all high. That's why I told them to go back over there go plant down there, they was going open the one right by that house where I was telling you, Montgomery, the State ho use. They was going cut over there, the trees like this big! How you going do that in the taro patch? The ones down there at least not big like that - stay all on the *kuleana*. On top the bank, not inside, had some inside - I been get em with the backhoe. The excavator, I been dig em all out. Although we not supposed to take machines inside there, but we go with machines inside there anyway, I did all that thing up. That's why now stay clean eh that place. I take em all out [TH].



Photo 49. Hau grows in several places



You know, it just was always...I guess at that time it just seemed so...it was a lot less overrun with alien vegetation; it was a lot more open.... The coconut trees were all there but a lot of the octopus tree, and all of that stuff that's covering it all now, none of that was there. There were vines and stuff, but you could see the rock walls, you could see the area. None of those *kamani* trees were covering the inside side of the park, right behind the lo'i and all of that. The ironwood trees are still there, were there originally. But it was an area that was never crowded [CW].

Photo 50. Coconut trees in HSP

#### 4.3.5 Park Lands: Activity

Well, when we were growing up it was really different...it was still very rural, very little tourism. Maybe once a day the "stretch"...we call it the "stretch", I don't know what you call it now. Actually, it looked like the long limo kind of thing. That was the tourist car, maybe once a day the thing would come down there. The cows ran wild in those days ....they fenced in the people... now the people run wild and they fenced in the cows. I think it was better before. It was just an amazing place to get to be. It was so beautiful [CW].

The Kauluo pā'oa (heiau) and Keahualaka, you could see it from the beach. You could go down there and go to the beach... it was just a great resource [CW].



Photo 51. Can no longer see heiau from Kē'ē

#### 4.3.6 Park Lands: Kalalau – Hanakāpī'ai Trail

[Freidrich Wundenberg, Grace Rice's grandfather] is the one who blasted out the Kalalau Trail. This was in the 1860s. He did not want to endanger any of the men that were working with him clearing this trail, so he himself set all 400 charges of dynamite that they blew up along the trail... because he was the Superintendent of Roads for this district and for the Monarchy. Because he

also did a lot plant experiments to see wh at plants would grow out here, h e's the one that started the oranges and the coffee. So along Hanakoa and Hanakāpī'ai [trail] you'll still see coffee trees. But the blight hit the orange s and blight hit the coffee. They wanted to be able to bring out the produce out of Kalalau. I believe they thought it was easier to come out this way -- one of the reasons they ca me this way was because Nu 'alolo was almost impossible to get in and out of except by sea. So that you had Kalalau, Hanakoa, Hanakāpī'ai, all of which were heavy with oranges and coffee. So his instructions were to build a trail that was wide enough for a fully loaded *burro* to move comfortably, which makes good sense [FBW].



Photos 52 - 54. Trail signs in Hā'ena State Park.



#### 4.3.7 Park Lands: Taylor Camp

Elizabeth Taylor's brother brought this piece of property that's right there on the bay, and the State condemned this particular end of the road in the early sixties or so - scattered all the owners and the taro farmers to the four winds, locked it down. This guy Taylor, in anger allowed these -- I don't want to stereotype or anything like that, but allowed a commune to begin to form that went unchecked for a long time. I remember the hepatitis epidemics one after another, almost non-stop epidemic level hepatitis with all the various strains, the significant trashing of everything and the whole subculture that happened there... Taylor Camp occupied all of this [looking at map] - this was all Taylor Camp. Well, actually it goes further out; it's actually all of this... Taylor Camp just refers to that particular time in history when it was overrun by the commune [RW].

Photo 55. Kalalau-Hanakāpī'ai Trail

#### 4.3.7 Park Lands: The Future (Master Plan)

We know the helicopter pad's got to go in there; we know that certain portions of this is going to have to be data recovered as you might be taking out a couple *lo'i* in order to actually put in the basic infrastructures that you need right there. RW

A lot of this stuff in here - the vegetation is *kamani* - there's a botany aspect to it too, so that's a separate 'House' too. There's a whole *lā'au lapa'au* aspect that could be done here too, which actually creates a whole other separate 'House of Botany' - again, a completely different discipline, and under different goals and objectives, but still important to the big picture. RW

Prior to the commune it was the Taro Mill - the footprint is still there so, I think, interpretive-wise that's still pretty cool. I think even to allow the Hui Maka'āinana to have the potential, if they should want to, to grind the taro in the original footprint, or close to it if you wanted to keep it. We can let SHPD decide on that one, whether we can use the original platform or build one right next to it. But the taro production and the taro mill, they are capabilities - could be there if they needed it - I know it's a long range plan but this is what it's all about. It's long range [RW]

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#### 4.4.0 Water Resources and Use

The Hawaiian word for fresh water is *wai*; the Hawaiian word for wealth is *wai wai*. This is because of the value the ancient Hawaiians placed on fresh water. For taro farmers water was a crucial resource and a lot of effort was employed and strategies used in order to get it to the *lo'i*. Fresh water was also crucial in the lifecycle of stream inhabitants such as the *o'opu* and *ōpae*, as well as some of the marine life that depended on the benefits of *muliwai* or brackish water areas.

##### 4.4.1 Fishponds and Fishpond Fauna

The big *meke* was over there and had plenty water inside down there by Kē'ā. That's the only local ones down there, that one. And then of course up the one below the water tank, the one past the Wichman's...going down Kē'ā. All inside there, I don't know if had *meke* inside there or what because by the time we been go had all grass inside the re - *honohono* and *pukamole* and all that. I don't know if had taro patch inside there because we never go walk all inside there because it was always like that - like now get the Jobs Tears - more worse [TH].

We use to get *o'opu*, *akupa*, and I think crayfish; that's all I went see in there [fishponds], I don't know if had mullet. And of course had bull frog. The crayfish had plenty down there. We use to eat the crayfish, catch em, rinse em out in the 5 gal. water and *pau* we fry em in shoyu, even the sand crab we do that too, fry em and eat em, and that time was *ono* because get big meat right inside the leg eh just like how the crab you know [TH].

These can also end up being working fishponds too. And so that could be another aspect under the fisheries in not only managing the *kai* fisheries but the *wai* fisheries also. So those are there as far as expansion capabilities. It would be nice to have it as a larger master plan ...and step by step work up to it [RW].



Photo 56. Part of former fishpond and marshlands

##### 4.4.2 'Auwai

There were two main *'auwai* that came off of Limahuli Stream and this one here came down, this was the primary one [CW].

It was after the partition - I think they were bulldozing that when they were trying to clean up the Taylor Camp scene over there. So they've totally destroyed the *'auwai* system. And when they cut the water off to the *'auwai* system then the *lo'i* became useless. It became overgrown with all the trees. Then when we went in to try and clean it, to map it with Alan Carpenter and Mo Major - it was a huge job just trying to get it clean enough that we could actually go in there and do mapping. So what you see today is the result of a lot of work. A lot of years and years of work just to get the *lo'i* exposed - we've had to run a pipe down there to get the water back because the *'auwai* system was destroyed [CW].

The water is going to be coming from Limahuli Stream. Right now, I know, it's tapped up above the road. In Limahuli it actually comes down through the *'auwai*, crosses underneath the culvert, and reenters into the *'auwai* that starts to feed the *lo'i* that are actually down there. That water has been flowing for awhile now. We may want to take another look at the water supply Hui Maka'āinana expanding their footprint. Right now the last time I saw it there were four big *lo'i*, however I know that Thomas Hashimoto had two or three other *lo'i* in the areas ...and I know he wanted to open up too. So I think in visioning a larger master plan for the actual footprint that Hui Maka'āinana can expand their *lo'i*, with the foot-trails that are coming through there ... that we keep it pretty safe ... the terrain itself is not necessarily really difficult. Although slightly undulating, the view plains through here are absolutely stunning [RW].



Photo 57 Modern 'auwai system.

##### 4.4.3 Hā'ena Watershed and Water Sources

Limahuli is the primary watershed, the primary watershed or valley within the ahupua'a. Mānoa does have a perennial stream through most of the upper Mānoa Valley, but there are times when it dries up by the time it reaches down by the dry cave [CW].

Before times everybody would just drink the water out of Limahuli Stream ... our house...our water comes from an ancient spring called "Kawaialoha". That spring has provided our homes with water since before my grandmother moved out there. The guy who had the property before her was Philip Palama, and before Palama was Walter McBride. And Walter McBride had put in a system that took the water from that spring and brought it by pipe down to the house.... I know that that place where our home was, was supposedly *kapu* that was a *kapu* area. In ancient times before he put that pipe in from Kawaialoha, it was supplied by a spring called Waikapū. You've got to ask Uncle Bruce about that, he's got all the scoop on that [CW].



Photos 58 and 59. Limahuli and Mānoa Streams

#### 4.4.4 Limahuli Fauna

We had a Filipino caretaker there for awhile. He must have been only four and a half feet tall...we would fish and come in to Limahuli and then deep fry them ('o'opu) in the woks over a fifty-five gallon drum that was cut out for the fire that the wok sat on. This went on for years. These are some of my happiest moments [RW].

#### 4.4.5 Hā'ena Floods

Flooding...I've seen this end of the road in the most vicious storms you can imagine. I know on the higher side the way the water comes you're on the safer side - the lower side, no. Of course on the lower parts flooding is a problem in the heavy rains [RW].

#### 4.5.0 Marine Resources and Use

The sea is a great resource for people with access to its bounty and Hā'ena was and is an exceptional marine resource according to the ethnographic consultants. However, it is a fragile resource sometimes abused by visitors.



Photos 60-62. Kā'ē Reef sign; Kā'ē Reef trespassers; Kā'ē Beach

#### 4.5.1 Fishing Lifestyle

Everybody most time they stay home sleep, not us we fish night and day because night time is a different way of fishing. Like if we work the whole day, evening time we go fish, catch fish for the family. You like catch fish you go down the beach one time you wack em out in one pop, you take em home, share with all the people, take enough for us eat. We can do that every day because there was lotta fish around the place [TH].

[People say] "What uncle, you no go surf?" If I go do that, my dad would tell me "Now what? Go eat the board." You know what I mean? Everytime like that. I hear the people always say, always tell me, *hana ka lima ai ka waha*. If you no work you no eat, if you lazy you no going get food. You gotta work with your hands and make something. That's what I hear all the time. If you no do nothing they going tell you, *ahmoloa* that boy, he lazy, we hear all that [TH].

Turtle, fish, but we no catch plenty, enough only, because we can always catch fresh kind. We know where the fish stay, we can go take our net and one blast we coming home with one net fish. That's how it use to be with my life when I was young. That's what made me interested in all the areas where I go fish [TH].

#### 4.5.2 Fishing Grounds

We use to fish from Hanalei to there [Kalalau]. But you know, before was little bit different too because everybody we knew who the *konohiki* was for that area eh. Like in Waimea, my grandfather near the road, then you had Chandler, then you had Tai Hook, and then you had Haumea, all fishermen in that area. Then Hā'ena was La'a, Mahuiki, my dad, and Hanohano. Before everybody respect each other so they no full around that kind. Like Hanalei was Goo - Goo and Dias. Then down in Kalihiwai was the old man Naka, nobody go fool around down there because they respect; unless they ask for help. Waimea had old man Kimokeo Kanehe, Chandler, Haumea, Tai Hook. All them were fishing right in that area by the beach. They had all Apana right there, coastline. They had their land there, they own the land, so they can fish right all through there [TH].

All the stuff that I show you, the maps that I have was originals from my dad. And he knew the place. Like today I go tell em the people who go fish inside there, they don't know. I can tell em over and over they no can remember. Like how I remember all that names. There may be people I went miss, I know that, I use to know the names, but I no go over there often so I forget. Lucky I remember that much because my brothers don't know that much too. Me the one went fish around with my dad, because my brothers went go in the service by that time, 1950 they went go away [TH].

#### 4.5.3 Fishing Methods

Hanalei we use to use *ku* net to *ku* the *'āpelu*, the *ahi* - *ahi* use to come we surround the *ahi* and catch em [TH].

When I had my family and I use the fish I go catch and sell em for subsistence to help me with money. At that time I use to sell the fish. And my dad did that when we were young too, selling the fish to the *Pake* - the *moi*, *āhole*, mullet - that's what the *Pake* like eat eh. That's how I learned to go catch fish. And we knew the grounds. That's how we learned everything that had to do with fishing [TH].

Photo 63. Uncle Tom's throw nets



That's why they don't realize how important we are passing down the message for the younger people. Sometimes like the old times, people don't wanna do that because people sell the information and make money out of it. That's where the wrong is. That's why the old people, they ask them, ah no, no, no, no, because they think like that. For me, I don't care because I'm not greedy for money. That's the reason why I share my mana'o with everybody, and I'll be sharing with Kepa Maly. Because of him that's the reason why I came up with everything, all the names, place names. Yah, I gave him all what I went remember and only very few I went miss because that's not my place for go, only those places where I went go fish where all the *moi*, *āhole*, where I go all the time. That's where I go back and back and back, and my dad use to say you go up there get big pile *moi*. I know where to go, I go straight over there go look [TH].

He [Uncle Tom Hashimoto] was mainly a throw net fisherman. He'd throw his own nets [CW].

I prefer to carry the second net anyways - I'm a team player - like to just follow Thomas around - carry the net. Whenever he threw his first net, I'd gather it up. If I had to go over the edge, I went over the edge. But I'd gather it up, drag it back to the beach, unloaded it and then drag his net back hopefully in time before he threw the second one. But I would go back and forth. I got to know the reef really good. As any fisherman knows, there are some taxes you have to pay. The spines of the *holi holi* hurt [RW].

Thomas is not a pole fisherman. We would surround the *'ō'io* when it would come into the bay. There were times when we would catch at least over a thousand pounds, and we shared with

everyone - everyone between Hā'ena and Wainiha - all the old families. That's because different families had different parts that you needed. Thomas had the deep nets and the boats. But John - John Haumea, for example, had the bag net that we needed. Once the fish were surrounded we needed to corral them up to a smaller net and then drag them in. But I know John had to have that....John-John Haumea who used to live right there at the Wainiha Bridge [RW].

Thomas had eight foot, twelve foot, twenty foot, twenty-four feet deep by a hundred yards long or more as you can piece these nets together. Because of the way we worked in Hā'ena our property has stunning views of the ocean, and it was a constant thing that we lift our heads up and scan the ocean - always. And when we saw the black spot, or the cloud, the work would stop. Then I remember him telling us stories that while they were working they would set the fishing lines out and tie them to one of those tin garbage cans, and when the *ulua* bit the garbage cans would be bouncing down the beach warning everybody there was a hookup. So all work stopped. Once the garbage can hit the water, the water stopped it and then they were able to retrieve it, and then pull the *ulua*'s in. But that was their way of fishing while they working. For us we weren't so restricted as such, so we had a chance to always check it [RW].

He [John] had the bag net that Thomas didn't have. Once the fish is surrounded we needed a smaller net to actually pull the purse strings on the bottom of it, and then that was the net that we actually dragged ashore - dragged closer in and actually up onto the beach. But all the times we ever did it, he never sold one of the fish. It was all given out to the different families that helped in pulling the nets in...it was a classic *hukilau* kind of thing. Absolutely. In Hā'ena - even in my day - which is the seventies and eighties when we were doing all of this [RW].

#### 4.5.4 Fish Catches

In 1966 before I went in the service we caught something like 96*ahi*, 100 lb fish. You know what the price? 19 cents! We sold 'em to Kip Mulley in Waimea, and we use a big dump truck to haul all that fish. We sold 60 and gave the rest away. Two guys one fish. Nobody gave fish like that away. They cut em all up. With us two guys one fish. 100 lb fish we give em. Go cut your own fish. That's what we did. And that was traditional because my dad he always tell us when you guys get one good catch, people come there, share. I still do that til today[TF].

From Lumahai to Hā'ena I use to catch all the moi down there. Big school, big like this house, you throw one net on top. For years I did that til today. Only me the one go catch the moi because I know the grounds, if he run away from me I go look for em because I know where he go run. I go get em. But lately I not doing it because I like replenish the fish [TH].

One time in 1970s we went go catch *kala*, I look inside I see the color - green inside there - so we make that kind net like I tell you, 500 mesh across, so we went in there, myself, my kid brother, Richard's two brothers, we went go inside there, shucks we had 92 *kala* in that *kuuna*. So I go home and ask my dad, "Daddy you guys ever catch plenty *kala* in one time?" He tell me yeh, Muliwai we caught 110, but look out, this is way after now, that was back in the 1920s! But us in the 1970s we was doing that we was catching!! And I use to go catch *kala* myself, I go with my small dingy catch 60-70 *kala* myself, and the biggest job for me was to go put em in my car eh. I gotta haul em up and put em in my car. And go sell em. That time I use to use that for subsistence but I use to go sell em dollar one *kala*, I made some money for my family! That's how I use to clothe my family, feed my family, plus my wages. I never stopped doing nothing, that's why I dunno how to surf like people like that [TH].

Most time I was going there for the moi and all the places I went name that's what made me learn that because my dad would go in the area and say, hey, going down there get big pile moi over there. I go straight over there. I go over there I look the big pile inside the wave already from far I look already. I go there and wrap em. Like this year, for all the years, that's the most moi I went catch - this year. I been catch maybe 600-700 lb this year, throw net. But not the kind for the kill

kind, its just accident I run into em I catch em. But not sell though - give all my friends, my kids. They like the fish [TH].

Over here we use to catch, 18 lb *ō'io* - big like this! Just like baby shark. In fact the one I caught this year was 10 lb - not too many, but mostly I would say maybe about 10 -12 lb because all this kind size eh. I had few big ones. And I had some smooth side ones like that, that's the kind I like to dry - we been dry some [TH].

There was always so much fish there in those days. The amount of fish in Hā'ena when we were growing up was so much more than there is today. Really, it's pretty amazing. I used to go diving and see the giant schools of moi swimming around ...big kind moi! Like as wide as this table...three feet. And the *kala* - every time before there's party, people go bang, bang and the *kauna* in those sand channels between *na papa* ...and oh, the *kala*! That was always good fun...everybody went as one gang and go bang, bang at night in there. Now you hardly see *kala* like that, no more *moi* like that...big ones already.... Those were the main ones. When we were growing up I used to like to whip too - go catch *papio*. Uncle Tom - we were always spoiled because Uncle Tom was the base fisherman and he would always - we hardly even go fish - he just bring the fish for us or we go bag-boy - go carry his bag for him [CW].

Now I'm *kapu* to *moi*, I'm now *kapu* to all baby fish...because the supply of *moi* is running out. I've personally *kapu*'ed myself on that [RW].

#### 4.5.5 Cooking, Preparing Fish, Etc.

Well before, most of the time we use to *pulehu* [*kala*], and make soup, cook em with shoyu and oil. It's *ono* that way. Of course they make soup only with water and salt. That time we real Hawaiian, and we use to eat all that because we had that at the time, we eat with the poi [TH].

The mullet, we use to eat em raw - what we use to do the mullet we use to cut em straight through and put em in shoyu and chili pepper, have you tried that?Yeh we cut em straight through just like the cucumber, straight through, and throw em in - put a little salt and shoyu and chili pepper inside there, ho *ono*. You eat with the hot rice, *ono*. You eat em like sashimi, like that. The meat by that time turn black yeh, from the shoyu, it's *ono*, you eat that you know, get that little bite from that chili pepper, that's how we use to eat em. We use to eat em raw and steam. That's how - we use to steam the mullet and the moi. Of course we fry em, we dry em. We dry the mullet and then we go fry em and that's ono again! At that time you gotta salt most of the fish because no more ice box. At a later date, then get ice box [TH].

My grandma - we get the salt from the Hanap *ēpē* people, the Aukona family like that. That no worry because they give em by the barrel, so you always got. And then what we use to do we use to salt the fish and the turtle and whatever, and you know the kind you go mix poi, the crock, that's how we use to salt the things because inside there no can come rusty the crock[TH].

Yeh, they get that salt cabbage and black beans, that's how my wife make. You can throw green onion inside there but overcook if going steam um. So we only put the black beans and the salt cabbage, that's it. That's our way, and of course you going put ginger and garlic inside there. Chop em all up. My wife no can eat shoyu so we just steam em like that, then you put on your own fish what you going eat because the black beans salted eh. So that's where your salt is, right there. You like put shoyu, you put on top your own after you take your share...we steam em with the oil. We make that and we go make even the nenui, taste ono too. Cook em with black beans, or sometime for fast action cook em with shoyu and oil, garlic, just steam cook. That's it. Only the water from the fish stay in there but mostly going be oil and shoyu. That's how I cook em [TH].

Well, you can put em [*limu*] in the soup, when you boil moi and stuff like that. Even the stew you throw that inside, that's ono [TH].



The *kala* everybody used to just pulehu that thing. The moi, we always liked to just fry it. Mostly we just would fry it. Sometimes you steam it but takes too long to steam it! [CW]

#### 4.5.6 Open Turtle Season

The turtle go eat all the *limu* and the fish no more food. [*Limu*] grow way on top just like one pasture on top the *napapa*. Before not like that, now the turtle he go on top the *napapa* he no scared you. Now get too much. Before that the *honu* dig out when we use to pound em. But you know what the fine for that though - you go catch the *honu* - \$55,000! Big fine when you go full around with that. That's why nobody like go touch that turtle, they go get em night time some.... They should open the season: one a month for one family you know what I mean, whoever eat that thing. And us we eat that thing, make good steak that -- mo bettah than beef steak because soft eh the meat. Like us we use to go catch em, cut em all up, salt em or make bar beque. That's the best, you put the turtle and the beef steak over there, they going eat the turtle because that thing going melt in your mouth. And then you gotta get good hand to cut the thing too because if not your whole house like if you go eat that turtle and your hand no good like when you talk to me I can smell you. I can smell turtle on you. And the people outside the road can smell the turtle cooking because the hand no good. The hand get lots to dowith that kind meat you know [TH].

Before we use to make that kind Kalalau cook, and how they use to live they use to clean all the turtle guts eh, we put the wing inside there, we cook em with the turtle fat, no need put oil inside there. And what we used to use for make em just like the garlic, we use to use the orange leaf. We throw the orange leaf inside there. It's ono! By the time everything all *palahe*, you just slam that thing right on your rice or whatever in your bowl. We eat that way. After you warm em up everything all *palahe* eh, the meat and the liver and all that man it's *ono*. We use to do that, we call it the Kalalau cook. Kalalau cook we use to make one big pot and put all that things in there [TH].

#### 4.5.7 Limu Gathering

All over get good *limu*. Well, most places get the *limu kohu*, and the only place get the other *limu*, but not too much now is at Kanaha. That's the only place. They get *limu pepehe*, *manaua*, *lipoa* - little bit not plenty. Before the fish go eat that, but you no can eat the fish. Smell. Too strong, but if only little bit, not too bad...I know where get so. So when I go catch the fish over there, I smell *lipoa*, I know where the fish came from. But we go eat, but not too much, only that particular place get [TH].

Our place no more that kind stuff like that. the only one that use to come plenty on the sand was *limu pa'apa'a*. The flat *limu* the one just like paper. When the *limu pa'apa'a* stay the moi go hide because get plenty small crabs that live in that thing, like Waimea. That's when they go *kokone* over there and catch moi and 'o'io inside that, when they see the *pa'apa'a* on the beach. That's the only *limu* that I see plenty on the beach, well use to get that and the *limu kala* but not anymore because the turtle eat em all. Like before we use to go fish, we use to go look *nemue*, get plenty *limu* rub against your leg, they eat your leg you gotta go with pants so that the *limu* no rub your leg when the wave come. Today no more that kind, the turtle eat em all. That's why the *kala* today no fat the *kala*, because no more their food [TH].

*Kala* and *lipoa* almost the same, but the *limu kala* is more thick and tough. The *lipoa* is short, but same color - brown. The *limu kala*, well I wouldn't say get smell - get some kind particular smell. Like certain *limu* get smell eh, like the *limu kohu* you know what I mean? The other *limu* no more smell, and then of course get the *lu'au*, the *limu*, *limu 'ele'ele*. The *'ele'ele* get a little smell like the dark hairy one, that's the *'ele'ele*. Get plenty other different kind *limu* yet, but these are the ones that they[turtle] eat all the time [TH].

#### 4.5.8 Gathering 'Opihi

Get [*'opihi*] but the screw-up when they market. That's where we lose em. When they start marketing that thing that's when we lose em [TH].

#### 4.5.9 Beach Erosion

The beaches were bigger than. We're seeing shore line erosion now. The beaches are significant ...in my mind they're significantly smaller than they were. You can see that in just the land falling down and the erosion that we're witnessing now [CW].

Photo 64. Kā'ē Beach at low tide



#### 4.5.10 Tsunami Impact

The other really significant event that I think had contributed to Hā'ena being really underdeveloped and really maintaining its rural lifestyle, were the tsunamis in 1946 and 1957. Those had a really profound effect on the people alive at that time because of the incredible damage that was done by those tsunamis. When I was growing up I remember all of the coastal areas of Hā'ena...just seeing the slabs of where the houses were...nobody wanted to rebuild along the coast. Because almost within in ten years you had two severe tsunamis, so it was fresh in everybody's memory. But by 1967 the most recent tsunami was ten years away. It was beginning to fade in the memory of the people, and as new people came they had never witnessed or understood the power of those tsunamis. So really, '67 was the beginning of a lot of change [CW].

#### 4.5.11 Surfing

It was in the early '70s that I got to come and actually live out there in Hā'ena with my grandmother. Those were really amazing years because it was still very undeveloped, still rural. Change was beginning, the surfers were catching on. The surfers had caught on to that Kaua'i has awesome waves, and we were getting surfers from California and other places [CW].

#### 4.5.12 Shark Grounds

My understanding of the shark home is actually in Makua in the outer edge. That is the hereditary home of the shark god. These are definitely his cruising grounds; they're definitely his front yard here. But my understanding is the currents are very deep off of Makua - the currents never cease even on the calmest of days, the currents always swirl in there and it goes deep onto the reef. I have never been able to swim, even on the calmest of days, in that corner of the reef. I can show it to you where Makua comes. Makua Reef is the Tunnel's area - off of Tunnel's [RW].

The ocean comes in in a big way there. I've also been there on the *heiau* and I've watched a whale shark go by on numerous occasions. There's one that does his regular route, so those are absolutely massive. Another time I saw it on the trail above this *heiau*, when you get into some higher grounds - I was able to watch it approach from very far away, come right off-shore right here at the *heiau* and I could tell by the scale of the people and the whale shark that it was an absolutely massive animal. So I know that he makes his annual cruise through there this particular whale shark. I'm sure other people must have seen it. My brother was there also on one of the occasions too and saw it cruise right off beach itself the lagoon [RW].

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#### 4.6.0 Cultural Resources and Use

This category includes traditional Hawaiian cultural resources and practices and other ethnic resources and practices. The traditional Hawaiian cultural resources and practices, includes the Pre-Contact Era, as well as cultural practices after Contact (post-1778). Cultural resources can be the tangible remains of the ancient past or the traditional *wahi pana* or sacred places, or any cultural gathering place. One of the most significant traditional Hawaiian cultural resources is the *heiau* or places of worship. Other places of great significance for all cultures are the burial places of loved ones. Unfortunately with the massive transformation of the landscape as a result of the many western industries [i.e., provisioning, sandalwood, cattle, sugar, tourism, urban development] coupled with the secretive nature of ancient burial practices, most of the ancient burial places are unknown or forgotten and are easily disrupted and disturbed by modern subsurface activity.

##### 4.6.1 Burial Sites in the Park and Vicinity

There's lot of issues, small issues, there's lots of em. Like in Hā'ena they had that burial thing -- the iwi. That was a big thing, but you know what, those guys, they stupid, that's not their iwi. That's burials over there all along the coastline. We use to go fishing night time all spooky, the whole place. We know that. And my dad said they tried \_\_\_\_ in Naue, that whole flat over there, guarantee all iwi, that's why they been find that one over there. And these people who think oh because the place name is Kounui, ah they say the Kounui family was buried there... ah bull shit, they don't know, they not sure. Now they all confused now. Even Jeff Chandler, same thing, Jeff Chandler he went talk -- that's the family.... That's warriors. And I know the place. No more other people that older than me in Hā'ena. I'm trying to help out, giving information while I'm in a good state of mind [TH].

I guess way back in the 1300s -- 1600s when they tried to come over here and conquer this place. They never did conquer this place because every time they tried the warriors over here would kill em. That's why they call the place Waikoko because that's where they use to kill em. Waikoko means blood water eh. Over there that's where they use to slaughter those kind people or they go chase em with their own kind canoe and kill em, take em down there to bury because big flat and sand. [They came from] off island I think coming over here to conquer this place. Like they did in Honolulu up by the mountain and dump em all down...the kind place like that, over there and like on top the Pali. They make that song like over the Pali yeh. That's how Kamehameha became the conqueror of the islands because he did that. That's why a lot of people don't know that the people buried in those graves over there. Now they do excavation -- so they gotta find something, but again I blame the real estate people because all these Hawaiian lands, get that kind stuff on these Hawaiian lands; and no more marker [TH].

Kē'ē get too, you know why? Kē'ē was a staging point for the people when they going back to Kalalae and maybe the \_\_\_\_ come pickup, drop, they no can go eh and if the people die they going bury em right there. But over there had plenty *paepae*, the other side of the *pali*, they had plenty stone kind formation around so you know that get grave yard but some places no more you know. Like where they had the cesspool they went go dig over there they went find bones over there, right by the toilet -- the new one, all over there, even in the front. I see people sleep on the ground over there, they sleeping on the buried bones [TH].



Photo 65. HSP Comfort Station

All that whole coastline - I no care. That's why when we go fishing over there spooky - use to be spooky for us night time, but we no care. We throw em off, like if we going down and run into em

we tell em you know what, my dad *po'e kaua*, Freddie Makua going *iluna* go up, but we still going down, so the thing he head up there where we not going, we going down so the spook *pau*. That's how we use to do it. And then when we go *holoholo* fish night time, we no say nothing, we only tell we going *holoholo* but not where, we just go, even day time if we going hunt, same thing, we just go we say we going *holoholo* but we no tell where otherwise this kind they wait for you. That time was haunted with devils when we go fish night time [TH].

I know there is one kid who got into trouble and thought he could hide out at the end of road in the *halau* area and that no one would come and find him. He said that he lasted a few hours there after dark...he said there were so much noises and voices and nothing and nobody could be seen and he couldn't take it [FBW].

[The iwi is of people who used to live here and] I think warriors too. That's what I think, that's why plenty eh? All along that coastline, even over here [looking at map], Kaloli, Kaloli inside here along this bank over here sometime you see the bones fully framed standing up --side-down, sideways, whatever. Just like they been throw em inside one hole like that--that's all sand eh. So when the sand goes the high waters go eat em, eat em, then you see em all falling down...you see the whole frameworks well within the sand. All that place like that, even the Rice's, the one we were talking about. Before when they went bulldoze the place before 1946, they went bulldoze all that place make em flat eh [TH].

And then I'd say, 'Okay, why don't we have the Burial Commission get land from the DLNR, half acre or acre, several different places, pick up the bones, carefully envelope them with the prayers and take them to this piece of property which then becomes a memorial park. Inter the bones there again and put a plaque with the names of the people from the *ahupua'a*...their names are in the Great Mahele...because those are possible ancestor of those bones...and those are the one names that we have...the most...the deepest listing of names that we have. But you get these fringe people...mainlanders come in...and they're going to tell us how to do things...and they come and make all of this great fuss [FBW].

We have Darren Mahuiki here who knows where his family is buried, and he got permission from the owner of that little corner...and you'll see it over here, it's marked 'Burial Place' now...and he has turned that into a garden And that is where his family bones are. The Smith family who are in the Park, they took where their family was buried and they turned that into a garden too. The Hashimoto's have their family, at least two generations that I know of, that are in the little hillock back behind the house. So these are three families here in Hā'ena who know where their family bones are, and they are taking care of them. And I would be the first one down there to fight off anybody going in there and moving those bones and disturbing them. That's one thing with the State Park thing, as far I'm concerned, that need to be kept in place and marked. Here are three families who know where their bones are and are keeping them, and doing something about it [FBW].

If you go there, just to let you know my great-grandmother is buried over there, her name is Ka'aumoana Moa Niau...the one says Moa, her whole name is Ka'aumoana Moa Niau. Come from Ni'ihau, get plenty family there, Niau -- my mother's relatives... Kaenaku-- you know the first one, that's the daughter of Mokuohai -- I don't know the rest [CM].

##### 4.6.2 Traditional Hawaiian Sites and Legends in Hā'ena

###### 4.6.2.1 Heiau and Hula Platform

The Kauluopā'oa [*heiau*] and Keahualaka [*hula* platform], you could see it from the beach [CW].

As a side note that very few people know is that in the '80s with *Halau Hula o Mililani* we went up to the *heiau* at night. We made torches and placed the torches where the big *pahu* drums are said to be facing the altar. What happens is that the dancers cast a forty foot shadow up on the wall and that is clearly visible from every area around....so the images of many dancers dancing on the cliff walls ... combined with the various acoustics. There are certain places along in here that if you stand in this one spot...the acoustics... you can hear the entire cliff wall far away. You step one inch on either side of it, you can't hear it. I can show them to you when the sea is calm. When the sea is calm it's much easier, as you walk along the beach you can...you'll actually be walking along these acoustic windows...they're short but you know exactly where to stand to hear somebody way far away in the back of the cliffs. So there are some acoustics on here ... which are common in many heiau....Hauola over in Waimea, Kekaha side is clearly an amphitheater...as many of them were. The chanting style of passing over mountains ... and the long distance too...I'm sure was practiced here [RW].

People were still living there yet [when I was growing up], the people would go teach hula over there [by the *heiau*] -- the old lady Wahinekouli, she was the teacher over there; and then the old man Kila went go.... [Hula people] still go over there clean up that place and go *uniki* over there [TH].

I know people have [gone up to the *heiau*], but I can't give you specifics on that. I just know that there are people like me who have gone up there and left their *ho'okupu*...and said thank you for what's happened and what's going on. It's a place that's rich with all kinds of ghost stories too [FBW].

I think the archaeology at this particular point will take its own particular course. The heiau is itself .....especially when it comes to the hula...you need to separate it out for both hula and for the heiau...they're two separate things. Even though they could be under one house ....but yet even then that house is divided into two separate categories...one is for the heiau itself and the other one is for the dance platform. They're two separate functions. Although it's all in the same because as you go up you're making your *ho'okupu* to the *heiau* itself, and then the *hula pā* is the secondary aspect of it. Once you've cleared the way through the *heiau* itself, now you're on the *pā*, and then now you do what you need to do to Laka. But there is a little bit of a gauntlet that needs to be run, and the protocols to the main *heiau* have to take place [RW].



Photo 66. Ke-Ahu-a-Laka

My understanding is when Kē'ē originally shows up in the material it's during the Mo'ikeha and La'amaikahiki saga. In that La'amaikahiki promised to Mo'ikeha that upon his death he would come back from Raiatea pick up his bones, intern them there at Taputapueta of which he had a hereditary role there with his grandfather, Maweke. When Mo'ikeha passed away his bones were kept in Kē'ē, right there at the end of the road for safe keeping, until La'amaikahiki's return. La'amaikahiki comes there, picks up his bones, goes to O'ahu, sires that royal line, and then goes back to Taputapueta. So that is my understanding where it first shows up in literature, the oldest. Already back then the school was evident as a place of history -- the school for historians. There's always been a center of history -- this would have been your PhD in all the various chants. I think a really good, more modern, but still shows you that even in the 1880's we have really good description of historical ... I'm jumping ahead a little bit but I'm just showing that even as it comes up to the early 1890's -- it's still very highly respected [RW].

My particular involvement, of course, has always been *heiau*. I understand that Auntie Kauai Zuttermeister has a connection here also with the Kaula Pā'ao, also the *hula pā* at the top. I think

there are only one, two, or three places in Hawai'i where the actual *hula pā* is incorporated in the *heiau* itself, so it makes it rather rare, very rare [RW].

I am aware of Kekahuna doing the map itself with Theodore Kelsey -- the dynamic duo -- can't think of Kekahuna without knowing about Theodore Kelsey. That was another part of it. I know that in the thirties the Kaua'i Historical Society hired....and I'll get the name again...it might have been Thomas' father or one of the more prominent residents. I'll have to look it up again. But we have all the pay stubs and all the materials, the monthly reports as we got from....at the same time the Historical Society had someone else working on the Wailua Complex -- Poliahu, Holoholoku, Hikiakala also -- full time hire. And for years the Kaua'i Historical Society maintained it. I was getting up to Kauai, Auntie Kauai Zuttermeister, which Roselle Bailey comes in and from my understanding there is a falling out over this heiau between the two. But I always wanted to be able to, obviously it's too late now, talk to Auntie Kauai Zuttermeister. I've always been meaning to go through her particular notes and papers on anything having to do with this....which I have yet to do. And I don't even know if you can or not....depending on the kind of notes she kept [RW].

Pā'ao was Lohi'au's best friend and retainer, and took over his responsibilities when Hi'iakea brought him back to life took him to the Moku o Hawai'i, where Pele rejected him, and he came back and lived a normal life. His sister, Kilioe was a sorceress and also the primary teacher in the school at the time. The whole Naupaka legend begins with her. She was rather a dangerous woman; you broke a *kapu* that was it! Accordingly, the stone right there in front of the *heiau* on the beach, right here, is Kilioe. That big one with all the -- when they say they put the piko into it, that stone is Kilioe. Kilioe guards the grave that Lohi'au is in. He's behind the stone, in the hollow part of the hill as you go under -- the chambers underneath and behind the stone, according to the 'olelo that I understand [RW].

Do you know who Henry Kekahuna is or was? He was a very famous historian, he was the mapper. He did a map of Ka Ulu o Pā'ao, and he did a whole kind of narrative on the side of the map about it. That was really interesting, if you haven't seen that you should let me know, I think we got a copy of it at Hā'ena...at Limahuli. We should have it [CW].

#### 4.6.2.2 Pele Connections

There is a chronology, (1) there is a genealogical chronology of the paramount chiefs, (2) there's a second chronology in the historical sequence which just shows up in our records, but there are many aspects to it, many portions in the history. So we're starting out in the 12<sup>th</sup> century with La'amaikahiki and Mo'ikeha, and Pele and Hi'iakekapoliopole also begins there at Hā'ena also. Having grown up with the Pele stories from my youngest age, and being a soldier for Lohi'au, my relationship with Pele has been quite spiritual...but because of the whole Pele, Hi'iakea, Lohi'au connections as to the beginnings there, is a critical point in history for understanding the importance of this particular site [RW].

The first legend of Pele is set at Mana...that's the Pā'u o Hi'iakea legend. They come into Mana, and the first battle with Pele and her sister takes place on Kalaheo side, at Kukui-o-Lono. And you have the legend of Pele and the *'ōhelo* berries. And of course the whole Pele, Hi'iakea, Lohi'au story, but that one gets very complex because you not only have Pele, Hi'iakea, Lohi'au, but you have Lohi'au's sister, Kahua. And you have the Chiefess in charge of the *hula halau*, Kili'oe, and Kili'oe is turned to stone by Hi'iakea and she's still down there at the end of the road. And my grand-daughter's piko was placed there -- she's taking care of it. So it's still kind of in use by some of us. And then Limaloa is Lohi'au and Kahua's brother. All of the Limaloa legends in my (???)...mirage that used to be...Limaloa catching the *uhu* off Hilo and there's the story of how he gets put into the mirage is part of the (???). Just so that you know, you know where Lohi'au's site is...that stone wall...my mother saved it [FBW].

#### 4.6.2.3 Other Legends

I never talk to my mother or my dad. My dad would know about all this, the legends. Like they talk about the Piliwale sisters above the dry cave...they all stone figures up there. Some day when you come here I show you.... Way on the side of the hill, Pōhaku Kāne stay over here some place you know. We look right from there eh. This is the start...that stone right up there, that's the one. And then Mānoa, the Piliwale sisters are up here somewhere because it's on the looking up it's on the right side right above the \_\_\_, you go look all that stone figures up there, get three pointed kind like that....[can see] right from the park -- the same side, and look straight up [TH].

We can go through the various stories. I know we have the Kihawahine activities going on with the Mo'o goddesses that were luring strangers into wet caves [RW].

My only one [mo'olelo] are the two dogs, but they're down over along the beach in front here, and in front of this County park. Because you know right in front of our house was that Hale o Pōhaku, which was a dog heiau. According to Tommy Hashimoto, the people who used to work down along in here and along in the park area, when they would ride home in the evenings a little white dog would come out...out of the woods and trot along with them until they got to the point where Hale Pōhaku was and the dog would disappear. I saw him once...really adorable little dog...kind of spotty face. And the other dog is the big black one, and he's supposed to come when there's going to be something bad happening...but he comes from the other side. He comes over this way and he kind of disappears around the dry cave. But he seems to be much bigger when you see him in the distance, than when he comes towards you. He just seems to slowly get smaller in size....odd looking thing [FBW].

### 4.6.3 Traditions

#### 4.6.3.1 'Ōahi Ceremony

The stories that I heard when I was growing up...it was like a fire throwing ceremony from the top of Makana. And that was really one of the things that drew people to Hā'ena in the ancient days to see this amazing sight. To my knowledge the 'Ōahi ceremony was only performed in two places in the whole *pae'āina*, and that was Limahuli off the top of Makana and at Kamaile down at Nu'alolo. Probably it had to do with the geological formations, the direction of the wind, and the up currents of the wind, but it was a ceremony where they used *papala* or *hau*, both of which were really light woods that were very flammable -- both have like a hollow pith or core. And while on fire they could be thrown and be caught in the updraft of the wind -- it must have been pretty spectacular. My understanding was that it wasn't like it was every full moon or something like that [when they did it] -- I don't even know if it was even related to things like the Makahiki or the four seasons [CW].

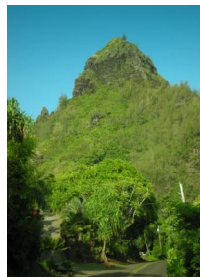


Photo 67. Pu'u Makana

I never did [see people throwing fireballs off of Makana], but my mother did. She said it was 1912. And I've seen a date somewhere recently where somebody said it was later than that, but I don't think so, I think it was 1912. I know La'a Mahuiki was one of the people, but he was a kid at the time because my mother was twelve. Of course, I think at that age what you remember are the brands floating -- the sticks with the sparks coming out the back. And it never occurred to her because she was afraid to ask how it came about. It's like me, I look back and the people that I remember, I wish that I knew what I knew now so I could ask the kind of questions that I should have asked! [FBW]

My grandmother remembers the 'Ōahi taking place. She was there the last time the fires flew from Makana. That was in 1910-11... it was one of the Maka's or Mahuiki's who went up and did that.

My uncles probably remember it easily. I guess I don't really want to go into all the lore and history of it, because I think my father would be able to go through a bunch of it [RW].

Another reference is 'the sparks from the 'Ōahi creating a feather cloak as it enveloped and draped over the whole bay.' So as you had the sparks in the shape of a feather cloak, you had all the people in the canoes, you had all the people on the beach, you had all the dancing, it made for a phenomenal spectacle [RW].

We knew that there were numerous ceremonies that everybody would gather here along the beach and in canoes [RW].

#### 4.6.3.2 Kē'ē Pu'uhonua and Halau

The references that we have in the Historical Society - one particularly beautiful one was done by Emory's daughter in the forties and it's coming from Hanohano Pa - John Hanohano Pa. In it and earlier, we have references by his mother and his grandparents, also records from them. She distills it, but even then the entire Nā Pali Coast understood that if they were able to reach Kē'ē Beach right there in front of the heiau, they were safe [RW].

There are stories of robbers and bandits along the coastline, and canoes making a mad dash for the safety of that end of the road there [RW].

All the Kalalau, the Nā Pali Coast, went to school - especially the women - all went to school there [Kē'ē] - they were all trained. And speak very highly of it already even in the 1880s and '90s and 1910 the school continues to operate it seems like. But you can make up your own mind when you start reading this material [RW].

#### 4.6.3.3 Gathering Rights

Take the gathering rights -- the gathering rights belong to the ahupua'a. You didn't have gathering rights in any other ahupua'a. And this is where you will find people like Tommy Hashimoto who will not fish in Wainiha. He doesn't go along the reef in Naue because that's Wainiha, not Hā'ena. He fishes only in Hā'ena because that's where technically he and his family belong within this ahupua'a, so he doesn't go around the whole island [FBW].

#### 4.6.3.4 Fish Gods

The fish-forming stone is, although to a lot of people they don't know it, but to me it's rather common. But mostly those fish stones were given as gifts to the mountain. What would you give the mountain is a gift of the sea. What do you give the sea is a gift of the mountain-- the exchange between sea and mountain, right? So you're bringing up these basalt fishes up to the mountain, you're bringing up the coral up to the mountain for your *ho okupu* - as your gift to the deities that live up there. And in return you bring the stone and the material from the very top of the mountain to the edge of the sea. That's how you're making that connection. The fish were an important part, you see it in Maupiti, you see it in French Polynesia, you see it in other places - the occurrence of the fish, the basalt fish [RW].



Photo 68. Possible fish god stone

The old man Hanohanopa'a, he supposedly had one rock he used to pray, and the fish would just come and they would line up. But after he was gone, I don't know, I don't think there's anybody like that any more [CW].

#### 4.6.3.5 Hā'ena Rains

And the noe noe! How do you know which one you're under going? And you can see it...there's one rain that I like to see is Lilinoe but it may be Noe...this very fine fine rain that soaks you immediately...you get wetter quicker with this fine rain than you do with the big raindrop. And I look at that and I think here are three main kinds of rains and I don't which one is which! [FBW]

#### 4.6.3.6 Hā'ena Boundaries

For me, I don't feel right until I get across Mānoa Stream. To me that's the boundary, right by the dry cave. Once I'm across that stream I'm in the zone...I'm in a whole other world....I will **not** cross that stream for **any** reason until I'm ready. So that's just my particular thing, once I'm across the stream I do not cross it until it's absolutely necessary. I stay from the dry cave to the end of the road, that's my turf. That's where my heart is, that's the center of my universe, that is my ahupua'a, and I have a sense of responsibility with the years of work that I've put into it [RW].



Photo 69. Mānoa Stream going over road

#### 4.6.4 Ali'i of Hā'ena

Hā'ena was unique in that when the Mahele took place, the main ahupua'a of Hā'ena was given to Abner Paki who was not *kama'aina* to Kaua'i. He had, as far as my research has shown, he had really no relationship at all to the place. It was more of a political bone that was tossed to him. So the true Ali'i from there...there is no record of it...Mahele records show that Kekela was the *konahiki* at the time of the Mahele, but she was from O'ahu, she had been brought over. So we don't really have a record of who the traditional chiefs of that area were [CW].

Kekela that was the High Chiefess here, she was sent down by Kamehameha as one of the messengers to Kaumuali'i, and Kaumuali'i took one of the messengers by the name of Kihei, and gave him Kalihiwai Ahupua'a. So he stayed here and when Kekela came, he gave her Hā'ena. And Hā'ena has always been ruled by a chiefess, who is independent of the ruling chief. When the ruling chief changed, the Hā'ena chiefess was never deposed the way that the *konahiki* in other *ahupua'a* were. And at the time of the Mahele, she came to Hā'ena and made sure that everyone who lived here made a claim. Where as Abner Paki told the people in Lumahai that he would take care of them, so only three people made any claims in Lumahai. Kekela lived most of the time, I think in Honolulu. Her home was...my mother's house is built over the platform of Kekela's house. It's built over the chiefesses's house site -- there's a stone platform underneath. She deliberately built the house over it so it wouldn't get damaged. I don't remember [any more about her], but you can track her down by going through Kamakau -- I'm sure there are other places; I've never really followed her. My interest has lain with the place names and with the history up until the end of the Kaua'i Kingdom, so called. So anything from 1824 forward I haven't really gone through. Information kind of spreads over that period, and I've never gone back to track her down [FBW].

I know that the last Chiefess of the area was Kekela. Chiefess -- rule by women -- is another important part of it. I need to preface with the Kaua'i chiefess, Kekela. She's all over the Mahele books and I'm sure there's probably some research to be done. My grandmother's home was actually on her compound...is on her compound. Everything that is there is still there and absolutely pristine, untouched. We had Emory come in -- my grandmother hired Emory in the early sixties or so to do some work in the back of our gardens and the reports are there. I know all of Emory's carbon dates are in question, but he had some old ones [RW].

That [where Juliet Rice lived] was supposedly where the Ali'i lived and that's why that area was *kapu*. I know before my grandmother was allowed to live there she had to talk to the old folks ... she had to go talk to the *kupuna* and get permission to go over there-- to the ones that were passed already -- to the spirits. According to Uncle Tom there were *kahuna* in that area, powerful ones. But by the time we guys were growing up they were all gone already ... She told us before there was no electricity; the spirits out there were strong. And even Uncle Tom, he said they go fishing like that, they see the hala tree on fire and they come over there and no more fire...they see fireballs...all kinds of heavy stuff up there. Now you don't see that kind of stuff [CW].

#### 4.6.5 Kē'ē – Nā Pali Connections

That particular connection -- and that's Wahinekapi, which is Hanohano Pa's mother and grandmother, grandfather also -- it's a male name too, Wahinekapi, but it's coming from 'Rebel Woman' which was the name given to Pi'ilani, who was Ko'olau's wife. So we see Ko'olau's wife, the family name there [Kē'ē] and Kalalau -- when they were all evicted in 1893 because of their role in helping Ko'olau. The Provisional Government immediately after the overthrow banned everyone from Kalalau and dumped them on the beach right here at the end of the road. And there they made their way in through Kaua'i. Some stayed in Hā'ena, others moved on, others moved off island and went elsewhere. But the entire Nā Pali Coast essentially came in on the beach right here and then entered into the new society, if you want to call it that, from Kē'ē Beach. It was because of their role in helping Ko'olau, the leper. Without going into that whole story, you know, the point that I am trying to make is the interconnecting of the Nā Pali with this whole bit and the far reaching respect that the school actually had [RW].

#### 4.6.6 Kekahuna: Park Mapper

The [Lohi'au] *heiau* is right on the corner where the trail start. That's where it is. I went work on that project, the *heiau* project with the old man Kekahuna from O'ahu. He was just like one archaeologist eh. He draw all that, just like one archaeologist. He put down everything. You like look at that map you go to Kaua'i Museum they got em. In fact I think stay in Honolulu too. You go look. That man was an intelligent man that...go look on top that map went explain everything. Was me and my Uncle Ralph Kanehe, old man Kekahuna, and the *haole* old man use to be -- all stay on that map, that drawing. You go look at it, get all the information right from there. I know that, because he gave me one, but every time they make this kind paper they give us this kind. That's why this one they laminate eh? That's why it will last forever. I get plenty of this too [TH].

#### 4.6.7 Cultural Identity and Balance

Establishing our Kaua'i identity, naturally, is a big deal for me. We do have our unique aspects, as each island needs to pursue their own specific cultural identity. Yes, we all belong to the same tree but we have our gifts also. And each island has a very distinct separate history because they have different genealogies. They have their own uniqueness that each island needs to seek and then adopt, and then relive them. And naturally, here on Kaua'i we have a big movement going back to seek our own cultural identity, and that part of the *kapu* is very important because now we're far more inclusive. So, no, I don't mind when women help us build rock walls. They did in Nu'alolo Kai, right? It's all incorporating. And when we do all the religious ceremonies, it's all male and female. It's not right unless the *kauna pule* that's both male and female. Here it just doesn't seem right to have a ceremony without the balance. Neither does it seem right for us to do the genealogy and leave the women out of it. So I do the male part, the women do the female part as we come up through the [genealogy]. But we're developing the female side of it right now. Having suggested to many of the women here that they need to get a lot more serious in collecting the female aspects of it...so you can see the duality when we do our genealogies [RW].

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#### 4.7.0 Thoughts/Concerns about Hā'ena State Park

Change often meets with resistance, especially change of lifestyle brought about by outside entities. People who grew up on the lands often don't want to see it changed, especially if it provided resources, recreation and respite. They also understand that things don't stay the same, and change could occur with cultural sensitivity. The consultants shared their *mana'o* about the future of this area; some of their thoughts are stated below.

##### 4.7.1 Heiau and Hula Pā

Just like one of my dreams with this Park here down at the end of the road. I would love to see the *halau*, the *hula halau* area, and Ka Ulu o Pā'oa -- I'd like to see it restored and used. My idea was over by the parking lot put in some sort of a building so that any *hula halau* in the State can perform on the *halau* platform with the understanding that they put on a program for the public which would be taped and begin a *hula* historical record -- a depository -- so that these things that are so ephemeral are not completely lost. Because I think of 'Iolani Luahine -- we have only one or two clips of her dancing and yet she was absolutely ...she was incredible! The minute she started, a possession took place. It was just incredible. And then, I think, there is so little of what she did, and I think this is one of the best places where you could set up something like that. I think you could end up with something that would be for a nonprofit organization running that sort of thing. And then, of course, you'd have a source of income being able to charge something to go to the performance. The *halau*, in order to be able to use the place, the actual school, would be, I think, somewhat of a good thing. I would think if I were a *kumu hula* to one of the most famous *hula halau* areas is some place that I could actually get to with my crew, would be something I'd want to do. And a few have done it in the past. But it's too dangerous right now. And too many people are going into it and lifting stones, and taking stones. Our former Postmistress used to dread getting these boxes addressed to 'whoever is in charge of the *halau*', because she said people would take these stones and then send them back. I don't know...something happened to them...she said you could just feel this mana! To me the only way you're going to save this, is to use it [FBW]

Again to me that should be directed to the practitioner's who use that [*hula* platform and *heiau*]. To me I think it should be cleaned up because when it's overgrown, the way it is now, the roots ... the trees and stuff...they're busting up all the rock walls. In my opinion, they're desecrating it. The challenge is that when you clean it all off, then all the tourists are going to want to go up there. So how do you control ...it's always a two-edged sword ...that kind of thing. So I think the master plan has to address ways of protecting cultural areas from just being considered public domain. The whole western [mentality] is so... "It's a State park and I'm a U.S. citizen, then I should be allowed to go anywhere I want in the State." That's not how this park should be operating. But I do think it would be ...it should be better maintained...it should be cleaned and better maintained. It's a really impressive site, like I said when we were growing up you could see all that -- I think Uncle Tom was the last one to really clean it really, really well for the Historical Society. It must have been like twenty years ago the Limahuli Garden was working, we were cleaning it, volunteering and going down there and cleaning it CW].

I think the archaeology at this particular point will take its own particular course. The *heiau* is itself, especially when it comes to the *hula* - you need to separate it out for both *hula* and for the *heiau* - they're two separate things. Even though they could be under one house, but yet even then that house is divided into two separate categories - one is for the *heiau* itself and the other one is for the dance platform. They're two separate functions. Although it's all in the same because as you go up you're making your *ho'okupu* to the *heiau* itself, and then the *hula pā* is the secondary aspect of it. Once you've cleared the way through the *heiau* itself, now you're on the *pā*, and then now you do what you need to do to Laka. But there is a little bit of a gauntlet that needs to be run, and the protocols to the main *heiau* have to take place [RW].

##### 4.7.2 Lohi'au Site

The Lohi'au is another one. It's overgrown its right by the trail head. It's an area that kind of needs to be cleaned up. I think it would be great to have it cleaned up and have better interpretive materials. The whole park needs interpretive materials, it's really lacking, and it's one reason that most of the people come there. They just think it's a place to go swimming or lie on the beach, or throw their rubbish away in the bushes. They don't understand that in the ancient days this was like one of the Seven Wonders of the World with the 'Oahi ceremony and the *heiau*...this was a very special sacred area that in ancient days people made pilgrimages to come here [CW].



Photo 70. Lohi'au's house site covered with vegetation

##### 4.7.3 Master Plan: Cultural Methods/Protocol Recommendations

**Multi-discipline Houses/Kuleana** I really don't want to reiterate the recommendations we made on behalf of the County of Kaua'i Historic Preservation Review Commission. That motion and stuff is out there, that I think we'll address piece by piece as it comes as a Commission. But I think that my main point is that some of the cultural methods that you may want to consider in this whole thing. Number One, this is multi-disciplinary. You have the hale's, we'll call them hale's for now - the Houses - you have the house where all the...this area should be reserved as an archaeological preserve. And so therefore, for educational purposes, the archaeology should be allowed, but that's separate in its own particular field. You have the fishing, so another house is controlling...their only duty is to manage the fisheries of Hā'ena. Another house is going to be Marine Biology, which is the study of reefs...that needs to go on. Another house would be the taro, such as Hui Maka'ānana, which is the taro growing aspects of it right there. Then another house will be the house that actually is the *heiau* itself. So briefly, I know there's a couple of more houses and more disciplines that we're dealing with, but essentially you have these separate disciplines right here. Each is their own particular entity. I think it's pretty ridiculous to even assume that one group can handle all aspects of this...so there's room for different groups...their *kuleana* are very separate, but yet all of them are focused and the goals are all the same - making Hā'ena the jewel it deserves to be.

Number two, the cultural, educational, spiritual, philosophical reserve or preserve where all of that [the various Houses and their *kuleana*] is perpetuated. So there's a unique opportunity by laying the fundamental groundwork for the separation yet the unification of these separate houses. I think it would be well worth considering over a long range period. It keeps the arguments and everybody focused on their job, instead of one guy who is in every single camp, this just doesn't work in the long run. So, therefore, although I was there at the beginning of Hui Maka'ānana o Makana, their function is quite clear in the taro productions and the expansion of the taro lands,



and all the aspects of the taro growing that are going out there. They can expand into other areas, but whether they would be the group that would handle all the protocols and everything with the *heiau* that's different, that needs to be a specialized group... a specialized *kahuna pule* - the house itself - the protocols that need to go on in the *heiau* and all the activities need to be overseen by some very experienced people [RW].

**Fishing House.** At this particular point I'm not going to put in any individual, I could say that, for example, Jeff Chandler, he's a fisherman. He has a great deal of knowledge that could be added to the world of fishing. For example, he would definitely be in the House of the Fisherman. His ideas and his participation in the fisheries, conferences and meetings, and everything like that, along with Thomas Hashimoto, they know what to do in regard to managing the fishing resources... I think he would be really good with that [RW].

**Botany House.** A lot of this stuff in here - the vegetation is *kamani* - there's a botany aspect to it too, so that's a separate house too. There's a whole *la'au lapa'au* aspect that could be done here too, which actually creates a whole another separate house of botany....again, a completely different discipline, and under different goals and objectives, but still important to the big picture [RW].

**Mason House.** We were able to do that in the new Loko Kai restoration Project, in that we created the Mason House in all the restoration work. The Mason House included both males and females. It was their job to decide how the stone walls were going to be built. Once they knew exactly what they were going to do, then they told the Kahuna Pule House, and then they're the ones who decided how to open the door....keep it open....keep everyone spiritually safe....and close the door after we're done. It was their job to protect the masons while they're working. The Third House was the Na Pali Coastal Ohana which both the masons and the Kahuna Pule knew exactly what to do, and then it was our job that both of them got exactly what they needed whenever they needed it [RW].

**State Parks House.** The Fourth House was State Parks, which oversaw the whole thing to begin with. In the long run that methodology really helped focus the work and the energy. It kept people from being in too many places...and into discussions where they don't really belong. It facilitated things in the long run much better and made for a stronger more cohesive unit [RW].

**Cultural Methodology.** I think the main point that I really wanted to make is to consider the culture methodology and the way you organize the different disciplines. I think it's going to help you a great deal in the end. It's worked for us. Our cultural methodology and problem solving and work ties everyone together, keeps everyone focused, keeps the arguments, keeps everybody out of each other's hair, keeps everybody out of where they do not belong, but also gives everybody a sense of responsibility and a place - a sense of importance and a sense of a very specific responsibility. People need this to grow, but at the same time it's symbiotic, if we don't seek the symbiotic relationships we're not following the lessons we're supposed to [RW].

The cultural protocols that demand this particular approach just because of the site you're dealing with. You're dealing with one of the most important religious, cultural, historical centers. Our ancestors deserve the best. Naturally when you're dealing with these elements it is much safer to be operating on a much higher elevation of ethics and protocols. And in the long run it's much safer for everyone. But at the same time it ends up as a spiritual experience because in the end it is a ceremony that binds us together. Now once we've experienced the ceremony together we have something in common. So the ceremony is actually critical. As far as I'm concerned, the more ceremonies that go on up there the better, but that elevated protocol is critical in keeping everyone safe and respectful [RW].

#### 4.7.4 Master Plan: General Issues

I think by thinking that Hā'ena State Park is only at the end of the road is misleading. I think we have a duty to incorporate the entire footprint of the property for a long range plan. Although we're in expansion phases, you can break it up into many different phases. It breaks it up into more of a size - components - like building a wall [RW].

**Lohiau Complex Site.** The areas of concern - my grandmother, Juliet Rice Wichman was there when the County was going to bulldoze Lohi'au complex. She actually started right there in front of our house as we have the Pōhaku Kāne, the brother, the stone which is a fishing shrine is right in front of our house. The sister, which was on the reef, is now broken. She's in forty feet of water. But the County was going to bulldoze the boulder away; my grandmother laid in front of the bulldozer and stopped it. The bulldozer went down to the Lohi'au house site, was going to take it apart, my grandmother laid in front of it and stopped it from getting destroyed.... The Lohi'au house site is poorly mapped. And that the road is actually coming way too close to it. The car bumper is almost touching the thing...so you need to put a larger buffer around that.... A larger buffer needs to be established around the Lohi'au house site [RW].



Photo 71. End of the road turn-around

**Burial/Turn-Around Issue.** In order for us to do the turn-around areas you're in the most sensitive of the burial areas. As you start to get that footprint between the Lohi'au house site and the bathroom you have a very tiny maneuvering room right there and also, quite frankly, problematic [RW].

**Comfort Station Issue.** We always have these problems with comfort stations in sacred zones, culturally we give up a lot for this. In that some of us are quite aware of the circumstances of the archaeology of the bathroom - it made a lot of people uncomfortable. So I'd hate to see more of it going on, and that the existing footprint right now needs to stay. But still close within it are the preserves, because we have burials that are right in there, below and around the bathroom area. But we can presume that it's going to run along a particular strip along the dune. So that's why I'm thinking that people can either walk along the beach, or they can walk along the path that brings you a little bit closer to the loko [RW].



Photo 72. Comfort Station

**Foot Traffic/Pathways.** Although we know we're dealing with a sacred area, there are certain sectors that are clearly more sacred than others. The pathway in which the human traffic is going through is absolutely critical that it goes around features not too close and not too far, and without going through any of the walls. So there is a sensitive approach that you really need to put the overall paths in there. Because anybody who has any understanding of Hawaiiana and they see the path not properly placed within the landscape, will cause problems. But I think in that sensitivity right there...right from the get-go will help things a great deal. Photo 73. Footpath through dune



We know where the burial areas are, we know this by the hard way....well, we knew it already...but then again people needed to learn the hard way exactly where it was. So I think cross-culturally enough people know where they are right now. So we know where the pathways can be leading. I think I made the suggestion that the pathways are leading along the edge of the

loko, on the belief that most of the burials are there within the dunes. And they may not be right on the edge of the loko, but at the same time these are beautiful views...and also not only enhances culturally but also within the visitor...from the visitor's standpoint to the beauty of it is going to be really cool [RW].

**Fishponds.** These can also end up being working fishponds too. And so that could be another aspect under the fisheries but the wai fisheries also. So those are there as far as expansion capabilities. It would be nice to have it as a larger master plan ....and step by step work up to it [RW].



Photo 74. Fishpond Area

**Parking Lot/Auwai Impact.** What this plans shows...and maybe this is another concern...it shows the *auwai* being restored and running through the parking lot. While that might sound good, the problem would be drainage and what's going to happen with all the runoff from this paved parking lot - assuming it's paved - maybe there's other ways to deal with it. But if you got all kinds of oil and brake fluid, dust, asbestos dust from brake pads...washing in to the *auwai* from the parking lot...that would have hundreds of cars a day parked in it...it could be really bad for the health....I mean you're talking about food production [CW].

**'Auwai-Lo'i Expansion.** The water is going to be coming from Limahuli Stream. Right now, I know, it's tapped up above the road. In Limahuli it actually comes down through the *auwai*, crosses underneath the culvert, and reenters into the *auwai* that starts to feed the *lo'i*'s that are actually down there. That water has been flowing for awhile now. We may want to take another look at the water supply Hui Maka'āinana expanding their footprint. Right now the last time I saw it there were four big *lo'i*'s, however I know that Thomas Hashimoto had two or three other *lo'i*'s in the areas...and I know he wanted to open up too. So I think in visioning a larger master plan for the actual footprint that Hui Maka'āinana can expand their *lo'i*'s, with the foot-trails that are coming through there...that we keep it pretty safe...the terrain itself is not necessarily really difficult; although slightly undulating, the view plains through there are absolutely stunning [RW].

**Parking Lot/Lo'i Issues.** On the other hand, I guess, if you graded it away from that and maybe had a permeable surface paving...you know not everybody is going green...we know that hardscape is not a good thing...the more permeable surfaces we can create the better. The problem with a lot of these, though, is intensity of use. This park gets a huge intensity of use. So things like grass-green, grass paving, and materials like that would not be functional...the high rainfall we get in Hā'ena. But maybe there's...they have permeable cement and permeable asphalt...there's gravel paved systems. There's different things that could be looked at. This is probably the logical place, because it already has been destroyed and disturbed, to keep a parking lot. But I think environmentally how we deal with those issues in terms of the *lo'i*, I think, is going to be really important because the *lo'i*'s are going to be a really important part of the cultural landscape of the Park [CW].



Photo 75. Parking Lot in Hā'ena State Park.

I think one can easily vision the areas that Hui Maka'āinana o Makana can expand to taro patches. I think we can begin to envision what the experience of our visitors is going to be when they arrive there. That immediate connection into the taro patches to begin with, I think is going to be important. Having a trail that actually loops around the ocean front and actually makes a full circle from the internal parking lot, which we know is going to have to be expanded and is not enough [RW].

**Level of Recreation Use.** Actually a lot of effort went into this Plan. The biggest compromise we had with this Plan was the State continuing to say that it had to be a "recreational" park, and trying to define what "recreational" meant because of the funding that they had received when they bought it. What's good about this plan is that it more or less preserved and sought to restore the primary cultural features within in the park and to protect the *iwi kupuna* in the dune system. So I'd say probably the only thing that, maybe, I would have a concern with in here would be the level of recreational use. I'm trying to remember, I think there were bike paths and stuff like that. I think people need to have access throughout the park, I'm not sure that we gotta necessarily have bike paths throughout the park. I'd say that's just something we'd probably want to re-look at...the location of those paths and access ways [CW].

**Tourist Guides.** Like before, when the guy was drawing this thing up, the Master Plan, the first time they were talking they were gonna take guides - going get guides for take the tourists inside there go look the taro, go look the canoe, had the canoe down the beach, they had the canoe house on the beach side below the taro patch, and all that. I don't know because when these guys get meeting about this Master Plan thing eh, I don't go *maha'oi*. All Jeff and Kawika, Chipper, all those guys they go look. I know they had one meeting not too long about the Master Plan thing. For me I'm willing to dakine, but if they make funny kind like that eh they kill my fight too, even with this fishery thing too you know. They gotta cooperate too. Chipper went get me involved with that [TH].

**Walking vs Driving.** This Plan actually has a gate right here, so cars have to stop here. But this is such a short walk people should be able to just walk down. It's really beautiful. In fact, when there's no vehicles driving here--the problem there isn't a shoulder on the side of the road so it's dangerous to walk on the road now with the cars on it [CW].

How you're going to transfer everybody from the parking lots...quite the distance. I don't know if it's 300 or 400 yards or more - quite a bit more than that between the parking lot - it's a long walk for people [RW].

**Base Yard/Helipad.** The location of the base yard...I think once they have a little bit better of the footprint in mind, we need to take a better look at it. They are pretty close to a cliff line right there, and they're on the high side. The toll booth thing and exactly the placement and how that's going to happen, that's still yet to come. The helicopter pad is pretty important. I was there when there was a helicopter crash...rotated on the reef in front of the *heiau*. And for the FAA we collected and kept the helicopter from being washed out to sea, so they could investigate the cause of the accident. Helicopters, I've seen them make several emergency landings in this area. Although I understand we will probably have to chop out a taro patch to put a helicopter field in there, but yet the emergency pad right there - we need it .... We know the helicopter pad's got to go in there...we know that certain portions of this is going to have to be data recovered as you might be taking out a couple *lo'i* in order to actually put in the basic infrastructures that you need right there [RW].

I feel the loss of the Hawaiian things that can be kept; I don't see that we need to be over captured by *hula* and the modern *auwana* rather than the *kahiko*. I don't see why we have to go the "Hawaiian-Jamaican" style thing. But in Hā'ena, maybe I'm asking too much, I don't know of any of it can be totally recovered, but I think a lot of it could be. But I'd like to see a lot more respect for these places. You know the DLNR is supposedly in charge of all of these things, but I'd like to see a lot more respect from them. I would like to see them really working with the people who are trying to keep things going. Like maintaining the *heiau* there.... It's like the end of the road here, I hate to argue, but it would be great if they would close off the road, which I understand they have at the parking lot where the heliport is and let people walk in from there. It's a quarter of a mile at most. And then, 'Oh, you can't do that, people are not going to do it!' Well, if they really don't want to do it, then fine, let them turn around and go home! [FBW]

**Resource Structure.** One of the things, though, that this Plan doesn't show on it is there's a house in this area in here, which this guy Rusty used to live in this house long time ago. It's really really run down. I'm not sure if it's at the point where you could still salvage it or not, you might be able to, but I think this Plan is kind of completely absent on it...and there's a road that goes down to there. And I think it is an under-recognized resource because within the context of this Park and the cultural use of this Park, I think you're going to need to have places like that that are kind of like retreat centers where cultural groups could come...whether they stay there over night or not. But it's kind of like Kōke'e there's an outdoor education center up there and the nature center...I think having something like that in the Park here could be really important. Also the Hui Maka'āinana o Makana which has been the...we established a curatorship program with the State back in 1999 for the archaeological...primarily for the *lo'i* complex. It would be really good for them to have a place where they could have meetings and functions related to their curatorship of the cultural sites within the park. So that is something that I would like to see changed or enhanced on this plan [CW].

**Caretaker Structure.** Now things get dangerous. The nights...I know the idea of the full position of a caretaker and that particular house...probably thinking that closer to the entrance. The caretaker is a traditional part of our culture, to have the caretaker close in. Security twenty-four hours a day would be nice, although I'm hard pressed at this particular time to actually point at the type of vandalism one would expect right there. However, the presence 24/7 in the zone is really good [RW].

**Taylor Camp.** I'm not really comfortable with not including the beach area that's in front of Taylor Camp into the whole scope of the park. I think you're defeating the purpose in the Master Plan by only taking a tiny portion which is the actual end of the road, and ignoring three-quarters of the land footprint in the planning process [RW].

**Rockfall Liability Issue.** Addressing the liability issues, I don't think we're going to get into this particular point, but I do know that it's serious with the rockfalls...that a good section of the road that you're walking or driving, is right next to a cliff. Therefore, the suggestion of leading the paths out and away from the parking lot and towards the ocean and doing the loop and so it keeps people into more of the open plains rather than along the edge of the cliff. Although the traffic, whether it's going to be shuttle buses - whatever the nature of the concessions they have in mind, I'm not really sure of how they are going to be doing it, they're going to still be using the road as a footprint [RW].



Photo 76. Rockfall

**Park Concessions.** I know there's discussions on the different natures of concessions, but then again that's concessions whether it's neighborhood driven or beyond at this particular point - naturally the first choice would be within the *ahupua'a* of Ha'ena and then Waihi after that, and then expand out. I wouldn't mind seeing - I understand that the reason why SHPD, or being the State Parks, need the money that these parks can generate with the revenues, it would be nice for the first five years that fifty percent of the revenues stay in the park, after that then maybe twenty-five percent depending on the infrastructure. I think it's pretty reasonable to start the ball with expecting a hundred percent revenue to stay in the park. But some sort of arrangement as to a percentage based on years, either going up or going down over the years, needs to be discussed and broken down into the various - the methodology just in that alone, right! But to begin a discussion, I think fifty percent of it needs to stay or a certain length of time to allow some of the infrastructure to get settled in by the volunteer groups [RW].

#### 4.7.5 Park Volunteer Issues

I know in the past the volunteer groups have been a blight on State Parks in that they've done...they have not been hospitable to any volunteer group so far that is willing to work on the

State Parks. It's been a hostile environment and I can attest to that. I sure hope some of the attitudes are going to change. Diplomatic management of these volunteer groups is absolutely critical.... I've been working on *heiau*, on State *heiau*, for how long now and I'm still treated like an enemy although I've done nothing to deserve this treatment. It's difficult. And it's really hard for me to bring in the pillars of the community to work on these things in a hostile environment created by State Parks. So I think the attitude has to change. We all know State Parks is broke but then again, at the same time, the hatred for the really good people - I know there's monkeys in there - the monkeys run free but the good people who are following the rules are constantly stymied and life is a lot more difficult. That attitude has got to change; otherwise it's never going to work. And naturally everything starts from above; the premise of which State Parks embarks on this community cooperation is going to be very important - that the State government is willing to undertake a project that is culturally rooted. 'Cause in my experience it's what lasts a long time. If it is within the psyche of the Hawaiian culture, we as a community will buy it because this is the way we live our lives. You put in a western methodology into this; you're going to have problems because it's very short-sighted. And at the same time, everybody is one large family but we all have our different jobs too. So it becomes more of a larger collective, but I do know the importance of State Parks to have somebody who has the diplomatic skills, and the cultural knowledge and the historical knowledge in which to navigate this Hawaiian cultural psyche. We still live by the old ways in many respects. Our sense of hospitality hasn't changed one bit from the beginning of time. And we still carry on this hospitality to a very high degree, although a lot more difficult today to live because - these are the clashes of cultures. Generosity is considered a weakness but it isn't in the Hawaiian world. Generosity means wealth. There's room for many of the multi-disciplinary things, and I think that's the beauty and long range jewel that this park can have [RW].

**Permitting Process/Volunteer Issues.** The other one too, of course, which is the different varying jurisdictions that should be brought into one house. I think you have four or five different government jurisdictions here going on within the State Parks, consolidated into one. It would make it a lot easier in the permitting process which is essentially...the permitting process is what kills any volunteer activity in the end. It's just much too bureaucratic, much too time consuming as you go through all the different agencies. If you kept to one, I think, you'd be able to do things more on a timely basis. And it's the nature with volunteers that they're ready and willing to go right now, but to continually stand them down...you'll lose them. And then the momentum that comes out of communities are strong for a moment, they taper off for a little bit, they pick up again...it's like a tide...the tide comes in...the tide goes out. But it's a continuous process...while the tide is coming in then lots of activities are occurring [RW].

#### 4.7.6 Kapu Issue

I think you can get yourself confused with all the *kapu*. It all depends on your religious upbringing. Most of its Christian; those *kapu* are done by Christians...all Hawaiians, right. The Christians feared it, so the element of fear that permeates our culture has everything to do with that. That complete disassociation...you know, 'you touch heiau you're evil, you will die'. That's a Christian influence, that's not a Hawaiian influence. I have to preference here that the *kapu* here on Kaua'i is very different than it is on the Moku o Hawai'i. We have cookie-cut all Hawaiians into the Big Island/Hawaiian mode, and no such thing is the case here.

I think it's in page 97 in Bennett's, 'Archaeology of Kaua'i', goes into depth as he explains all the unique characteristics culturally, artistically, spiritually, and in our *kapu* - Kaua'i's cultural identity. And in it he clearly states that the *kapu* here was far more inclusive of all classes. The people sought the balance between male and female. The females were involved in war, they're involved in art, in the artistry and all aspects of it, and they're also involved in religion. The whole point of it was to seek the balance between male and female. There were not these European patriarch notions that people are so caught up with. No such thing here, clearly a lot more matriarchal, on this island. So our *kapu* are different. Essentially what it is, is that it is a reminder to men that they cannot bleed each other on royal sacred grounds. There is a place to fight and

there is a place where you cannot spill man blood. The spilling of man blood on a *heiau* is the most profane thing in the world. Somehow we've gotten all confused in thinking that because of women's *ma'i*, that's profane. But that's actually ridiculous, because they've lost sight of the real intent of it. Men cannot bleed on the *heiau*. And naturally having worked on it for so many years, every time somebody catches a little bleeder or stuff like that, I'm always very quick to get them off. Under my watch nobody bleeds on the *heiau*. They've gotten off as quickly as possible. It's fairly rare that it happens here, but still I'm always watching out for that. So there was far more of an effort to seek the balance between male and female here on Kaua'i. Those *kapu* did not exist that everybody seems to be so overly caught up in.

So ultimately this is how I see the world. This is how I see the way the culture blends, balances and moves in through all of that. Not exclusive, much more inclusive of all classes and people. I'm saying this because it's important to - there are so many *kapu* running around - everybody's got a *kapu* of everything. But the bottom line really is that in 1819 after the death of Kamehameha, all the references that I was aware of at that particular part by Hawaiians, it was always mentioned as the 'lifting of the *kapu*' - even Malo. You know Malo doesn't use the word "break" until way later, it's always 'the lifting of the *kapu*'. I think he says it really good, I think Edith McKenzie in the back of her book writes that particular letter, 'Due to the industriousness and the hard work of the *maka'ainana*, the privileges that were once Ali'i are now everyone's. The *kapu* was lifted.' They lifted the *kapu*, so show me any culture in the world that came to terms with forty years of foreign impact to their gods and said they no longer work we have to put them to bed. They actually put them to bed. They lifted the *kapu*. The breaking of the *kapu* is an early Christian attempt to make them feel better like they did it, but they didn't. And it's not so simple as Ka'ahumanu sitting down with Liholiho eating, that's just a gross simplification of what really happened. Yes, there were some diehards, but the *kapu* was lifted. So in that particular time all the *kapu* that was running around was lifted, and *ma'enoa*. Now in my mind it is up to us as a people, as we put back the *kapu*...but there is no real formal way and no real understanding by most people of just the fact that of the breaking of the *kapu* or lifting, just how much of a difference that really means. I'm saying this because I'm trying to explain my cultural viewpoint, of which I preface everything else on, of which I hand everything else on, on those basic premises. Seek the balance - far more inclusive of all cultures and class. The role of the male and female is clearly laid out in all of this, and we need to work a lot harder in reestablishing those [RW].

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#### 4.8.0 Anecdotal Stories

##### 4.8.1 Kekela-Wichman House

I've got one story...another one of my spooky ones. My mother's house is just above... immediately above the house was the old 'around the island trail'. And when she first got the house, the house behind her as it turned out was built on this trail...lies the cookhouse, which was just the dining room and a kitchen. During the War the Army had taken over the house, and they'd gotten a whole bunch of beautiful stuff for the roof, only they put it on the floor instead of on the roof...so that everything from the floor up ...so my mother had to rebuild the house. And when she rebuilt it, she kept the cookhouse and turned it into two bedrooms. So that at one end you had a spring door that faced out towards the dry caves and a door between what was the kitchen and the old dining room and then a door leading out immediately to the house- you could go out either door or through. In my room - I took the old kitchen - that was about as far as you could get from everybody. I had my bed up against the window so that I could look out at the ocean. I kept having this feeling at night that people were walking past - you know that feeling - I thought I saw somebody out of the corner of my eye. I'm breaking my sleep all the time, so I moved the bed across the doorway to the dining room. And one night, I heard the screen door open and looked up to see who was there and nothing. But footsteps across the lauhala mat and I could see something stepping on to the mattress and footprints going down and I looked on the other side of me and somebody sitting on my chest, breathing on to my face. And then lifting off the weight, footsteps back to the floor, the door opens and shut and it open and shut again just a couple of minutes later.

I was really getting out of there. I never slept in that room again! I don't know what it was, but in the dining area my brother and sister-in-law put their oldest baby in there in the crib to get out of the way and the child would wake up just screaming and shortly after they'd put him down in there the baby would scream. After that incident mother just tore the place down - took both the kitchen and the dining room down because nobody would stay there. It was on the trail.

At her house she had several times somebody coming in and sprinkling salt and sprinkling around with ti leaves...there was just too much going on. But she was meant to be here... We were living in Lihue and she had gotten the place fixed up to move out - this was early '48 - the summer of '48. I don't know why we were supposed to wait for awhile, but everything was ready and about 9:00 that night, moonlit, my mother looked at me and said, 'Let's go.' 'Let's go out.' No problem for me so we got into the car and we came out. At that time you had to stop along the road at the bottom of the stone wall, so we stopped there and as she stepped out of the car. The sky had gotten overcast but as she stepped out of the car this little rectangle of moonlight appeared and she stepped into it and it followed her. She opened the gate and I'm following right behind her and never got into the moonlight and this moonlight took her to the door of the house. But she walked from the road all the way up into the house in moonlight and I did not. It was weird! But just as she got to the door, we heard a voice out on the balcony. ("Uuuu, Uuuuu") That was weird...I told her the next morning at breakfast, "Were you aware that you walked in moonlight and I didn't?" She wasn't aware of it; she just said that she's got immense feeling of being welcomed. What that was, I don't know! Somebody's saying, 'Welcome to the place' [FBW].

##### 4.8.2 Tsunami

I was 12 years old then. It was April Fools, April 1st, I was getting ready to go to school right before 7, and my brother was outside by the lanai, look down toward the corner, looking down, and he saw the water splashing on the coconut trees, right where the big white house, the football guy own now. Well it's kinda blocked by the fishtail farm that's why you couldn't see the house now, but anyway it's right close there in the Makua area. So we went down there, we went run down to the next place because the old man Hanohano and they all live right next to us below us, so we went go tell them about the boat and the net. We had the boat and the net down at the Rice's. So we all went down there. When we got down there, the water was receding but we never know what the hell was going on. We were busy unloading the net because it was full with water in the big boat so we unloaded the net and drying em. We didn't know what the hell was going happen. By that time, the channel was all empty with water. Then we looked outside the bay, we could see Namoku right in the center of the bay, kinda on the outside. And then the water was dropping off from there like \_\_\_. We still never think nothing. So we kept on doing the net. Until we heard the wreck sound up above us, the wreck sound, bulldozing all the house up by the Rice's. When we looked up, we saw the waves grinding, grinding, grinding all these houses that were up there because there were a bunch of em, coming toward us. That's when we started to run, we left everything, we ran in the corner, and just about that time the Rice's had the place graded with the bulldozer, so went bulldoze all the guava trees against the kamani trees, we call them, but anyway, yeh the false kamani trees, so we climbed on that rubbish pile that was about 15 feet, and climbing the trees, the two old men went climb on the rubbish, and they went hold on to the tree and the water went catch them over there. But we were up in the tree. So after the water went recede, the big haul that they had right down came right on the side of us because was open inlet. Because they went bulldoze everything and nothing could hold em back - right on the side of us. After the water went recede we ran home. By that time our house was against the pear tree and the plum trees in back of our place. We went home go look for my mom, call, call, call but the house was up against the trees. Call, call, but no more. Then we hear one faint soft calling us far up. So we went over the hill - we went follow the sound - we went over the hill because my sister she get that little hill eh, so we went right behind there, my mom was there all nude because her pajamas went all rip from the barbed wire, and she was pregnant with my brother. She was all scratched. So I went go home grab one sheet so I could wrap my mom, let her wrap herself, because she and Julia they were all bust up inside the lantana and barbed wire behind our house, but they were safe - all scratch up. By that time, before the second wave came, we was on our

way across the fence way in the back of us, you know where the \_\_\_ trail is? Below that there was a fence line, we went go climb on the fence line and swing across the place. That's kinda far you know, from here to in the back of my truck, I think that low in the back of the hill. So we went swing that part and we just got above that place, water came, sweeping down, by that time everybody was safe, we went climb on the hill to that Robinson's fence line and look down, there was no buildings, that YMCA was all flat. YMCA had about 8 cottages, and the theater and stuff was all flat, the stone theater over there was all flat and the kitchen, no more, all the roofs were all back against the hillside. So you can imagine how big that thing was. And then, we climbed further up, we look, all the hala trees were gone in back of the hillside. That's how that wave went wipe out all that hala because from the YMCA going to the Colony Resort that whole area was all hala trees, that's why they call that place Hala \_\_\_\_\_. 1946, the wave wiped that whole place out. But little bit been grow back, little bit. Most of the thing went smash, just like the wave went pound right on em, just like one bulldozer went right through that place. That's what happened.

In this area right here where the Rice place, that's where the water was coming down and we were over here and the wave went come around and wrap just like one back lash when we seen em pushing all these houses. But when we went run was one far run you know! We had to run fast because the wave was just coming down. They all flat - the water came from here and just like came this way. But actually when the water went reach here, this whole place here was all empty because here get the apapa, over here get the apapa - was dropping down from there. Over here was just like mountain, all the apapa was just like mountain, if the water was 40 feet, the mountain was standing 40 feet cut there. That's how it was - was spooky.

And then we seen em again in 1957 when we went run away when all this thing was taking place. We seen that, because we waiting for the waves come. It was 8 o'clock, quarter to 8, came that time. That was the estimated time...from the Aleutians down to our place. That was the time of the arrival of the wave, and we were watching that in 1957 ...and we never know what the hell would happen. We were watching from Keaumele ...right here this area. That's where the Wichman's are - Keaumele. Keaumele is right on that corner. Right in the back there we were standing up there and watching that[TH].

#### 4.8.3 Pohakupukane and Pohakuloa.

Pohakupukane stay on the hill. Pohakuloa stay right on the road right by the Wichman drive way, but stay covered with - you cannot see that because get sunflower growing right around em. It's right on the side of the road by the rubbish pile. That's Pohakuloa. And then the sister I don't know what the name - stay inside the water - someplace inside, out here somewhere, inside a puka someplace out here. Whether the thing is the same distance, I don't know. I just assuming that the place you know, like the distance from Pohakuloa to Pohakupukane, maybe the same distance for this in the water. You know the legend for that eh? Was something about she didn't wanna stay on the land by-and-by the bird would shit on her, and then the brothers told her oh if you going in the ocean, the eel and all the fish going live under you. She never care. Or something like that. But Pohakupukane I don't know. But actually they no belong here eh? These stones they come from Tahiti I hear. That's what the story was...you gotta look at the legend[TH].

#### 4.8.4 Lohiau Stone Wall

Just so that you know, you know where Lohi 'au's site is...that stone wall. My mother saved it. She was at home, right next door here. John Hanohano came to her and said that the County trucks were on their way to take the rocks from the [Lohi 'au] house site. So he took her down there and she walked in and just leaned against the wall. And they brought out the bulldozers and the trucks and all that kind of stuff, and she refused to move. She said, "You're going to take me first, before you touch one rock!" And she stood them off. And they finally called up Lihue and got some supervisor out here, who talked to her and turned around and ordered all the people to leave. "Leave it! Leave it alone!" But it was there, they had the bulldozers and everything to do it with [FBW].

## 5.0 SUMMARIES AND ASSESSMENTS

This cultural impact assessment is based on two guiding documents: Act 50 and OEQC Guidelines (see Appendices A and C).

**5.1.0 Act 50 State of Hawai'i 2000** H.B. NO. 2895 H.D.1 was passed by the 20<sup>th</sup> Legislature and approved by the Governor on April 26, 2000 as *Act 50*. The following excerpts illustrate the intent and mandates of this Act:

The legislature also finds that native Hawaiian culture plays a vital role in preserving and advancing the unique quality of life and the "aloha spirit" in Hawai'i. Articles IX and XII of the state constitution, other state laws, and the courts of the State impose on government agencies a duty to promote and protect cultural beliefs, practices, and resources of native Hawaiians as well as other ethnic groups.

Moreover, the past failure to require native Hawaiian cultural impact assessments has resulted in the loss and destruction of many important cultural resources and has interfered with the exercise of native Hawaiian culture. The legislature further finds that due consideration of the effects of human activities on native Hawaiian culture and the exercise thereof is necessary to ensure the continued existence, development, and exercise of native Hawaiian culture.

The purpose of this Act is to: (1) Require that environmental impact statements include the disclosure of the effects of a proposed action on the cultural practices of the community and State; and (2) Amend the definition of "significant effect" to include adverse effects on cultural practices.

### 5.2.0 Summary of Findings

The following summaries are based on the information presented in the previous sections: the traditional and historical literature review in Section 3.0 and the ethnographic data and analyses in Section 4.0. References are not cited here unless it is new information and not already cited in the text above. These summaries condense the information above, but also serve to focus on a few significant individuals and events in Kaua'i's history in relation to the *ahupua'a* of Hā'ena in the traditional *moku* of Halele'a.

#### 5.2.1 Summary of Significant People and Events: Project Area or Vicinity

##### 5.2.1.1 Ancient or Mythical People

Hā'ena figures significantly in the legends of Hawai'i volcano goddess Pele and her sister Hi'iakaikapoliopole (Hi'iaka). Pele falls in love with the local chief Lohi'au and requests that her sister go to Kaua'i to bring him back to Hawai'i Island. The house ruins of Lohi'au still exists in Hā'ena today, as does the hula platform associated with him, where he paid tribute to Laka. What is not clear, is when, in relation to the ali'i below, Pele, Hi'iaka and Lohi'au are in Hā'ena. Other people during this period are Lohi'au's sister Kahuanui, his friend and companion Pā'oa, the Piliwale sisters, a *kupua* named Kapalae and mo'o wahine Kilioe and Kalanamainu'u who guarded the spirit body of Lohi'au in the cave and fought with Hi'iaka and her companion Wahine'ōma'o when they tried to take his spirit body.

The Menehune are said to be legendary as well, yet they appear to be a very real part of Kaua'i's history and said to have finally left the island from Hā'ena, as did the subsequent Mai'a people who were also connected to the early people of Kaua'i.



### 5.2.1.2 Significant Ancient Events

The significant ancient events connected to the project area (vicinity) include the origin of the *hula* -- the *hula halau* or school that included use of the lands of Kēʻē for practices, ceremonies and habitation; the spirit visit of Pele where she follows the sounds of the *hula* drum to Kēʻē, and manifested as a beautiful woman whom Lohiʻau fell in love with; the visit by Hiʻiaka sent by Pele to fetch Lohiʻau who had died of a broken heart when Pele left Kēʻē, and the exodus of the Menehune and the Maiʻa. Other than Lohiʻauʻs house, the *hula* platform (*Ke Ahi A Laka*) and the heiau (*Ka Ulu o Paoa*), any evidence on the landscape connected to these events within the project area was most likely destroyed over time by both natural (storms surges, tsunami) and human means.

### 5.2.1.3 Aliʻi nui

Kauaʻi was first settled by descendants of Kumu -honua and Lalo -honua -- thirty-six generations before Papa was born. Chief Ka-māwae-lua-lani-moku traveled to Kauaʻi with his wife, Kahiki -lau-lani, and her two paddlers Kō-nihinihi and Kō-nahenahe. Because of his good deeds, the great number of his descendants, and the prosperity of his reign, people began to call this island Kauaʻi-aʻi (*Place of Abundance*). Then a few generations after Papa and Wakea (second son of Kahiko and Kū-pūlana-kehau) and also well before the descendants of Nanaʻulu came to Kauaʻi from the south of Hawaiʻi around the 6<sup>th</sup> century along with other families from Tahiti or Samoa who brought their Polynesian traditions, a voyaging canoe commanded by Kūʻalu-nui-kini-akua landed on the west shores of Kauaʻi, at the mouth of the Waimea River. His counselor named Piʻi -ʻaliʻi came with him. They settled in Waimea along its bountiful river and surrounding valleys. Over time they expanded into nearby canyons, valleys and coasts, from Nāpali to Kōloa. Kūʻalu-nui-paukū-mokumoku followed his father as leader of the people of Kona, Kauaʻi and it was during his reign that he sent for a group of people called *Menehune* from his homeland. They helped to construct *heiau*, fishponds and irrigation systems for raising taro. His son Ola was responsible for having the *Menehune* construct the ditches of Pali-uli.

Over time other settlers inhabited all the Hawaiian Islands. Many genealogies of Hawaiian *aliʻi* indicate that Nanaʻulu and ʻUlu (ca A. D. 830) were prominent ancient ancestors who settled all over the Pacific Islands. Around A.D. 1090 Puna -nui-ka-ʻāina arrived on Kauaʻi, said to have come from the Marquesas Islands. Puna-nui-ka-ʻāina arrived when the chief with the deadly riddles, Ka-iki-paʻa-nānea, was ruler of Waimea. Puanui chose to settle along the banks of the Wailua River and this land came to be called Puna. This was the beginning of two chiefdoms on Kauaʻi; Puna in the east, and Kona on the west.

Marriages between chiefly families on all islands are very common as families and alliances are strengthened. During the 1300s the Kona chiefdom is defeated by the Puna chiefdom. Moʻikeha arrives on Kauaʻi and enters a contest which he wins; his prize is the daughter of the Puna chief. His father-in-law orders the construction of Holoholokū (birthing stones of Wailua), for the birth of Moikehaʻs children. Moʻikeha became the first aliʻi aimoku of Kauaʻi. When Moʻikeha passed away his bones were kept in Kēʻē, at the end of the road for safe keeping, until Laʻamaikahikiʻs return.

Early in the 1400s the two chiefdoms were united during the reign of Kūkona, father of Mano-ka-lani-pō and Palekaluhi. Mano-ka-lani-pō married Nae-kapu-lani, the daughter of Kauaʻi Kona chief Makaliʻi-nui-ku-a-ka-wai-ea. During the reign of Kūkona, Hawaiʻi Island chief Ka-lau-nui-o-Hua defeated Maui chief Ka-malu-o-Hua, Molokaʻi chief Ka-haku-o-Hua, and Oʻahu chief Hua-i-pou-leilei [their names imply they were related] and set out with his hostage chiefs to Kauaʻi where he planned to defeat Kūkona. However, Ka-lau-nui-o-Hua was in turn defeated by Kūkona. The hostages were set free after promising never to attack Kauaʻi again; the Hawaiʻi chief remained a prisoner for a while, but he too was later freed.

With Kauaʻi kingdoms united, the new royal residence was set up at Wailua, but Waimea remained significant. It was during the reign of Mano-ka-lani-pō that Kauaʻi prospered during its Golden Age; this was the period of fishponds and monumental *heiau* and complex irrigated *loʻi* or pond fields. This continued on to the mid -1500s and mid-1600s; this was also the beginning of the Kawelo line of *aliʻi nui* on Kauaʻi.

Oʻahu *aliʻi nui* Kū-aliʻi was a descendant of the Kawelo line on his grandmotherʻs side. During the battles of the Kawelo cousins Kawelo -lei-makua (Kawelo) and Kawelo -ʻAikanaka (ʻAikanaka) in the late 1600s, Kawelo ceded Kauaʻi to Kū-aliʻi if they should both die. Kawelo defeated the forces of ʻAikanaka who escaped and hid in a cave. He was later found and supposedly thrown off the cliffs of Hanapēpē. However, Kawelo was also supposedly thrown off the cliff as well by his warriors who were afraid he was going crazy. Kū-aliʻi came to Kauaʻi and declared himself the ruling chief and installed his son Pele -iʻō-hōlani as governor. After Kū-aliʻi died in Kailua, Oʻahu in A.D. 1730, Pele -iʻō-hōlani left Kauaʻi to become the ruling chief of Oʻahu. He left his daughter Kaʻapuwai as governor of Kauaʻi.

Kaʻapuwai died before Pele -iʻō-hōlani so the government of Kauaʻi passed to Ka -maka-helei who owed allegiance to her grandfather Pele -iʻō-hōlani. She married Kiha, a Kauaʻi chief, and had three children: a daughter, Lele-māhoa-lani, a son, Keawe, and another daughter, Ka -lau-i-pihana. Pele -iʻō-hōlani sent his grandson Ka-neoneo to Kauaʻi to ensure the island would remain loyal to him. Ka -neoneo and Ka-maka-helei were first cousins and Ka -maka-helei set Kiha aside and took Ka-neoneo for her husband.

During this time, Maui ruling chief Kahekili won several skirmishes with Pele -iʻō-hōlani who then sent for Ka-neoneo to help him on Oʻahu. This left Ka -maka-helei vulnerable. Kahekili took advantage of this and sent his half -brother Kaʻeo-kūlani to Kauaʻi to woo Ka-maka-helei; she married Kaʻeo and they later had Ka-umu-aliʻi, who was to become the last ruling chief of Kauaʻi.

### 5.2.1.4 Ancient Practices

Changes occurred during 1300-1600s that brought about a uniquely Hawaiian culture, documented by the material culture found in archaeological sites. Kauaʻi developed a unique form of poi pounder such as *pōhaku kuʻi poi* (ring and stirrup pounders), double -grooved stone club heads, and a broad anvil *kapa* beater. The early culture evolved as the population grew, and many of the changes were related to significant socio-economic changes.

There are several ancient practices connected to the project area and vicinity. As stated above, the *hula* was an ancient practice connected to Kēʻē, and greater Hāʻena, as were the ancient practices of fishing, fishpond aquaculture, taro cultivation, sand dune burials and cave burials. Lohiʻau was said to be buried in a cave until retrieved by Hiʻiaka and the bones of Moʻikeha were buried in Kēʻē until Laʻamaikahiki returned to collect them and take them to Kahiki. Ancient *ʻiwi* (bones) are still in Kēʻē sand dunes although relative dating has not been done of their vicinity. Ancient voyaging practices can also be implied to be connected to the area because, according to the *moʻolelo*, the Menehune and Maiʻa departed from Hāʻena to sail back to their homelands. And the ancient ceremony of throwing fire brands (*ʻōahi*) off the mountain was performed at the top of Mauna Makana - the project area is located at the northern base of this mountain.

### 5.2.1.5 Historic People

One of the first significant historic people to land on Kauaʻi shores was Captain James Cook who landed at the mouth of Waimea River, the same place as Kauaʻiʻs first legendary Polynesian settlers, centuries before. His contact with the people of Kauaʻi would have far reaching and devastating effects. Cook gave Ka-maka-helei and Kaʻeo and others gifts, including goats, sheep and a new breed of pig. Cookʻs

men also gave the people of Kaua'i venereal disease. Many more foreign ships made contact with the island people of Kaua'i; some stayed and became residents. In 1820, the first missionaries landed in Hawai'i; they brought Humehume back with them. He was the oldest son of Kaumu'ali'i, who had been sent by his father to the mainland to obtain an education. Since he had not been heard from in years, it was assumed that he was dead. Kaumu'ali'i later converted and gave the missionaries lands to build a church and school.

Kaumuali'i was later coerced into ceding Kaua'i to Kamehameha I who had conquered the other island kingdoms, but Kaumu'ali'i was allowed to continue to rule Kaua'i. A couple of years after the death of Kamehameha I, his son and heir Liholiho (Kamehameha II) visited his cousin Kaumuali'i on Kaua'i. Kaumuali'i was subsequently "kidnapped" by Liholiho and taken to O'ahu, never to return to Kaua'i or to his family. He was also coerced into marrying his cousin Ka'ahumanu, former queen of Kamehameha I and *kuhina nui* or regent to Liholiho. Kaumuali'i died a few years later.

During the reign of Kamehameha III, lands were assigned to and claimed by lesser chiefs and *konohiki* in what was called *The Great Mahele* (ca. AD 1846-1856). The lands of Hā'ena with the exception of *kuleana* lands, were awarded to Abner Pākī, grandson of Maui mo'i Kamehameha Nui (older brother of Kahekili and Ka'e'o), father of Princess Bernice Pauahi Bishop and cousin of Ka'umu'ali'i. Pākī's *konohiki* was E. Kekela, sister of Pākī's mother, and wife of half-brother of Kamehameha I. After her husband's death, she became the wife of Kamaholelani, ohana of Kau'muali'i. After Pākī's death (1855) the lands went to his daughter Princess Pauahi. In 1858 Princess Pauahi sold her Hā'ena lands to W. H. Pease.

#### 5.2.1.6 Historic Events

Historic events connected to Hā'ena would have included the awarding of the ahupua'a to Abner Pākī, which were managed by his aunt and *konohiki* Kekela; the visit by Hawai'i Island *ali'i* Moku'ohai who claimed lands at Hā'ena. The awarding of *kuleana* lands to Haole (#7998 - 'Ili of Kē'ē) by Moku'ohai in 1846, formerly cultivated by Ho'oleali'i; Kanehakili (#7996 - 'Ili of Kapihae) by Kekela in 1839; Nanahu (#8200B 'Ili of Naia, located between Loko Naia and Loko Kē'ē); Moku'ohai (#8200C/RP #7091 - 'Ili of Kē'ē /Naia) by Kekela in 1840 and 1844 (his grandchild and heir Kaenaku inherited it); Naiwa (#10941/RP #6388 - 'Ili of Kamookhalu) by *konohiki* pre-839 and Kekela in 1839; Pea (#10675 - 'Ili of Pa'akala) a tenant during pre-Kekela. After the death of W.H. Pease (1866) his lands were purchased by William H. Kinney (1872); and in 1875, Hā'ena was conveyed to Hui Kū'ai 'Āina o Hā'ena (Andrade 2008:99).

#### 5.3.0 Summary of Interviewee Concerns/Mana'o

- ❖ The lower slope of the dunes had houses/hale...artifacts found when Mo and Alan did their inventory survey.
- ❖ Hā'ena is really old and any loss is significant...this is well-known.
- ❖ The age of the settlement is significant; the Menhune and Mu/Mai'a people left for their homeland from Kē'ē Beach as this was the doorway out...the safety area of Nāpali. It's [Hā'ena/Kē'ē] old...should get archaeological carbon dating; would be significant to know.
- ❖ I would think if I were a *kumu hula* to one of the most famous *hula halau* areas is some place that I could actually get to with my crew [students]...would be something I'd want to do. And a few have done it in the past. But it's too dangerous right now. And too many people are going into it and lifting stones, and taking stones .... To me I think it should be cleaned up because when it's overgrown, the way it is now, the roots ... the trees and stuff...they're busting up all the rock

walls. In my opinion, they're desecrating it. The challenge is that when you clean it all off, then all the tourists are going to want to go up there. So how do you control...it's always a two-edged sword...that kind of thing.

- ❖ The Lohi'au is another one. It's overgrown its right by the trail head. It's an area that kind of needs to be cleaned up. I think it would be great to have it cleaned up and have better interpretive materials.
- ❖ The Lohi'au house site is poorly mapped...other things are not mapped.
- ❖ The road is actually coming way too close to it [Lohi'au site]. The car bumper is almost touching the thing...so you need to put a larger buffer around that.... A larger buffer needs to be established around the Lohi'au house site
- ❖ In order for us to do the turn-around areas you're in the most sensitive of the burial areas. As you start to get that footprint between the Lohi'au house site and the bath room you have a very tiny maneuvering room right there and also, quite frankly, problematic
- ❖ Although we know we're dealing with a sacred area, there are certain sectors that are clearly more sacred than others. The pathway in which the human traffic is going through is absolutely critical that it goes around features not too close and not too far, and without going through any of the walls. So there is a sensitive approach that you really need to put the overall paths in there. Because anybody who has any understanding of Hawaiiana and they see the path not properly placed within the landscape, will cause problems. But I think in that sensitivity right there...right from the get-go will help things a great deal
- ❖ The whole Park needs interpretive materials, it's really lacking, and it's one reason that most of the people come there. They just think it's a place to go swimming or lie on the beach, or throw their rubbish away in the bushes. They don't understand that in the ancient days this was like one of the Seven Wonders of the World with the 'Ōhō ceremony and the heiau...this was a very special sacred area that in ancient days people made pilgrimages to come here.
- ❖ I think it's pretty ridiculous to even assume that one group can handle all aspects of this...so there's room for different groups...their *kuleana* are very separate, but yet all of them are focused and the goals are all the same.
- ❖ The wetland is there already – breathing...no need to convert anything; no need to clean it up; there will be a problem if effluence is pumped into the wetland....
- ❖ Comfort Station/Wetlands is really rich culturally; if they trench for a septic system it will go through quite a bit.
- ❖ The existing [CS] footprint right now needs to stay, but still close within it are the preserves - we have burials that are right in there, below and around the bathroom area.
- ❖ Sewage draining [into "wetlands"] is serious stuff; it will punch through the cultural layers to the burials...this will be highly contentious with the Hā'ena group...they all know about the burials and cultural layers.
- ❖ Comfort Station [is]...at edge of the fishpond...10-15 feet, plus right on water table
- ❖ What this Plans shows...and maybe this is another concern...it shows the 'auwai being restored and running through the parking lot. While that might sound good, the problem would be drainage and what's going to happen with all the runoff from this paved parking lot, assuming it's paved, maybe there's other ways to deal with it. But if you got all kinds of oil and brake fluid, dust, asbestos dust from brake pads...washing in to the 'auwai from the parking lot...that would have

- hundreds of cars a day parked in it...it could be really bad for the health....I mean you're talking about food production
- ❖ We just came back from Kē'ē, we had a grave site in Kē'ē, right near the sand dunes. I can't even recognize all that today. Ka'ilio nui yes, all around there. I guess that's old grave sites, because you folks remember sometimes when a big wave or *nalu*, you could see the skeleton s.... I remember walking down, going down Kē'ē, pass Ka'ilio nui and then all these skeletons on the beach.
  - ❖ Having a trail that actually loops around the ocean front and actually makes a full circle from the internal parking lot, which we know is going to have to be expanded and is not enough
  - ❖ I'd say probably the only thing that, maybe, I would have a concern with in here would be the level of recreational use. I'm trying to remember, I think there were bike paths and stuff like that. I think people need to have access throughout the park, I'm not sure that we gotta necessarily have bike paths throughout the park. I'd say that's just something we'd probably want to re-look at...the location of those paths and access ways.
  - ❖ How you're going to transfer everybody from the parking lots...quite the distance. I don't know if it's 300 or 400 yards or more - quite a bit more than that between the parking lot - it's a long walk for people.
  - ❖ The location of the base yard...I think once they have a little bit better of the footprint in mind, we need to take a better look at it. They are pretty close to a cliff line right there, and they're on the high side.
  - ❖ Although I understand we will probably have to chop out a taro patch to put a helicopter field in there, but yet the emergency pad right there - we need it.... We know the helicopter pad's got to go in there...we know that certain portions of this is going to have to be data recovered as you might be taking out a couple *lo'i* in order to actually put in the basic infrastructures that you need right there.
  - ❖ The toll booth thing and exactly the placement and how that's going to happen, that's still yet to come.
  - ❖ I'd like to see a lot more respect for these places. You know the DLNR is supposedly in charge of all of these things, but I'd like to see a lot more respect from them. I would like to see them really working with the people who are trying to keep things going. Like maintaining the *heiau* there.
  - ❖ It's like the end of the road here, I hate to argue, but it would be great if they would close off the road, which I understand they have - at the parking lot where the heliport is and let people walk in from there. It's a quarter of a mile at most. And then, 'Oh, you can't do that, people are not going to do it!' Well, if they really don't want to do it, then fine, let them turn around and go home!
  - ❖ In the past the volunteer groups have been a blight on State Parks in that they've done...they have not been hospitable to any volunteer group so far that is willing to work on the State Parks. It's been a hostile environment and I can attest to that. I sure hope some of the attitudes are going to change. Diplomatic management of these volunteer groups is absolutely critical.... The premise of which State Parks embarks on this community cooperation is going to be very important - that the State government is willing to undertake a project that is culturally rooted.... You put in a western methodology into this; you're going to have problems because it's very short-sighted.
  - ❖ I do know the importance of State Parks to have somebody who has the diplomatic skills and the cultural knowledge and the historical knowledge in which to navigate this Hawaiian cultural psyche. We still live by the old ways in many respects. Our sense of hospitality hasn't changed one bit from the beginning of time. And we still carry on this hospitality to a very high degree,

although a lot more difficult today to live because - these are the clashes of cultures. Generosity is considered a weakness but it isn't in the Hawaiian world. Generosity means wealth. There's room for many of the multi-disciplinary things, and I think that's the beauty and long range jewel that this Park can have.

#### 5.4.0 Guideline Criteria in Relation to Project Lands

According to the State of Hawai'i Environmental Council Guidelines, the types of cultural resources, practices and beliefs subject to assessment may include subsistence, commercial, residential, agricultural, access-related, recreational, religious and spiritual customs.

#### 5.4.1 Cultural Practices/Resources in Project Area

There were/are several cultural resources and cultural practices in the Hā'ena State Park lands as indicated below:

| Cultural Resources | Cultural Practice                  | Continuing Practice/Use         |
|--------------------|------------------------------------|---------------------------------|
| Ka-Ulu-O-Paoa      | ceremony/ritual                    | ho'okupu <i>wahi pana</i>       |
| Ka-Ahu-O-Laka      | hula/uniki                         | ho'okupu/hula/ <i>wahi pana</i> |
| Lohi'au Complex    | house site/misc                    | <i>mo'olelo/wahi pana</i>       |
| Sand Dune Burials  | burials                            | <i>wahi pana</i>                |
| Loko Kē'ē/Naiia    | aquaculture/ <i>ali'i</i> resource | want restoration                |
| Taro <i>Lo'i</i>   | food resource                      | some restored/more wanted       |
| 'Auwai System      | Agriculture irrigation system      | modified/in use                 |
| Pu'u Makana        | 'Ōahi Ceremony/Practice            | <i>mo'olelo/wahi pana</i>       |
| Waiakapala Cave    | Sacred Waters of Kānaloa           | <i>wahi pana/healing waters</i> |
| Waiakapala'e Cave  | Mo'o mo'olelo                      | <i>mo'olelo/wahi pana</i>       |
| Kalalau Trail      | <i>huaka'i</i>                     | access trail                    |
| Kē'ē Beach Trail   | ceremonial                         | access trail to <i>hula pā</i>  |
| Limahuli Stream    | multi-practices                    | multi-uses                      |
| Kē'ē Beach         | multi-practices                    | multi-uses                      |

#### 5.5.0 Cultural Impact Assessment

##### 5.5.1 Cultural Resources

This category entails sites or places associated with significant events and/or people important to the native Hawaiian patterns of prehistory; embody distinctive characteristics; or are likely to yield information important for research on the prehistory of Hawai'i. It also includes sites that yield resources important for native Hawaiian Cultural Practices, past and present; and items that are part of a cultural context. *Wahi Pana* or sacred places are important cultural resources to native Hawaiians regardless that the original sites that may have been there no longer exist.

The project lands were once a part of an ancient Hawaiian *ahupua'a* life-system as well as a support system for the *ali'i* who lived there and the *hula halau*. The physical evidence of multi-use ancient or traditional cultural practices still exists (e.g. Lohi'au's *hale*, *hula* platform, *heiau*, fishponds and *lo'i*), which not only indicate traditional land-use of the area, but that it (Kē'ē) was/is considered a *wahi pana*. The evidence also indicates that Hā'ena was not only well established, but part of ancient Hawaiian life-systems that included the traditional gods, goddesses, other significant deities, *ali'i nui*, officiating *kahuna* and people who lived and cared for the land. The *hale* or house complex of Lohi'au confirms that portions of Hā'ena were *ali'i* lands with all the necessary traditional infrastructure and required support

systems. According to several sources, there are burial grounds for ancient as well as historic Hawaiians. The project area also included fishponds, considered resource/property of the *ali'i nui* and an extensive taro *lo'i* - *'auwai* system with documented *ko'ele* or taro patches set aside for *ali'i nui*.

## 5.5.2 Cultural Practices

This category includes items that are essential to the practices that have cultural value to either native Hawaiians or other ethnic groups. Burials are considered a very significant cultural practice and both cave and sand dune burials are located within the project lands. The whole area of Kē'ē, Hā'ena, was once part of the original *hula halau* connected to Laka, and honored by Hā'ena *ali'i nui* Lohi'au whose *hale* or house is located at the base of Pu'u Makana, to current *kumu hula*. Other traditional practices included *'ōahi* (firebrand throwing), crop cultivation (e.g. taro, sweet potato and banana), salt water and stream fishing, marine gathering (e.g. seaweed or *limu*, limpets or *'opihi*, *wana*, *he'e* or octopus and sea cucumber), stream gathering of crayfish and *kupe'e*, forest gathering of medicinal plants, food plants and craft plants. Many of these latter practices continue to today.

## 5.5.3 Historic Resources

This category entails sites associated with significant events and/or people important to the broad patterns of history [post Western contact], which includes other ethnic groups; embodies distinctive characteristics of an historic era or master; or are likely to yield information important for research on the history of Hawai'i. There are historic burials within the project lands, but while people are no longer being buried there, their families continue to honor them, a filial practice that has been continuous. The poi mill foundation is all that exists of a historic cultural practice, however, some of the Hā'ena people would like to see it restored to be used in conjunction with ancient and historic taro *lo'i* that have been restored and re-cultivated within the last twelve years. The ancient fishponds were also used in historic times, but often modified to include non-traditional species such as introduced fish, ducks and rice. And although both Kē'ē fishponds were discontinued years ago, some Hā'ena people would like to see them restored and utilized again as a community food and education resource.

## 5.6.0 Summary of Cultural Impact Assessment/Recommendations

### 5.6.1 Cultural Resources (Land, Water and Marine) Impact

The lands within Hā'ena State Park were impacted by natural and human activities of the 19<sup>th</sup>, 20<sup>th</sup> and 21<sup>st</sup> centuries. However, many cultural resources still exist as indicated above and many are associated with cultural practices that continue today. The Hā'ena State Park Master Plan should include preservation plans for the cultural resources, burial treatment plans for ancient and historic burials, interpretive plans, and cultural access strategies.

### 5.6.2 Cultural Practices/Access (Land) Impact

While there haven't been any recent (continuing) burials in the project area or functioning use of the fishpond, according to some of the consultants, traditional/ancient sand dune burials may be impacted by any modifications to the vicinity; lack of beach trail maintenance will impact cultural access to the *hula pā* for *hula halau*; and traditional unrestored *lo'i* may be impacted by the creation of permanent parking lots or helipads in the old *lo'i* areas. Therefore the Hā'ena State Park Master Plan should include strategies to keep current trails clear; to create culturally sensitive trails and buffers to ancient burial grounds; and to protect unrestored *lo'i kalo*, *'auwai* and fishponds.

### 5.6.3 Historic Resources (Land) Impact

This category overlaps Cultural Resources in that sand dune burials continued into the historic period, as did the use of fish ponds, taro *lo'i*, *'auwai* systems, *hula pā* and Kalalau trail. While some of these resources may have been damaged by historic tsunami, they still qualify as historic resources (religious/spiritual and subsistence example). There are a number of historic burial plots framed by concrete or other markers within Hā'ena State Park and remnants of a historic poi mill. There are also at least two historic structures (wooden houses) located in Hā'ena State Park or immediate vicinity that could be considered "historic" (over 50 years). The Hā'ena State Park Master Plan should include preservation plans to protect historic burials and provide access for families; the two historic wooden should be assessed on their integrity and possible future uses.

### 5.5.4 Historic Practices (Land and Water) Impact

The historic practice of sand dune burials was discontinued; the historic use of the fishpond aquaculture was also discontinued in Hā'ena. The restoration and continued practice of growing *kalo* (taro) has been revitalized in recent years in Hā'ena State Park and elsewhere in Hawai'i. Fishpond aquaculture has also been revitalized around Hawai'i and there is some hope that this will happen in Hā'ena State Park as well, for subsistence and cultural purposes. Several marine cultural practices continue today with some modifications. Limited fishing continues although hampered somewhat by the extensive use of the visiting tourist who use the beaches and snorkel in the protected Kē'ē lagoon. Use of the reef is discouraged so there is little likelihood of *limu* gathering there, although limited gathering of *'opihi* may still continue on shore-line.

## 5.7.0 Interviewees Master Plan Recommendations

When the ethnographic survey for the Master Plan/EIS CIA was conducted, the Comfort Station was already in the very early stages of construction however, modifications for the Wetlands had not started. While a limited number of people were interviewed, they shared their many concerns regarding Hā'ena State Park and a long list of recommendations for the Hā'ena State Park Master Plan, which are re-capped below.

- ❖ **Restore/Use Cultural Sites** One of my dreams with this park here down at the end of the road. I would love to see the *halau*, the *hula halau* area, and *Ka Ulu o Paoo* -- I'd like to see it restored and used. My idea was over by the parking lot put in some sort of a building so that any *hula halau* in the State can perform on the *halau* platform with the understanding that they put on a program for the public which would be taped and begin a *hula* historical record -- a depository -- so that these things that are so ephemeral are not completely lost... I think you could end up with something that would be for a nonprofit organization running that sort of thing. And then, of course, you'd have a source of income being able to charge something to go to the performance. The *halau*, in order to be able to use the place, the actual school, would be, I think, somewhat of a good thing.... To me the only way you're going to save this, is to use it...to me that should be directed to the practitioner's who use that [*hula* platform mad *heiau*].
- ❖ A larger buffer needs to be established around the Lohi'au house site
- ❖ **Special Use Cultural Park** I think the Master Plan has to address ways of protecting cultural areas from just being considered public domain. The whole western [mentality] is so... "It's a State park and I'm a U.S. citizen, then I should be allowed to go anywhere I want in the State." That's not how this Park should be operating. But I do think it would be ...it [*hula pā/heiau*] should be better maintained...it should be cleaned and better maintained - it's a really impressive site.
- ❖ **Interpretation** The whole Park needs interpretive materials, it's really lacking.

- ❖ **Sand Dune Field School** Maybe open the [project area sand dunes] area for field school...it's a rich eco-system.
- ❖ **Multi-Disciplinary Approach** I think that my main point is that some of the cultural methods that you may want to consider in this whole thing. Number One, this is multidisciplinary.
- ❖ **Archaeology Preserve** This area [the park] should be reserved as an archaeological preserve and so therefore, for educational purposes, archaeology should be allowed, but that's separate in its own particular field.
- ❖ **Fishing House.** You have the fishing, so another house is controlling [fishing] - their only duty is to manage the fisheries of Hā'ena.... At this particular point I'm not going to put in any individual, I could say that, for example, Jeff Chandler, he's a fisherman. He has a great deal of knowledge that could be added to the world of fishing. For example, he would definitely be in the House of the Fisherman. His ideas and his participation in the fisheries, conferences and meetings, and everything like that, along with Thomas Hashimoto, they know what to do in regard to managing the fishing resources. I think he would be really good with that
- ❖ These can also end up being working fishponds too and so that could be another aspect under the fisheries in not only managing the kai fisheries but the wai fisheries also. So those are there as far as expansion capabilities. It would be nice to have it as a larger Master Plan ....and step by step work up to it
- ❖ **Marine Biology House** Another house is going to be Marine Biology, which is the study of reefs, that needs to go on.
- ❖ **Taro House** Another house would be the taro, such as Hui Maka'ainana, which is the taro growing aspects of it right there.
- ❖ **Lo'i Expansion/Water Supply** We may want to take another look at the water supply Hui Maka'ainana expanding their footprint. Right now the last time I saw it there were four big *lo'i*, however I know that Thomas Hashimoto had two or three other *lo'i* in the areas...and I know he wanted to open up too. So I think in visioning a larger Master Plan for the actual footprint that Hui Maka'ainana can expand their *lo'i*, with the foot-trails that are coming through there...that we keep it pretty safe...the terrain itself is not necessarily really difficult; although slightly undulating, the view plains through here are absolutely stunning.
- ❖ **Botany House** A lot of this stuff in here - the vegetation is *kamani* - there's a botany aspect to it too, so that's a separate house too. There's a whole la'au lapa'au aspect that could be done here too, which actually creates a whole another separate house of botany....again, a completely different discipline, and under different goals and objectives, but still important to the big picture
- ❖ **Protocol House** Then another house will be the house that actually is the *heiau* itself.... The group that would handle all the protocols and everything with the *heiau* that's different, that needs to be a specialized group...a specialized *kahuna pule* - the house itself - the protocols that need to go on in the *heiau* and all the activities need to be overseen by some very experienced people
- ❖ **Mason House** We were able to do that in the new Loko Kai restoration Project, in that we created the Mason House in all the restoration work. The Mason House included both males and females. It was their job to decide how the stone walls were going to be built. Once they knew exactly what they were going to do, then they told the Kahuna Pule House, and then they're the ones who decided how to open the door...keep it open...keep everyone spiritually safe...and close the door after we're done. It was their job to protect the masons while they're working. The Third House was the Nā Pali Coast Ohana which both the masons and the Kahuna Pule knew exactly what to

do, and then it was our job that both of them got exactly what they needed whenever they needed it.

- ❖ **State Parks House.** The Fourth House was State Parks, which oversaw the whole thing to begin with. In the long run that methodology really helped focus the work and the energy. It kept people from being in too many places...and into discussions where they don't really belong. It facilitated things in the long run much better and made for a strong more cohesive unit
- ❖ **Fundamental Groundwork** Number two, the cultural, educational, spiritual, philosophical reserve or preserve where all of that [the various Houses and their *kuleana*] is perpetuated. So there's a unique opportunity by laying the fundamental groundwork for the separation yet the unification of these separate houses. I think it would be well worth considering over a long range period. It keeps the arguments and everybody focused on their job, instead of one guy who is in every single camp, this just doesn't work in the long run.
- ❖ **Cultural Methodology** The main point...is to consider the culture methodology and the way you organize the different disciplines. I think it's going to help a great deal in the end.... Our cultural methodology and problem solving and work ties everyone together, keeps everyone focused, keeps the arguments, keeps everybody out of each other's hair, keeps everybody out of where they do not belong, but also gives everybody a sense of responsibility and a place - a sense of importance and a sense of a very specific responsibility. People need this to grow, but at the same time it's symbiotic, if we don't seek the symbiotic relationships we're not following the lessons we're supposed to.
- ❖ **Ceremony/Cultural Protocols** The cultural protocols that demand this particular approach just because of the site you're dealing with. You're dealing with one of the most important religious, cultural, historical centers. Our ancestors deserve the best. Naturally when you're dealing with these elements it is much safer to be operating on a much higher elevation of ethics and protocols. And in the long run it's much safer for everyone. But at the same time it ends up as a spiritual experience because in the end it is a ceremony that binds us together. Now once we've experienced the ceremony together we have something in common. So the ceremony is actually critical. As far as I'm concerned, the more ceremonies that go on up there the better, but that elevated protocol is critical in keeping everyone safe and respectful
- ❖ **Continuing Negotiation** That place [Kē'e] is horrible for traffic...no easy solution. Guarantee that negotiation won't do a bit of good because the State has a bad rap...years of nothing and a bad attitude...just won't cut it on Kaua'i. But they have to negotiate with the people in good faith.
- ❖ **Relocate Comfort Station** There is rancor of the residents regarding the Comfort Station; put it somewhere else--anywhere along the dunes is bad .... State is aware - no one wants the Comfort Station there...it should be moved to the parking lot area....
- ❖ **Parking Lot** If you graded it away from that and maybe had a permeable surface paving ...we know that hardscape is not a good thing...the more permeable surfaces we can create the better. The problem with a lot of these, though, is intensity of use. This park gets a huge intensity of use. So things like grass-green, grass paving, and materials like that would not be functional...the high rainfall we get in Hā'ena. But maybe they have permeable cement and permeable asphalt...there's gravel paved systems - there's different things that could be looked at. This is probably the logical place, because it already has been destroyed and disturbed, to keep a parking lot. But I think environmentally how we deal with those issues in terms of the *lo'i*, I think, is going to be really important because the *lo'i* are going to be a really important part of the cultural landscape of the park.
- ❖ **Retreat Resource** One of the things, though, that this Plan doesn't show on it is there's a house in this area in here, which this guy Rusty used to live in this house long time ago. It's really really run down. I'm not sure if it's at the point where you could still salvage it or not, you might be able



to, but I think this Plan is kind of completely absent on it...and there's a road that goes down to there. And I think it is an under-recognized resource because within the context of this Park and the cultural use of this Park, I think you're going to need to have places like that that are kind of like retreat centers where cultural groups could come...whether they stay there over night or not. I think having something like that in the Park here could be really important. Also the Hui Maka'āinana Makana which we established a curatorship program with the State back in 1999 for the archaeology - primarily for the *lo'i* complex. It would be really good for them to have a place where they could have meetings and functions related to their curatorship of the cultural sites within the park. So that is something that I would like to see changed or enhanced on this Plan

- ❖ **Full-time Caretaker/Kahu** The nights...I know the idea of the full position of a caretaker and that particular house...probably thinking that closer to the entrance. The caretaker is a traditional part of our culture, to have the caretaker close in. Security twenty-four hours a day would be nice, although I'm hard pressed at this particular time to actually point at the type of vandalism one would expect right there. However, the presence 24/7 in the zone is really good
- ❖ **Additional Beach Focus** I'm not really comfortable with not including the beach area that's in front of Taylor Camp into the whole scope of the park. I think you're defeating the purpose in the Master Plan by only taking a tiny portion which is the actual end of the road, and ignoring three-quarters of the land footprint in the planning process
- ❖ **Safety/Loop Trail** Addressing the liability issues, I don't think we're going to get into this particular point, but I do know that it's serious with the rockfalls...that a good section of the road that you're walking or driving, is right next to a cliff. Therefore, the suggestion of leading the paths out and away from the parking lot and towards the ocean and doing the loop and so it keeps people into more of the open plains rather than along the edge of the cliff. Although the traffic, whether it's going to be shuttle buses - whatever the nature of the concessions they have in mind, I'm not really sure of how they are going to be doing it, they're going to still be using the road as a footprint
- ❖ **Concessions/Revenues** I know there's discussions on the different natures of concessions, but then again that's concessions whether it's neighborhood driven or beyond at this particular point - naturally the first choice would be within the *ahupua'a* of Hā'ena and then Wainiha after that, and then expand out. I wouldn't mind seeing - I understand that the reason why SHPD, or being the State Parks, need the money that these parks can generate with the revenues, it would be nice for the first five years that fifty percent of the revenues stay in the park, after that then maybe twenty-five percent depending on the infrastructure. I think it's pretty reasonable to start the ball with expecting a hundred percent revenue to stay in the park. But some sort of arrangement as to a percentage based on years, either going up or going down over the years, needs to be discussed and broken down into the various - the methodology just in that alone, right! But to begin a discussion, I think fifty percent of it needs to stay or a certain length of time to allow some of the infrastructure to get settled in by the volunteer groups

#### 5.8.0 ADDITIONAL RECOMMENDATION

It is highly recommended that a Cultural Advisory Committee or Group be formed, hopefully including the interviewees, who would provide cultural expertise during the Master Plan/EIS process and during any later Park development projects. They can also provide direction in the likely event that more burials are uncovered during any future sub-surface activity within Hā'ena State Park.

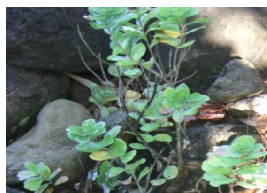


Photo 77. Native plant in the park

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## APPENDIX A

### Act 50 - 2000

#### A BILL FOR AN ACT RELATING TO ENVIRONMENTAL IMPACT STATEMENTS [UNOFFICIAL VERSION]

HOUSE OF REPRESENTATIVES H.B. NO. 2895 H.D.1  
 TWENTIETH LEGISLATURE, 2000  
 STATE OF HAWAII

#### A BILL FOR AN ACT RELATING TO ENVIRONMENTAL IMPACT STATEMENTS.

BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF HAWAII:

SECTION 1. The legislature finds that there is a need to clarify that the preparation of environmental assessments or environmental impact statements should identify and address effects on Hawai'i's culture, and traditional and customary rights.

The legislature also finds that native Hawaiian culture plays a vital role in preserving and advancing the unique quality of life and the "aloha spirit" in Hawai'i. Articles IX and XII of the state constitution, other state laws, and the courts of the State impose on government agencies a duty to promote and protect cultural beliefs, practices, and resources of native Hawaiians as well as other ethnic groups.

Moreover, the past failure to require native Hawaiian cultural impact assessments has resulted in the loss and destruction of many important cultural resources and has interfered with the exercise of native Hawaiian culture. The legislature further finds that due consideration of the effects of human activities on native Hawaiian culture and the exercise thereof is necessary to ensure the continued existence, development, and exercise of native Hawaiian culture.

The purpose of this Act is to: (1) Require that environmental impact statements include the disclosure of the effects of a proposed action on the cultural practices of the community and State; and (2) Amend the definition of "significant effect" to include adverse effects on cultural practices.

SECTION 2. Section 343-2, Hawai'i Revised Statutes, is amended by amending the definitions of "environmental impact statement" or "statement" and "significant effect", to read as follows:

"Environmental impact statement" or "statement" means an informational document prepared in compliance with the rules adopted under section 343-6 and which discloses the environmental effects of a proposed action, effects of a proposed action on the economic [and] welfare, social welfare, and cultural practices of the community and State, effects of the economic activities arising out of the proposed action, measures proposed to minimize adverse effects, and alternatives to the action and their environmental effects.



The initial statement filed for public review shall be referred to as the draft statement and shall be distinguished from the final statement which is the document that has incorporated the public's comments and the responses to those comments. The final statement is the document that shall be evaluated for acceptability by the respective accepting authority.

"Significant effect" means the sum of effects on the quality of the environment, including actions that irrevocably commit a natural resource, curtail the range of beneficial uses of the environment, are contrary to the State's environmental policies or long-term environmental goals as established by law, or adversely affect the economic [or] welfare, social welfare[.], or cultural practices of the community and State."

SECTION 3. Statutory material to be repealed is bracketed. New statutory material is underscored.

SECTION 4. This Act shall take effect upon its approval.

**Approved by the Governor as Act 50 on April 26, 2000**

## APPENDIX B

### Scope of Work (SOW)

#### Cultural Impact Assessment [in accordance with OEQC Guidelines]

1. identify and consult with individuals and organizations with expertise concerning the types of cultural resources, practices and beliefs found within the broad geographical area, e.g., district or ahupua'a;
2. identify and consult with individuals and organizations with knowledge of the area potentially affected by the proposed action;
3. receive information from or conduct ethnographic interviews and oral histories with persons having knowledge of the potentially affected area;
4. conduct ethnographic, historical, and other culturally related documentary research;
5. identify and describe the cultural resources, practices and beliefs located within the potentially affected area; and
6. assess the impact of the proposed action, alternatives to the proposed action, and mitigation measures, on the cultural resources, practices and beliefs identified.

#### Methods

The specific tasks listed below expand on the above scope of work:

- ✦ Conduct historical and cultural background research (i.e., business records, land records; archival documents, literature, reports, letters, photographs, journals, or newspaper files) to locate material that will provide broad patterns of the history of the project area such as subsistence, religious, recreational, and commercial uses of the land; as well as settlement and residential patterns of the area and region; major family groups that inhabited, used or controlled lands within the project area and region; documented legends, myths, or traditional histories associated with the area; and descriptions of traditional practices, customs and beliefs associated with identified traditional cultural practices;
- ✦ Prepare a semi-structured ethnographic research instrument that will include questions that will generate general biographical information, association with and knowledge of the project area, its history and use
- ✦ Prepare a consent form to be used as written agreement with any individual interviewed concerning the review of content and use of information recorded during the interview
- ✦ Identify individuals knowledgeable with the project area.
- ✦ Conduct and record ethnographic interviews with knowledgeable individuals. If feasible individuals shall participate in field inspections (Makana to be given)
- ✦ Transcribe recorded interviews (Approximate time, 68 hrs/per hr of recording)
- ✦ Prepare a report that will include an overview of the archival material, and an analysis of the ethnographic data.

## APPENDIX C

### **Guidelines for Assessing Cultural Impacts** Adopted by the Environmental Council, State of Hawai'i November 19, 1997

#### I. INTRODUCTION

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

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

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

#### II. CULTURAL IMPACT ASSESSMENT METHODOLOGY

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

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

In scoping the cultural portion of an environmental assessment, the geographical extent of the inquiry should, in most instances, be greater than the area over which the proposed action will take place. This is to ensure that cultural practices which may not occur within the boundaries of the project area, but which may nonetheless be affected, are included in the assessment. Thus, for example, a proposed action that may not physically alter gathering practices, but may affect access to gathering areas would be included in the assessment. An ahupua'a is usually the appropriate geographical unit to begin an assessment of cultural impacts of a proposed action, particularly if it includes all of the types of cultural practices associated with the project area. In some cases, cultural practices are likely to extend beyond the ahupua'a and the geographical extent of the study area should take into account those cultural practices.

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

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

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

1. identify and consult with individuals and organizations with expertise concerning the types of cultural resources, practices and beliefs found within the broad geographical area, e.g., district or ahupua'a;
2. identify and consult with individuals and organizations with knowledge of the area potentially affected by the proposed action;
3. receive information from or conduct ethnographic interviews and oral histories with persons having knowledge of the potentially affected area;
4. conduct ethnographic, historical, anthropological, sociological, and other culturally related documentary research;
5. identify and describe the cultural resources, practices and beliefs located within the potentially affected area; and
6. assess the impact of the proposed action, alternatives to the proposed action, and mitigation measures, on the cultural resources, practices and beliefs identified.

Interviews and oral histories with knowledgeable individuals may be recorded, if consent is given, and field visits by preparers accompanied by informants are encouraged. Persons interviewed should be afforded an opportunity to review the record of the interview, and consent to publish the record should be obtained whenever possible. For example, the precise location of human burials are likely to be withheld from a cultural impact assessment, but it is important that the document identify the impact a project would have on the burials. At times an informant [consultant] may provide information only on the condition that it remain in confidence. The wishes of the informant should be respected.

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

#### III. CULTURAL IMPACT ASSESSMENT CONTENTS

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

1. A discussion of the methods applied and results of consultation with individuals and organizations identified by the preparer as being familiar with cultural practices and features associated with the project area, including any constraints or limitations which might have affected the quality of the information obtained.
2. A description of methods adopted by the preparer to identify, locate, and select the persons interviewed, including a discussion of the level of effort undertaken.

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

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

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

6.A discussion concerning the cultural resources, practices and beliefs identified, and, for resources and practices, their location within the broad geographical area in which the proposed action is located, as well as their direct or indirect significance or connection to the project site.

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

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

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

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

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

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

## APPENDIX D CONSENT FORM

### Agreement to Participate in this Cultural Impact Study/Assessment

Project Title: **Hā'ena State Park CIS/A  
Hā'ena, Kē'ē and Limahuli**

Investigator: Maria "Kaimi" Orr, M.A. [(808) 375-3317]  
Kaimipono Consulting Services LLC  
[kaimi@lava.net](mailto:kaimi@lava.net)

You are being asked to participate in a cultural impact study/assessment [CIS/A] conducted by an independent investigator contracted by *PBR Hawai'i & Associates, Inc* as part of a larger Master Plan and Environmental Impact Statement they are conducting for Hā'ena State Park. The investigator will explain the purpose of this study, the procedures to be used, the potential benefits and possible risks of participating. You may ask the investigator any question(s) in order to help you to understand the study or procedures. A basic explanation of the study is written below. If you then decide to participate in the study, please sign on the second page of this form. You will be given a copy of this form to keep.

#### I. Nature and Purpose of the Study

The purpose of this cultural impact study/assessment is to gather information about the project lands of Hā'ena, through interviews with individuals who are knowledgeable about this area, and/or about traditional and historic information such as cultural practices, legends, songs, chants or other information. The objective of this study is to facilitate in the identification and location of any cultural resources and cultural practices in the area mentioned above, in accordance with applicable historic preservation laws, regulations, and guidelines, including: *Office of Environmental Quality Control [OEQC] Guidelines and Act 50 HB2895 [A.D.2000], HRS Chapter 343.*

#### II. Explanation of Procedures

After you have voluntarily agreed to participate and have signed the consent page, the investigator will tape record your interview and have it transcribed later. The investigator may also need to take notes and/or ask you to spell or clarify terms or names that are unclear. Data from the interview [ethnographic research] will be used in the CIS/A report.

#### III. Discomforts and Risks

Foreseeable discomforts and/or risks may include, but are not limited to the following: having to talk loudly for the recorder; being recorded and/or interviewed; providing information that may be used in reports which may be used in the future as a public reference; knowing that the information you give may conflict with information from others; your uncompensated dedication of time; possible miscommunication or misunderstanding in the transcribing of information; loss of privacy; and worry that your comment(s) may not be understood in the same way you understand them. It is not possible to identify all potential risks.

#### IV. Benefits

This study will give you the opportunity to express your thoughts (*mana'o*), and your opinions will be listened to and shared; your knowledge may be instrumental in the preservation of significant cultural resources, practices and information.

## V. Confidentiality

Your rights of privacy, confidentiality and/or anonymity will be protected **if you so desire**. You may request, for example, that your name and/or sex not be mentioned in write-ups, such as field notes, on tape, on files (disk or folders), drafts, reports, and future works; or you may request that some of the information you provide remain “off-the-record.” In order to ensure protection of your privacy, confidentiality and/or anonymity, you should immediately advise the investigator of your desires. The investigator will ask you to specify the method of protection, and note it on this form below.

## VI. Refusal/Withdrawal

You may, at any time during the interview process, choose to not participate any further and ask the investigator for the tape and/or notes. Please note that you will be given an opportunity to review your transcript, and to revise or delete any part of the interview.

## VII. Waiver

### Part I: Agreement to Participate

I, \_\_\_\_\_, understand that Maria “Kaimi” Orr, an independent investigator contracted by *PBR Hawai‘i & Associates, Inc.* will be conducting oral history interviews with individuals knowledgeable about the project lands and vicinity. The oral history interviews are being conducted in order to collect information on possible pre-historic and/or historic cultural resources, as well as traditional cultural practices associated with these lands and access to these resources and practices.

I understand I will be provided the opportunity to review my interview to ensure that it accurately depicts what I meant to say. **I also understand that if I don’t return the revised transcripts after two weeks from date of receipt, my signature below will indicate my release of information for the draft report. I also understand that I will still have the opportunity to make revisions during the draft review process.**

\_\_\_\_\_ I am willing to participate.

\_\_\_\_\_ I am willing to participate, under the following conditions:

|               |          |
|---------------|----------|
| Signature     | Date     |
| Print Name    | Phone    |
| Address       | Zip Code |
| Email Address |          |

MAHALO NUI LOA

## APPENDIX E ETHNOGRAPHIC INSTRUMENT Ethnographic Survey

### Basic Research Instrument for Oral History Interviews

This research instrument includes basic information as well as research categories which will be asked in the form of open primary questions which allow the individual interviewed (Consultant) to answer in the manner he/she is most comfortable. Secondary or follow-up questions are asked based on what the Consultant has said and/or to clarify what was said. The idea is to have an interview based on a “talk-story” form of sharing information. Questions will NOT be asked in an interrogation style/method, NOR will they necessarily be asked in the order presented below. This research instrument is merely a *guide* for the investigator and simply reflects general categories of information sought in a semi-structured format. Questions will be asked more directly when necessary.

The Consultants were selected because they met one or more of the following criteria:

- ❖ Had/has Ties to Project Area/Vicinity
- ❖ Known Hawaiian Cultural Resource Person
- ❖ Known Hawaiian Traditional Practitioner
- ❖ Referred By Other Cultural Resource People
- ❖ Referred By Client Staff

**[NOTE: This part of the interview, #1 –4 is mutual sharing and rapport building. Most of the information for research categories “Consultant Background” and “Consultant Demographics” come from this section, but not exclusively.]**

### 1. *To start please tell me about yourself... Name? Where/When you were born?*

[This information can be addressed in a couple of ways. After the investigator first turns on the tape recorder, the following information will be recorded: Day/Date/Time/Place of Interview; Name of Consultant (if authorized by Consultant); Name of Investigator; Initial Questions: Have you read the Agreement to Participate? Do you have any questions before we begin? Will you please sign the Consent Page. The investigator will explain again the purpose of the interview.

The investigator will then ask the Consultant to “Please tell me about yourself--when/where were you born? Where did you grow up? Where did you go to school?” This general compound question allows the Consultant to share as much or as little as he/she wants without any pressure. Some of the information for #1 may already be known to the investigator.]

### 2. *History: Your ‘ohana/family background; Hawaiian connection (if any)?*

[Much of the information for questions #2, 3, and 4 usually comes from the “monologue” answer to Question #1. If it does not, then these questions will be asked. The answers in this section usually establish how the Consultant meets the criteria; how the Consultant developed his/her information base, etc.]

### 3. *Youth: Where lived? Grew up?* [This may have been answered in #1]

### 4. *Schooling? Where? When?* [This may have been answered in #1]

**[NOTE: The next part of the interview, #5-7 reflects information sought for the following research categories: Land, Water, Marine, Cultural Resources and Use as well as Significant People and Events. The questions**

are open-ended so as NOT to “put words in the mouths” of the Consultants. The answers will help in assessing if any cultural properties or practices (or access to them) will be impacted by the proposed project.]

## APPENDIX F RELEASE FORM

5. *Please tell me what you know about the lands of Hā`ena, Ke`e and Limahuli?*

[NOTE: Generally when people share information about a specific topic/place, they usually state where their information came from. If it isn't volunteered, it is asked as a follow-up question(s). A map of the project area should be available to confirm that investigator and consultant are talking about the same place. Photos would also help if a field trip is not possible. The best scenario would be to be “on-site” at some part of the interview...although this is not always practical.]

6. *What are your recollections and/or personal experiences of this area?*

7. *Do you know any stories/legends/songs/chants associated with these areas?*

[NOTE: Possible follow-up questions if information not in their answers:

- How are you or your family connected to the lands of Hā`ena, Ke`e and/or Limahuli?
- What year(s) were you and/or your family associated with these lands?
- What was this place/area called when you were growing up? When you were working here?
- Can you describe what the area looked like--what kinds of natural and/or man made things?
- To your knowledge what kind of activities took place in this location?
- Do you know of any traditional gathering of plants, etc in the area?
- Please describe any other land/water use? Resources?
- What was the historic land use? Agriculture? Habitation? Dwellings? Military? Ranching?
- **[Have map ready for marking.]**
- Do you know about any burials in the project area? [last resort question]
- Do you know of any cultural sites in the project area or vicinity? [last resort question]

8. *Is there anyone you know who can also tell me about the project area?*

[NOTE: Usually in the course of the interview, Consultants suggest other people to interview.]

9. *As soon as the tape of this interview is transcribed I will send you two sets. Please review your transcript and make any corrections and/or additions, then sign both copies of the Release Forms thereby allowing the information to be used by the investigator, PBR Hawai`i & Associates, Inc. and Hā`ena State Park. Then mail one set back in the enclosed stamped-addressed envelope.*

10. *If your revised transcript is not returned within two weeks of date of receipt, it will be assumed that you are in concurrence with the transcript material and your information will then be incorporated into any draft reports. However, you can still make changes during the draft review process.*

**MAHALO NUI LOA**

### Part II: Personal Release of Interview Records

I, \_\_\_\_\_, have been interviewed by Maria “Kaimi” Orr of Kaimipono Consulting Services LLC, an independent investigator contracted by PBR Hawai`i & Associates, Inc. I have reviewed the transcripts of tape recordings of the interview and agree that said documentation is complete and accurate except for those matters specifically set forth below the heading “CLARIFICATION OR CORRECTIONS.”

### CLARIFICATION OR CORRECTIONS:

*I further agree that KCS and/or PBR Hawai`i may use and release my identity and other interview information, both oral and written, for the purpose of using such information in a report to be made public, subject to my specific objections, to release as set forth below under the heading “SPECIFIC OBJECTIONS TO RELEASE OF INTERVIEW MATERIALS.”*

### SPECIFIC OBJECTIONS TO RELEASE OF INTERVIEW MATERIALS:

|            |       |
|------------|-------|
| Signature  | Date  |
| Print Name | Phone |
| Address    |       |
| Zipcode    |       |

**MAHALO NUI LOA**



## APPENDIX G

### Ali'i Aimoku of Kaua'i

The monarchs of island Kaua'i like those of the other Hawaiian Islands, claim descent from Wakea and Papa. Nanaulu, a descendant in the fourteenth generation from Wakea, was the ancestor of Moikeha, 1st Alii Aimoku of Kaua'i, but his dynasty was supplanted after two generations. The second or Puna dynasty was established by La'amaiahiki, eleventh in descent from Puna who was twenty-fourth in descent from Wakea. O'ahu and Kaua'i are the most ancient. The last Ali'i 'Aimoku of Kaua'i of the old uninterrupted line of Puna was Kawelo'a'maihunali'i. After his death the kingship of Kaua'i fell on Kūali'i, the Ali'i 'Aimoku of O'ahu and cousin of Kawelo'a'maihunali'i. In 1810, King Kaumuali'i, the 23rd Ali'i 'Aimoku of Kaua'i, ceded his kingdom to King Kamehameha I of Hawai'i, in an effort to avoid bloodshed. Thereafter, he ruled as a tributary, until kidnapped by King Kamehameha II and taken to Honolulu in 1821. After his death in 1824, his son and heir, George Humehume attempted to re-establish his independence on Kaua'i, but was also eventually captured and taken to Honolulu. Ironically, the rights to the crown of the Hawaiian Islands now rest with Kaumuali'i's heirs the Kawanakoaas after the death of the Kamehamehas and Kalakauas.

### List of Alii Aimoku of Kaua'i

- Ali'i nui [Moikeha](#) 1st Alii Aimoku of Kaua'i
- Ali'i nui [Haulanuiakaikea](#) 2nd Alii Aimoku of Kaua'i
- Ali'i nui [La'amaiahiki](#) 3rd Alii Aimoku of Kaua'i
- Ali'i nui [Ahukini-a-Laa](#) 4th Alii Aimoku of Kaua'i
- Ali'i nui [Kamahano](#) 5th Alii Aimoku of Kaua'i
- Ali'i nui [Luanu'u](#) 6th Alii Aimoku of Kaua'i
- Ali'i nui [Kukona](#) 7th Alii Aimoku of Kaua'i
- Ali'i nui [Manokalanipo](#) 8th Alii Aimoku of Kaua'i
- Ali'i nui [Kamakamano](#) 9th Alii Aimoku of Kaua'i
- Ali'i nui [Kahakuakane](#) 10th Alii Aimoku of Kaua'i
- Ali'i nui [Kuwalupaukamoku](#) 11th Alii Aimoku of Kaua'i
- Ali'i nui [Kahakumakapaweo](#) 12th Alii Aimoku of Kaua'i
- Ali'i nui [Kalanikukuma](#) 13th Alii Aimoku of Kaua'i
- Ali'i nui [Kahakumakalina](#) 14th Alii Aimoku of Kaua'i
- Ali'i nui [Kamakapu](#) 15th Alii Aimoku of Kaua'i
- Ali'i nui [Kawelomahamahai](#) 16th Alii Aimoku of Kaua'i
- Ali'i nui [Kawelomakualua](#) 17th Alii Aimoku of Kaua'i
- Ali'i nui [Kaweloiaakanaka](#) 18th Alii Aimoku of Kaua'i
- Ali'i nui [Kawelo'a'maihunali'i](#) 19th Alii Aimoku of Kaua'i
- Ali'i nui [Kuali'i](#) ? - 1730 20th Alii Aimoku of Kaua'i and 19th [Alii Aimoku of O'ahu](#)
- Ali'i nui [Peleioholani](#) 1730 - 1770 21st Alii Aimoku of Kaua'i and 22nd Alii of O'ahu
- Ali'i nui [Kamakahahele](#) 1770 - 1794, 22nd Alii Aimoku of Kaua'i
- Ali'i nui [Kaumuali'i](#) 1794 - 1810, 23rd Alii Aimoku of Kaua'i

[http://en.wikipedia.org/wiki/Ali'i\\_'Aimoku\\_of\\_Kaua'i](http://en.wikipedia.org/wiki/Ali'i_'Aimoku_of_Kaua'i) (2009)

## APPENDIX H

### SIGNED CONSENT FORMS

(Copies)

#### IV. Benefits

This study will give you the opportunity to express your thoughts (*mana'o*), and your opinions will be listened to and shared; your knowledge may be instrumental in the preservation of significant cultural resources, practices and information.

#### V. Confidentiality

Your rights of privacy, confidentiality and/or anonymity will be protected **if you so desire**. You may request, for example, that your name and/or sex not be mentioned in write-ups, such as field notes, on tape, on files (disk or folders), drafts, reports, and future works; or you may request that some of the information you provide remain "off-the-record." In order to ensure protection of your privacy, confidentiality and/or anonymity, you should immediately advise the investigator of your desires. The investigator will ask you to specify the method of protection, and note it on this form below.

#### VI. Refusal/Withdrawal

You may, at any time during the interview process, choose to not participate any further and ask the investigator for the tape and/or notes. Please note that you will be given an opportunity to review your transcript, and to revise or delete any part of the interview.

#### VII. Waiver

##### Part I: Agreement to Participate

I, \_\_\_\_\_, understand that Maria "Kaimi" Orr, an independent investigator contracted by PBR Hawaii & Associates, Inc. will be conducting oral history interviews with individuals knowledgeable about the project lands and vicinity. The oral history interviews are being conducted in order to collect information on possible pre-historic and/or historic cultural resources, as well as traditional cultural practices associated with these lands and access to these resources and practices.

I understand I will be provided the opportunity to review my interview to ensure that it accurately depicts what I meant to say. I also understand that if I don't return the revised transcripts after two weeks from date of receipt, my signature below will indicate my release of information for the draft report. I also understand that I will still have the opportunity to make revisions during the draft review process.

\_\_\_\_\_ I am willing to participate.

\_\_\_\_\_ I am willing to participate, under the following conditions:

Signature Kapua Kuniwaka-Alquiza Date 11/20/08  
Print Name Kapua Kuniwaka-Alquiza Phone 335-6466  
Address P.O. Box 49 Hanalei, HI 96716 ZipCode \_\_\_\_\_  
Email Address Kapua.alquiza@hawaiiantel.net

MAHALO NUI LOA

#### IV. Benefits

This study will give you the opportunity to express your thoughts (*mana'o*), and your opinions will be listened to and shared; your knowledge may be instrumental in the preservation of significant cultural resources, practices and information.

#### V. Confidentiality

Your rights of privacy, confidentiality and/or anonymity will be protected **if you so desire**. You may request, for example, that your name and/or sex not be mentioned in write-ups, such as field notes, on tape, on files (disk or folders), drafts, reports, and future works; or you may request that some of the information you provide remain "off-the-record." In order to ensure protection of your privacy, confidentiality and/or anonymity, you should immediately advise the investigator of your desires. The investigator will ask you to specify the method of protection, and note it on this form below.

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You may, at any time during the interview process, choose to not participate any further and ask the investigator for the tape and/or notes. Please note that you will be given an opportunity to review your transcript, and to revise or delete any part of the interview.

#### VII. Waiver

##### Part I: Agreement to Participate

I, \_\_\_\_\_, understand that Maria "Kaimi" Orr, an independent investigator contracted by PBR Hawaii & Associates, Inc. will be conducting oral history interviews with individuals knowledgeable about the project lands and vicinity. The oral history interviews are being conducted in order to collect information on possible pre-historic and/or historic cultural resources, as well as traditional cultural practices associated with these lands and access to these resources and practices.

I understand I will be provided the opportunity to review my interview to ensure that it accurately depicts what I meant to say. I also understand that if I don't return the revised transcripts after two weeks from date of receipt, my signature below will indicate my release of information for the draft report. I also understand that I will still have the opportunity to make revisions during the draft review process.

\_\_\_\_\_ I am willing to participate.

\_\_\_\_\_ I am willing to participate, under the following conditions:

Signature Thomas Hashimoto Date 11/22/08  
Print Name Thomas Hashimoto Phone 808-1206  
Address 6639 412 Kilauea ZipCode \_\_\_\_\_  
Email Address \_\_\_\_\_

MAHALO NUI LOA

#### IV. Benefits

This study will give you the opportunity to express your thoughts (*mana'o*), and your opinions will be listened to and shared; your knowledge may be instrumental in the preservation of significant cultural resources, practices and information.

#### V. Confidentiality

Your rights of privacy, confidentiality and/or anonymity will be protected if you so desire. You may request, for example, that your name and/or sex not be mentioned in write-ups, such as field notes, on tape, on files (disk or folders), drafts, reports, and future works; or you may request that some of the information you provide remain "off-the-record." In order to ensure protection of your privacy, confidentiality and/or anonymity, you should immediately advise the investigator of your desires. The investigator will ask you to specify the method of protection, and note it on this form below.

#### VI. Refusal/Withdrawal

You may, at any time during the interview process, choose to not participate any further and ask the investigator for the tape and/or notes. Please note that you will be given an opportunity to review your transcript, and to revise or delete any part of the interview.

#### VII. Waiver

##### Part I: Agreement to Participate

I, Clarence A. Medina, Jr., understand that Maria "Kaimi" Orr, an independent investigator contracted by PBR Hawaii & Associates, Inc., will be conducting oral history interviews with individuals knowledgeable about the project lands and vicinity. The oral history interviews are being conducted in order to collect information on possible pre-historic and/or historic cultural resources, as well as traditional cultural practices associated with these lands and access to these resources and practices.

I understand I will be provided the opportunity to review my interview to ensure that it accurately depicts what I meant to say. I also understand that if I don't return the revised transcripts after two weeks from date of receipt, my signature below will indicate my release of information for the draft report. I also understand that I will still have the opportunity to make revisions during the draft review process.

☒ I am willing to participate.  
☐ I am willing to participate, under the following conditions:

Clarence A. Medina, Jr. 5-20-10  
Signature Date  
Clarence A. Medina, Jr. 325-2074  
Print Name Phone  
267672 Govt. Main Road Captain Cook, HI 96744  
Address Zip Code  
CAH Medina@goval.com  
Email Address

MAHALO NUI LOA

#### IV. Benefits

This study will give you the opportunity to express your thoughts (*mana'o*), and your opinions will be listened to and shared; your knowledge may be instrumental in the preservation of significant cultural resources, practices and information.

#### V. Confidentiality

Your rights of privacy, confidentiality and/or anonymity will be protected if you so desire. You may request, for example, that your name and/or sex not be mentioned in write-ups, such as field notes, on tape, on files (disk or folders), drafts, reports, and future works; or you may request that some of the information you provide remain "off-the-record." In order to ensure protection of your privacy, confidentiality and/or anonymity, you should immediately advise the investigator of your desires. The investigator will ask you to specify the method of protection, and note it on this form below.

#### VI. Refusal/Withdrawal

You may, at any time during the interview process, choose to not participate any further and ask the investigator for the tape and/or notes. Please note that you will be given an opportunity to review your transcript, and to revise or delete any part of the interview.

#### VII. Waiver

##### Part I: Agreement to Participate

I, Chipman Wichman, understand that Maria "Kaimi" Orr, an independent investigator contracted by PBR Hawaii & Associates, Inc., will be conducting oral history interviews with individuals knowledgeable about the project lands and vicinity. The oral history interviews are being conducted in order to collect information on possible pre-historic and/or historic cultural resources, as well as traditional cultural practices associated with these lands and access to these resources and practices.

I understand I will be provided the opportunity to review my interview to ensure that it accurately depicts what I meant to say. I also understand that if I don't return the revised transcripts after two weeks from date of receipt, my signature below will indicate my release of information for the draft report. I also understand that I will still have the opportunity to make revisions during the draft review process.

☒ I am willing to participate.  
☐ I am willing to participate, under the following conditions:

Chipman Wichman 11/21/08  
Signature Date  
Chipman Wichman 651-4266  
Print Name Phone  
3535 Papalina Rd 96741  
Address Zip Code  
wichman@ntbq.org  
Email Address

MAHALO NUI LOA

#### IV. Benefits

This study will give you the opportunity to express your thoughts (*mana'o*), and your opinions will be listened to and shared; your knowledge may be instrumental in the preservation of significant cultural resources, practices and information.

#### V. Confidentiality

Your rights of privacy, confidentiality and/or anonymity will be protected **if you so desire**. You may request, for example, that your name and/or sex not be mentioned in write-ups, such as field notes, on tape, on files (disk or folders), drafts, reports, and future works; or you may request that some of the information you provide remain "off-the-record." In order to ensure protection of your privacy, confidentiality and/or anonymity, you should immediately advise the investigator of your desires. The investigator will ask you to specify the method of protection, and note it on this form below.

#### VI. Refusal/Withdrawal

You may, at any time during the interview process, chose to not participate any further and ask the investigator for the tape and/or notes. Please note that you will be given an opportunity to review your transcript, and to revise or delete any part of the interview.

#### VII. Waiver

##### Part I: Agreement to Participate

I, Fredrick B. Wickham, understand that Maria "Kaimi" Orr, an independent investigator contracted by PBR Hawaii & Associates, Inc. will be conducting oral history interviews with individuals knowledgeable about the project lands and vicinity. The oral history interviews are being conducted in order to collect information on possible pre-historic and/or historic cultural resources, as well as traditional cultural practices associated with these lands and access to these resources and practices.

I understand I will be provided the opportunity to review my interview to ensure that it accurately depicts what I meant to say. I also understand that if I don't return the revised transcripts after two weeks from date of receipt, my signature below will indicate my release of information for the draft report. I also understand that I will still have the opportunity to make revisions during the draft review process.

☒ I am willing to participate.  
☐ I am willing to participate, under the following conditions:

Signature Fredrick B. Wickham Date 11/20/08  
Print Name FREDRICK B. WICKHAM Phone 826-7449  
Address P.O. Box 1050 Hanalei, HI 96714 ZipCode  
Email Address fwickham@paleo.net

MAHALO NUI LOA

#### IV. Benefits

This study will give you the opportunity to express your thoughts (*mana'o*), and your opinions will be listened to and shared; your knowledge may be instrumental in the preservation of significant cultural resources, practices and information.

#### V. Confidentiality

Your rights of privacy, confidentiality and/or anonymity will be protected **if you so desire**. You may request, for example, that your name and/or sex not be mentioned in write-ups, such as field notes, on tape, on files (disk or folders), drafts, reports, and future works; or you may request that some of the information you provide remain "off-the-record." In order to ensure protection of your privacy, confidentiality and/or anonymity, you should immediately advise the investigator of your desires. The investigator will ask you to specify the method of protection, and note it on this form below.

#### VI. Refusal/Withdrawal

You may, at any time during the interview process, chose to not participate any further and ask the investigator for the tape and/or notes. Please note that you will be given an opportunity to review your transcript, and to revise or delete any part of the interview.

#### VII. Waiver

##### Part I: Agreement to Participate

I, Randy Wickham, understand that Maria "Kaimi" Orr, an independent investigator contracted by PBR Hawaii & Associates, Inc. will be conducting oral history interviews with individuals knowledgeable about the project lands and vicinity. The oral history interviews are being conducted in order to collect information on possible pre-historic and/or historic cultural resources, as well as traditional cultural practices associated with these lands and access to these resources and practices.

I understand I will be provided the opportunity to review my interview to ensure that it accurately depicts what I meant to say. I also understand that if I don't return the revised transcripts after two weeks from date of receipt, my signature below will indicate my release of information for the draft report. I also understand that I will still have the opportunity to make revisions during the draft review process.

☒ I am willing to participate.  
☐ I am willing to participate, under the following conditions:

Signature Randy Wickham Date NOV. 20 08  
Print Name RANDY WICKHAM Phone 482-0516  
Address PO BOX 3740 ZipCode 96766  
Email Address RFWICKHAM@gmail.com

MAHALO NUI LOA



APPENDIX I  
SIGNED RELEASE FORMS

(Copies)

Part II: Personal Release of Interview Records

I, Frederick B. Wichman, have been interviewed by Maria "Kaimi" Orr of Kaimipono Consulting Services LLC, an independent investigator contracted by PBR Hawaii & associates, Inc. I have reviewed the transcripts of tape recordings of the interview and agree that said documentation is complete and accurate except for those matters specifically set forth below the heading "CLARIFICATION OR CORRECTIONS."

CLARIFICATION OR CORRECTIONS:

I further agree that KCS and/or PBR Hawaii may use and release my identity and other interview information, both oral and written, for the purpose of using such information in a report to be made public, subject to my specific objections, to release as set forth below under the heading "SPECIFIC OBJECTIONS TO RELEASE OF INTERVIEW MATERIALS."

SPECIFIC OBJECTIONS TO RELEASE OF INTERVIEW MATERIALS:

*I ask that the sections I have marked as "Please delete" not be used in any way.*

|                             |                 |
|-----------------------------|-----------------|
| <u>Frederick B. Wichman</u> | <u>2/26/09</u>  |
| Signature                   | Date            |
| <u>Frederick B. Wichman</u> | <u>826-7449</u> |
| Print Name                  | Phone           |
| <u>P.O. Box 1050</u>        |                 |
| Address                     |                 |
| <u>Honolulu Hawaii</u>      | <u>96814</u>    |
|                             | Zipcode         |

MAHALO NUI LOA



**Part II: Personal Release of Interview Records**

I, Clarence A. Mercedes, Jr., have been interviewed by Maria "Kaimi" Orr of Kaimipono Consulting Services LLC, an independent investigator contracted by PBR Hawaii & associates, Inc. I have reviewed the transcripts of tape recordings of the interview and agree that said documentation is complete and accurate except for those matters specifically set forth below the heading "CLARIFICATION OR CORRECTIONS."

**CLARIFICATION OR CORRECTIONS:**

as indicated on corrected draft dated 3/16/2008  
which was e-mailed to you on 12/9/2008

I further agree that KCS and/or PBR Hawaii may use and release my identity and other interview information, both oral and written, for the purpose of using such information in a report to be made public, subject to my specific objections, to release as set forth below under the heading "SPECIFIC OBJECTIONS TO RELEASE OF INTERVIEW MATERIALS."

**SPECIFIC OBJECTIONS TO RELEASE OF INTERVIEW MATERIALS:**

|                                  |                 |
|----------------------------------|-----------------|
| <u>Clarence A. Mercedes, Jr.</u> | <u>5-28-10</u>  |
| Signature                        | Date            |
| <u>Clarence A. Mercedes, Jr.</u> | <u>328-2674</u> |
| Print Name                       | Phone           |
| <u>86-3612 Capt. Main Road</u>   |                 |
| Address                          |                 |
| <u>Captain Cook, HI 96704</u>    | <u></u>         |
|                                  | Zipcode         |


**MAHALO NUI LOA**



Photo 78. Kumu Hula and haumana end ceremony on hula pa.

P A U





## Appendix F



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# TRAFFIC IMPACT ANALYSIS REPORT HĀ'ENA STATE PARK MASTER PLAN

Hā'ena, Kaua'i, Hawai'i

September 14, 2011  
Revised June 17, 2013

Prepared for:

PBR Hawaii & Associates, Inc.  
1001 Bishop Street, Suite 650  
Honolulu, Hawaii 96813



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# TRAFFIC IMPACT ANALYSIS REPORT HĀ'ENA STATE PARK

Hā'ena, Kaua'i, Hawai'i

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## TRAFFIC IMPACT ANALYSIS REPORT HĀ'ENA STATE PARK Kaua'i, Hawai'i

### I. INTRODUCTION

This report documents the findings of a traffic study conducted by Austin, Tsutsumi & Associates, Inc. (ATA) to evaluate the potential traffic impacts resulting from the proposed Hā'ena State Park Master Plan (Project).

#### A. Background

The proposed Master Plan will be limiting the number of visitors and the amount of vehicular traffic into Hā'ena State Park to help improve safety, mitigate impacts to the unique cultural and natural resources, and enrich visitor experience at the park. The initial proposed visitor limit is 900 people per day but this number could be adjusted over time based on the impacts to the park. This daily visitor limit does not include the 60 overnight camping permits for the Kalalau Trail. This would represent a significant reduction from the park's current number of visitors, estimated at 2,000 visitors per day.

Similar to the previous Draft Master Plan, the proposed plan will have roughly 100 parking stalls in the main parking lot and an additional 13 special parking stalls at Kē'ē Beach. This report will also investigate the requirements for a shuttle service between Hā'ena State Park and a satellite parking area in Princeville that could be considered to support access to the park. The satellite parking area would be outside of the special flood hazard area as designated by the Federal Emergency Management Agency. This report will investigate existing



federal precedent, examples of similar applications, and estimate the cost of the proposed shuttle system (Shuttle).

This study will also analyze the traffic impacts of the proposed project and potential management options.

### B. Location

Hā'ena State Park is situated on approximately 65.7 acres of land located on the north shore of the island of Kaua'i. The park is bordered to the east by the Limahuli Stream, to the south by cliffs and by the Pacific Ocean to the north and west.

Sole access to Hā'ena State Park is provided via Kūhiō Highway, which terminates at Kē'ē Beach.

See Figure 1 for the location of the Hā'ena State Park. See Figure 2 for the Project Site Plan. See Figure 3 for the proposed parking lot.

### C. Study Methodology

This study will address the following:

1. Existing traffic operating conditions at key locations within the study area.
2. Existing precedent for shuttle services in state and/or national parks.
3. Estimation of shuttle operation costs.
4. Recommendations for shuttle operations.
5. Projected traffic impacts for the proposed master plan and management options.



## II. EXISTING CONDITIONS

### A. Roadway System

Sole ingress and egress to Hā'ena State Park is provided via Kūhiō Highway, which in the vicinity of the park is a winding two-lane roadway that runs east-west and terminates near Kē'ē Beach. Ten (10) one-lane bridges slow traffic between Princeville and Hā'ena State Park. The Kaua'i County General Plan (2000) stated the county's intent to maintain them; the bridges are valued for their historic significance and "traffic slowing" effect.<sup>1</sup>

Hā'ena State Park currently provides two parking lots. The first is approximately 750 feet west of the Hā'ena State Park entrance, and the second is where Kūhiō Highway terminates near Kē'ē beach. Due to the limited number of stalls, vehicles park along the road leading up to the beach. No sidewalks are provided for pedestrians.

### B. Existing Traffic Conditions Analysis and Observations

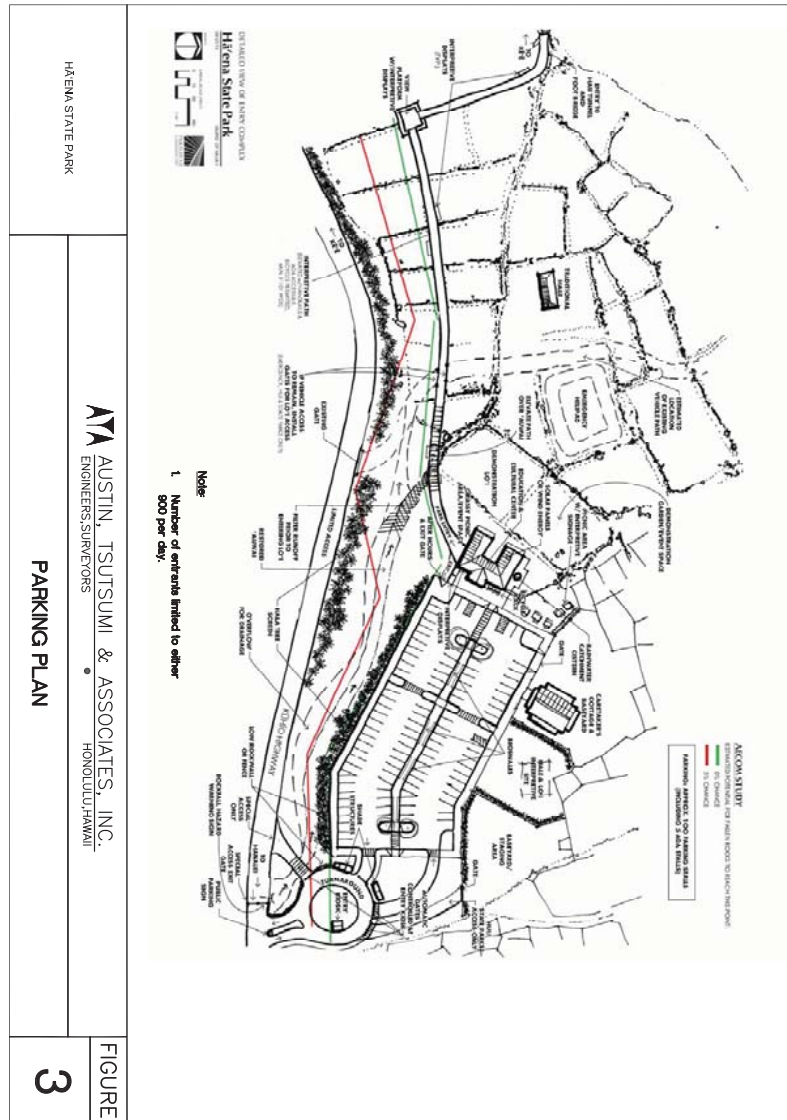
Along Kūhiō Highway and leading up to the park, no significant congestion was observed. However, in the areas between Princeville and Hā'ena State Park, a maximum of 4-vehicle queues were observed to form as they waited to traverse the numerous narrow 1-lane bridges. Otherwise, traffic flowed smoothly, though cautiously, due to the relatively low volume.

It is estimated that Kūhiō Highway operates at approximately 39 percent of capacity at the Waipa bridge based upon a bi-directional capacity of 1,250 vehicles per hour and a bi-directional volume of 487 vehicles per hour<sup>2</sup>. Refer to Appendix B for derivation.

Upon entering the Hā'ena State Park driveway (Kūhiō Highway), vehicles generally travel slowly to avoid pedestrians and oncoming vehicles. An incoming driver will first encounter an unpaved and un-striped parking lot on the right (makai), approximately 750 from the entrance. Visitors that use this parking lot must walk approximately 1,500 feet along the roadway to reach the beach, as no

<sup>1</sup> County of Kaua'i Planning Department, *Kaua'i General Plan*, (2000), 2-11.

<sup>2</sup> Field observations indicate that capacity might be lower than 1,400 – however, traffic was observed to flow smoothly.



sidewalk is provided. At the end of the road, there is a turnaround area wherein a limited number of parking stalls are provided. Due to the stalls' comparatively favorable location, congestion occurs as vehicles wait for them to be vacated. Some visitors were observed waiting for over five (5) minutes for a stall.

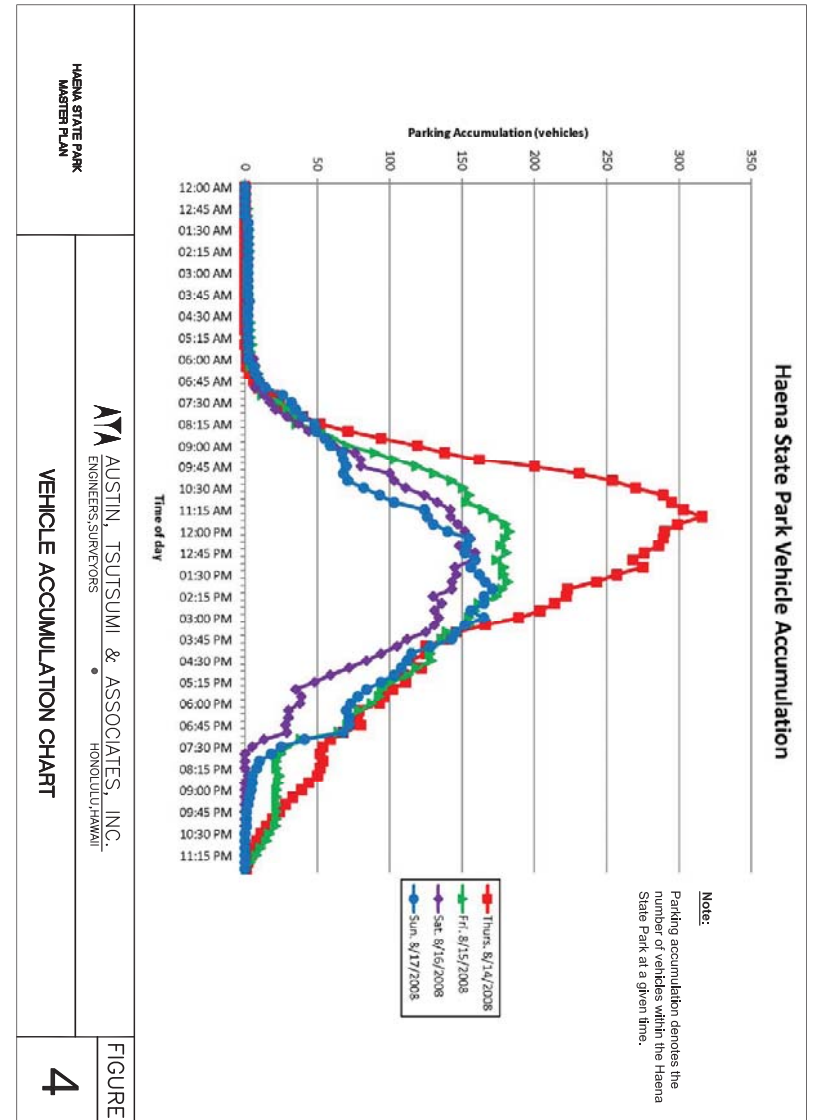
The 24-hr traffic count data was collected via pneumatic tubes laid at the Hā'ena State Park entrance between August 14, 2008 and August 18, 2008; this included a long weekend for Statehood Day. According to 1993 data from County of Kaua'i Lifeguards, Hā'ena State Park experiences its highest attendance during month of August.<sup>4</sup>

Approximately 1,550 vehicles per day were counted entering and exiting Hā'ena State Park (775 entering, 775 exiting). The heaviest hourly flow of traffic occurred on Thursday, August 14 between 1:15 and 2:15 PM, where 75 vehicles entered and 120 vehicles exited.

At the Hā'ena State Park entrance, the peak hours occurred towards the middle of the day. Near the Princeville Center, more typical commuter peak hours were observed. The traffic count data and respective peak hours are shown in Figure 5.

See Figure 4 for daily parking accumulation over a 5-day period.

<sup>4</sup> The Keith Companies, V-5.





### III. SHUTTLE RESEARCH

#### A. Background

##### Alternative Transportation in Parks and Public Lands (ATTPL)

In 1997, the Department of the Interior and Department of Transportation signed a Memorandum of Understanding (MOU) to “develop a plan for a comprehensive effort to improve public transportation in the National Parks.”

Pursuant to this goal, the “Alternative Transportation in Parks and Public Lands” program has been initiated in 2005 – with the stated purpose “to enhance the protection of national parks and public lands and to increase the enjoyment of those visiting parks and public lands.” The program authorized \$97 million dollars in funding for Alternative Transportation Systems (ATS) projects between fiscal years 2006 and 2009.

The program – while primarily geared towards National and Tribal parks, also states that “also eligible to apply are state, tribal, or local governmental authorities with jurisdiction over land in the vicinity of an eligible area, acting with the consent of the FLMA, alone or in partnership with an FLMA or governmental or nongovernmental participant.”

Funding is directed only towards either planning (studies to identify the best alternative) or implementation (capital improvements, i.e. equipment purchases) projects.

According to its 2007 program manual the demand for funding is “highly competitive,” with only half of the 2006 applicants having been funded.

##### Federal Lands Alternative Transportation Systems Study (2001)

This report identified prospective sites for either new or improved ATS at 207 locations throughout the country, including those listed in Table 1 below:

**Table 1: Hawai'i ATS Parks Information**

|                                  | Annual Visitation (2001) | Annual Visitation (2010) | Current ATS | ATS improvements or new ATS proposed? |
|----------------------------------|--------------------------|--------------------------|-------------|---------------------------------------|
| Haleakalā National Park          | 1.1 Mil.                 | 1.1 Mil.                 | None        | Yes                                   |
| Hawai'i Volcanoes National Park  | 1.5 Mil.                 | 1.3 Mil.                 | None        | Yes                                   |
| Kalaupapa National Historic Park | 75,000                   | 28,546                   | Plane       | Yes                                   |
| Pohakuloa Heiau National Park    | 200,000                  | 124,061                  | None        | Yes                                   |

It should be noted that ATS measures were recommended for all of the Hawai'i National Parks studied, though none have been implemented to-date for all but Kalaupapa National Historic Park.

The report identified that the following parks offered small or medium busses for use in shuttles as of 2001:

**Table 2: Nationwide Shuttle Use at National Parks**

| Park                                       | Annual Visitation | Existing ATS     |
|--------------------------------------------|-------------------|------------------|
| Red Rock Canyon National Conservation Area | 1,100,000         | Small/medium bus |
| Kenai National Wildlife Refuge             | 400,000           | Small/medium bus |
| Merritt Island National Wildlife Refuge    | 500,000           | Small/medium bus |
| Adams National Historic Park               | 65,000            | Historic trolley |
| Aztec Ruins National Monument              | 72,000            | Small/medium bus |
| Cabrillo National Monument                 | 1,200,000         | Small/medium bus |
| Chiricahua National Monument               | 195,000           | Small/medium bus |
| Devil's Postpile National Monument         | 125,000           | Small/medium bus |
| Eugene O'Neill National Historic Site      | 5,000             | Small/medium bus |
| Glacier National Park                      | 1,800,000         | Small/medium bus |
| Great Smoky Mountains National Park        | 10,000,000        | Historic trolley |
| Hot Springs National Park                  | 1,500,000         | Historic trolley |

|                                             |           |                  |
|---------------------------------------------|-----------|------------------|
| Jefferson National Expansion Memorial       | 1,000,000 | Small/medium bus |
| Kalaupapa National Historic Park            | 75,000    | Small/medium bus |
| Lyndon B. Johnson National Historic Park    | 125,000   | Small/medium bus |
| Natchez National Historic Park              | 41,000    | Historic trolley |
| Organ Pipe Cactus National Park             | 300,000   | Small/medium bus |
| Pinnacles National Monument                 | 95,000    | Small/medium bus |
| San Juan Island National Historical Park    | 250,000   | Small/medium bus |
| Scotts Bluff National Monument              | 150,000   | Small/medium bus |
| Sequoia and Kings Canyon National Parks     | 1,500,000 | Small/medium bus |
| Shenandoah National Park                    | 1,750,000 | Small/medium bus |
| Tallgrass Prairie National Preserve         | 100,000   | Small/medium bus |
| Tumacacori National Historic Park           | 62,500    | Small/medium bus |
| Wolf Trap Farm Park for the Performing Arts | 500,000   | Small/medium bus |

Budgetary and ridership information was not readily available for most of these sites.

## B. Case Studies

### Zion National Park (Utah)

Zion National Park served 2.7 million visitors in 2010, and implemented a mandatory shuttle system in 2000. In the year 2000, the shuttle transported 2,994 passengers per day. The annual operating costs of the system are estimated to be \$2.5 million, or \$1 per visitor. Capital improvements to initiate the program were \$27.4 million.



Source: <http://www.nps.gov/zion/planyourvisit/shuttle-system.htm>

### Kalaeloa Homeless Shelter

Established in June, 2008, this program utilizes 2 full-sized busses and 1 van. The bus provides transit between Kalaeloa and the Kapolei Transit Station and is operational during the following hours:

- Monday-Friday: 7:00 AM-4:30 PM, with a headway of 60 minutes.
- Saturday & Sunday: 8:30 AM-4:00 PM, with a headway of 90 minutes.

The program operates on an annual budget of approximately \$152,000, but is also supplemented by the Hawai'i Helping the Hungry Have Hope (H-5) Program.

### Kaua'i Bus System

The Kaua'i Bus system provides six (6) routes – with headways generally at 60 minutes between arrivals. Notable statistics<sup>5</sup>:

- Ridership for March 2011: 51,894 trips
- Annual Budget (2012): \$5,550,482
- Salaries and Wages (2012): \$2,500,464
- Bus Driver Wage: \$19.22/hour
- Hourly costs: \$69/service hour/bus

### Speedishuttle

During this investigation, Speedishuttle was found to be the only shuttle operator on Kaua'i providing service between the Airport and hotel destinations. According to its website, the lowest one-way fare was \$9 per passenger.

<sup>5</sup> County of Kaua'i Transportation Agency, 2012 Budget Presentation (2011), 3,7,9.

#### **TheBus (Honolulu)**

Honolulu's TheBus system operates with a \$125 Million subsidy and charges its approximately 73 Million riders \$2.50 each way, with special pricing for monthly, annual, senior, child, and student passes. Its busses carry between 63 and 103 passengers per bus.

The annual subsidy, divided by the number of passengers, equates to approximately \$3.40 for each round-trip ride. Added to the standard bus fare of \$5.00/round trip, the total cost for each round trip is approximately \$8.40, despite the fact that the carrying capacity is at least three times as great as the proposed Shuttle system.

#### **IV. ALTERNATIVES ANALYSIS**

As mentioned in the introduction, the proposed Master Plan will be limiting the number of visitors to 900 per day. The following scenarios were considered:

**Scenario 1** – Limit the number of visitors to 900 persons per day and reduce the number of parking stalls to 100.

**Scenario 2** – Limit the number of visitors to 900 persons per day, and reduce the number of parking stalls to 50. Provide a shuttle service between Princeville and Hā'ena State Park.

**Scenario 3** – Limit the number of visitors to 900 persons per day, and eliminate the parking lot. Provide a shuttle service between Princeville and Hā'ena State Park.

**Scenario 4** – Do not limit the number of visitors to Hā'ena State Park; reduce the number of parking stalls to 50. Provide a shuttle service between Princeville and Hā'ena State Park.

**Scenario 5** – Do not limit the number of visitors to Hā'ena State Park; eliminate the parking lot. Provide a shuttle service between Princeville and Hā'ena State Park.

##### **A. Traffic Analysis**

Although some congestion currently occurs within the Hā'ena State Park site, traffic along the roadways leading up to Hā'ena State Park is relatively light. The proposed shuttle system would serve to significantly reduce the number of vehicles destined towards Hā'ena State Park. This impact would improve queuing while reducing the amount of traffic at all of the historic one-lane bridges between the Princeville Center (proposed shuttle terminus) and Hā'ena State Park to below the current 39 percent of capacity. See Table 3 for a comparative analysis of the scenarios during the critical PM peak hour of traffic. The Waipa bridge was analyzed as the measure of capacity because it is the longest one-lane span between Princeville and Hā'ena State Park, and is close to the HDOT count location used in this study.

Table 3: Capacity Analysis of Waipa Bridge During the Critical PM Peak Hour.

| Scenario                               | Bi-directional Flow @<br>Waipa Bridge (veh./hr.) | Estimated Bridge<br>Capacity (veh./hr.) | Volume-to-<br>Capacity Ratio |
|----------------------------------------|--------------------------------------------------|-----------------------------------------|------------------------------|
| Existing                               | 487                                              | 1250                                    | 39%                          |
| Scenario 1                             | 388                                              | 1250                                    | 31%                          |
| Scenario 1 w/carpooling (4 pers./veh.) | 358                                              | 1250                                    | 29%                          |
| Scenario 2                             | 323                                              | 1250                                    | 26%                          |
| Scenario 3                             | 319                                              | 1250                                    | 26%                          |
| Scenario 4                             | 337                                              | 1250                                    | 27%                          |
| Scenario 5                             | 333                                              | 1250                                    | 27%                          |

Note: Bridge capacity estimated based upon Simtraffic Analysis of existing conditions.

While vehicle occupancy rates are estimated to be approximately 2.5 persons/vehicle, "Scenario 1 w/carpooling" assesses the impact of increasing the occupancy to 4 persons per vehicle.

See Figure 5 for traffic volumes with and without the proposed shuttle system (scenario 1).

The shuttle system would also reduce traffic throughout the Hanalei and Princeville Area. However, the access point to the shuttle pick-up/drop-off terminus is anticipated to generate a maximum of 60, 70, 140, and 150 vehicles per hour entering/exiting the site, respectively for shuttle scenarios 2, 3, 4, and 5 (refer to section IV.D. for description). The arrivals are assumed to be relatively uniform as a result of the reservation system.

#### B. Shuttle (Scenarios 2-5)

It is proposed that the shuttle run between Hā'ena State Park and the Princeville Center with no stops in-between. The number of busses and proposed headways will be scenario-based and discussed in section III.C below.

It is anticipated that if the number of entrants into the park are limited, some form of communication or a reservation system will be needed to ensure against backlogs and long wait times at the shuttle's entrance point. This could be accomplished through any combination of the following methods:

- **Online reservation system** – Tickets would have to be presented to ride the shuttle; walk-in's would be accepted, but given last priority.

Ideally, the departure time would be reserved as well to ensure that long delays are prevented while leaving the park as well. The implementation cost of such a system is currently unknown, and will require further study.

- **Bus Driver Fare Collection Method** – Given that an online ticket reservation system might be costly to implement, it is possible that bus drivers could collect the money themselves. However, this would slightly increase the time required at stops. This method is not recommended where entry restrictions are enacted for Hā'ena State Park due to the potential for wasted trips and long wait times at the shuttle terminus.
- **Kiosk Fare Collection Method** – Would require a manned kiosk where ride fares could be collected and tickets distributed. The kiosk's operator could perform other tasks, such as:
  - Gather and disseminate information regarding current shuttle wait times; the information could be provided to hotels, or be managed via a website.
  - Serve as the hub of communication in the event of an emergency or compromised road conditions.

It is assumed that handicapped park entrants will be allowed to park in the parking lot at Hā'ena State Park.

It is recommended that a roadside sign be installed along Kūhiō Highway ahead of the Park and Ride to inform visitors that shuttle service to the park is required and that vehicles will not be allowed to park unless passes are purchased.

This will encourage visitors to plan their trips ahead of arrival and prevent visitors from parking throughout the surrounding neighborhoods and walking in.

#### C. Engineering Considerations

Due to the narrow and winding roadways between Hā'ena State Park and Princeville, it is recommended that as a maximum, only 15- or 20-passenger

vehicles be used as shuttles, as vehicles of this size were reported to have been used along these routes during five days of filming of the Pirates of the Caribbean: On Stranger Tides movie in 2010. Parking was also available to the east of the County's Hā'ena Park. See Figure 5.

The following information was gleaned from the experience:

1. Flagmen and road signage were used to help the vehicles in areas streets were narrow and/or curvy. This could denote that there were issues with sight distance and or traversal of narrow segments.
2. Two 15-passenger and one wheelchair-ready 20-passenger van were used to shuttle beachgoers.

It should be noted that topographical survey data was not available at the time of this report, and therefore vehicle navigability was not explicitly considered. Further study and/or test runs may be necessary prior to implementation and could affect vehicle size/model selection.

The 12 bridges along the proposed Shuttle route appear to offer sufficient theoretical carrying capacity to accommodate 15-20 passenger shuttles. See Table 4.

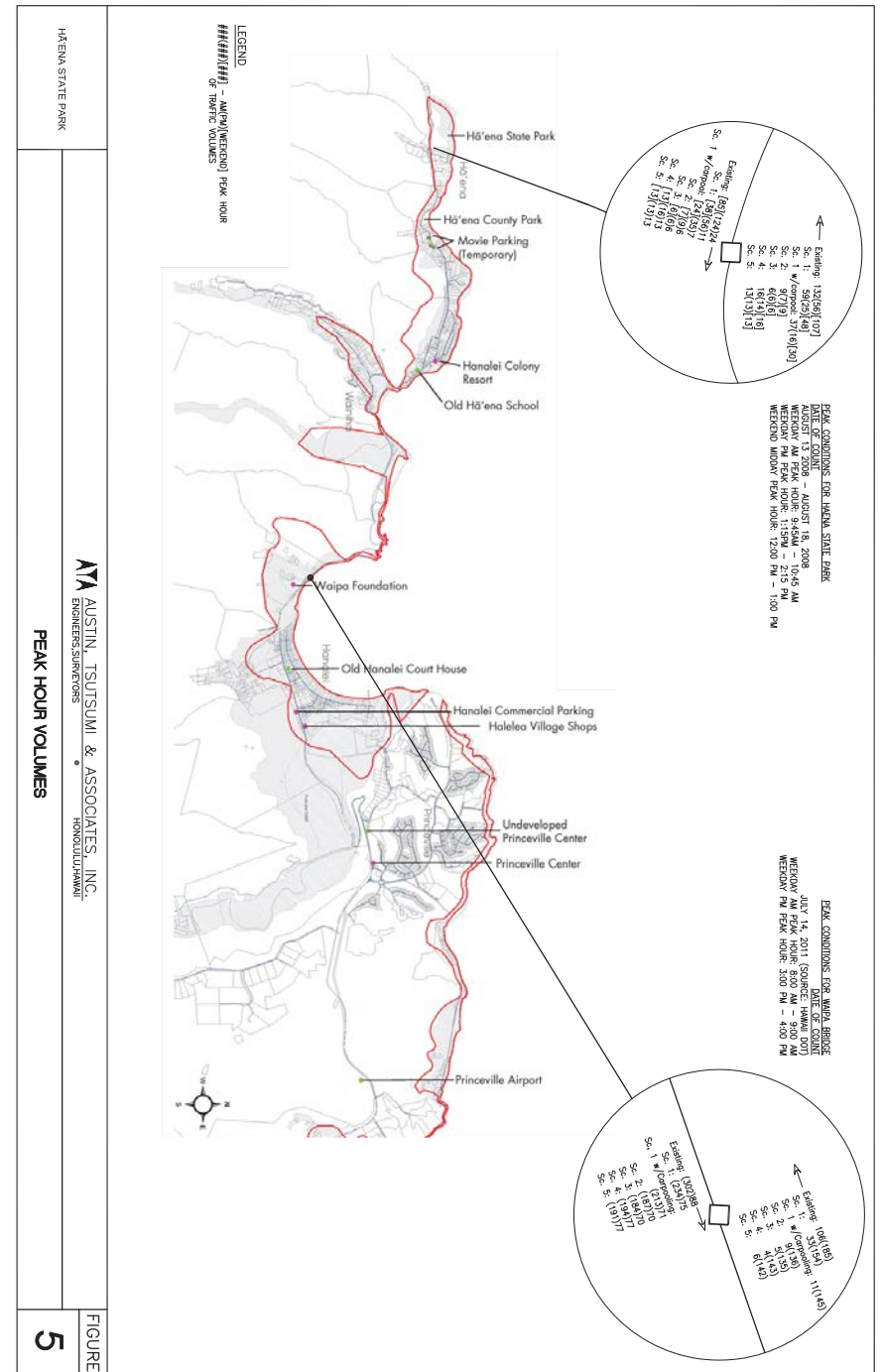




Table 4: Existing Bridge Capacity

| Bridge Name             | MP    | Type                 | Year Constructed | Length (ft.) | Load Rating | Load Restriction (lbs.)* |
|-------------------------|-------|----------------------|------------------|--------------|-------------|--------------------------|
| <b>Kaua'i Route 560</b> |       |                      |                  |              |             |                          |
| Hanalei River Bridge    | 1.2   | Steel Pratt Truss    | 1912             | 113          | H-10        | 30,000                   |
| Wai'oli Bridge          | 3.39  | R.C. Flat Slab       | 1912             | 90           | H-15        | 16,000                   |
| Waipā Bridge            | 3.91  | R.C. Flat Slab       | 1912             | 188          | H-15        | 16,000                   |
| Waikoko Bridge          | 4.21  | R.C. Flat Slab       | 1913             | 45           | H-10        | 16,000                   |
| Lumaha'i Bridge         | 5.88  | Cont. Concrete       | 1968             | 538          | HS 20       | 32,000                   |
| Wainiha Bridge #1       | 6.4   | Steel Truss Deck     | 1969             | 42           | H10         | 16,000                   |
| Wainiha Bridge #2       | 6.86  | Steel Truss Deck     | 1973             | 78           | H15         | 16,000                   |
| Wainiha Bridge #3       | 6.7   | Steel Truss Deck     | 1975             | 146          | H15         | 16,000                   |
| <b>Kaua'i Route 56</b>  |       |                      |                  |              |             |                          |
| Waiakalua Bridge        | 20.29 | PrSt. Conc. Gdr      | 1967             | 39           | HS20        | 40,000                   |
| Kilauea Bridge          | 22.92 | Prestressed Beam     | 1973             | 258          | HS20        | 40,000                   |
| Structure #4            | 24.9  | RC SlabBr.           | 1963             | 50           | CHN         | 40,000                   |
| Kalihiwai Bridge        | 25.01 | Prestressed Concrete | 1963             | 798          | RW          | 50,000                   |

\*Information provided by the Hawai'i Department of Transportation.

Typical 15- and 20- passenger vans have gross vehicle weights (includes passengers and load) of approximately 10,000 lbs.

#### D. Shuttle Cost Estimate

##### Assumptions

- Based on information collected in 2011.
- Per-van cost \$920/day
  - Driver cost: \$600/day
  - Van O&M: \$300/day
  - Van cost (amortized over 5 years): \$20/day
- Administrative costs:
  - Assume 2 positions (1 full-time, and 1 part-time) in addition to a web startup fee (not based upon any research). \$610/day with amortized web startup fee.
    - \$577/8 hours = \$72.12/hour for Administrator (incl. overhead cost).
    - \$33\*365 days\*5 years = \$60,000 for web startup fee.
- Round trip duration: 70 minutes
- ADA accessibility: It was assumed that an ADA-accessible van would render approximately 4-5 seats unusable. This will vary depending upon the make and model of the van.
- Van capacity: 15 persons (20-person van with reductions for wheelchair capability and partial occupancy).

- Visitor demand: Approximately 2,000 daily (in 1993, the demand was 750,000 persons/year ~ 2055 persons/day)
- Number of cars entering the park per day in 2008: 780 veh/day. (x2.5 = 1950 persons/day)
- Contingency:
  - Chosen based upon judgment. Realistically, there will be slow days and erratic arrivals when smaller revenue will be generated:
    - Rainy day
    - Cold/winter day
    - Economic problems
    - Road closures
    - Etc.
  - Shuttle contracts will often be 3-5 years instead of as-needed.
- No allowance made for park operations outside of administrative position. For example, no lease fees were included for parking at the Princeville Center.
- No explicit knowledge of website operation/administrative costs. This is considered a "best guess."
- Note: The estimates provided below portray minimalist costs. The Kaua'i Bus and Speedishuttle both operate with costs of approximately \$20 per round trip, but might have higher contingency costs. Note also that the Kaua'i Busses operate with greater carrying capacity per bus.**

Five scenarios were considered:

##### Scenario 1: 900-person limit with no shuttle – (No shuttle).

**Scenario 2: 900-person limit with 50 stalls and shuttle** – Shuttle ridership is estimated to be 775 per day, with the other 125 arriving via vehicles using day-long parking passes; 6 vans necessary to operate continuously to meet this demand.

- Assumes that people will be beholden to the shuttle schedule, and that there will be 10 trips/day (arrivals can only occur during 9 of them).
- Carrying capacity:
  - 6 ADA Vans x 15 persons/trip x 9 trips/day = 810 persons/day > 775 2persons/day requirement.
- Cost
 

|                                                          |   |                            |
|----------------------------------------------------------|---|----------------------------|
| 6 vans @ \$920/day                                       | = | \$5,520                    |
| Administrator w/web startup @ \$610/day                  | = | \$610                      |
| Total                                                    | = | \$6,130/day                |
| Per rider @ 775 riders                                   | = | \$7.91/person/day          |
| With 30% contingency for low or sporadic ridership, etc. | = | <b>\$10.28 /person/day</b> |

**Scenario 3: 900-person limit without parking lot and with shuttle** – Shuttle ridership is estimated to be 900 per day; 7 vans necessary to operate continuously to meet this demand.

- Assumes that people will be beholden to the shuttle schedule, and that there will be 10 trips/day (arrivals can only occur during 9 of them).
- Carrying capacity:
  - 7 ADA Vans x 15 persons/trip x 9 trips/day = 945 persons/day > 900 persons/day requirement.
- Cost
 

|                                                            |   |                            |
|------------------------------------------------------------|---|----------------------------|
| ○ 7 vans @ \$920/day                                       | = | \$6,440                    |
| ○ Administrator w/web startup @ \$610/day                  | = | \$610                      |
| ○ Total                                                    | = | \$7,050/day                |
| ○ Per rider @ 900 riders                                   | = | \$7.83/person/day          |
| ○ With 30% contingency for low or sporadic ridership, etc. | = | <b>\$10.18 /person/day</b> |

**Scenario 4: Unconstrained with 50 stalls and shuttle** – It is estimated that approximately 2,000 visitors per day visit Hā'ena State Park. During our field investigation, 775 vehicles per day were counted entering the park. Fourteen vans would be necessary to operate continuously in order to meet this demand.

- Assumes that the number of visitors remains constant at 2,000/day minus 125 persons that arrive by vehicle, but will be beholden to the bus schedule; no additional capacity allowed for peak demand. In essence, this is  $1875/135 = 14$  vans.
- Cost
 

|                                                                                                        |   |                           |
|--------------------------------------------------------------------------------------------------------|---|---------------------------|
| ○ 14 vans @ \$920/day                                                                                  | = | \$12,880                  |
| ○ Administrator w/web startup @ \$610/day                                                              | = | \$610                     |
| ○ Total                                                                                                | = | \$13,490/day              |
| ○ Per rider @ 1,875 riders                                                                             | = | \$7.19/person/day         |
| ○ With 50% contingency for low or sporadic ridership, etc. (higher due to increased demand volatility) | = | <b>\$10.79/person/day</b> |

**Scenario 5: Unconstrained without parking lot and with shuttle** – It is estimated that approximately 2,000 visitors per day visit Hā'ena State Park. During our field investigation, 775 vehicles per day were counted entering the park. Fifteen (15) vans would be necessary to operate continuously in order to meet this demand.

- Assumes that the number of visitors remains constant at 2,000/day and will be beholden to the bus schedule; no additional capacity allowed for peak demand. In essence, this is  $2000/135 = 15$  vans.

- Cost
 

|                                                                                                        |   |                           |
|--------------------------------------------------------------------------------------------------------|---|---------------------------|
| ○ 15 vans @ \$920/day                                                                                  | = | \$13,800                  |
| ○ Administrator w/web startup @ \$610/day                                                              | = | \$610                     |
| ○ Total                                                                                                | = | \$14,410/day              |
| ○ Per rider @ 2,000 riders                                                                             | = | \$7.21/person/day         |
| ○ With 50% contingency for low or sporadic ridership, etc. (higher due to increased demand volatility) | = | <b>\$10.80/person/day</b> |

Table 5 compares the estimated costs to those of other transit services.

Table 5: Comparison of Estimated Transit Costs

| Name                                                                | Roundtrip<br>Cost/Passenger | Cost/Bus/12-hour |
|---------------------------------------------------------------------|-----------------------------|------------------|
| HSP Shuttle -- Scenario 2<br>(900-Person Limit with 50 Stalls)      | \$ 10.28                    | \$ 920.00        |
| HSP Shuttle -- Scenario 3<br>(900-Person Limit without Parking Lot) | \$ 10.18                    | \$ 920.00        |
| HSP Shuttle -- Scenario 4<br>(Unconstrained with 50 stalls)         | \$ 10.79                    | \$ 920.00        |
| HSP Shuttle -- Scenario 5<br>(Unconstrained without Parking Lot)    | \$ 10.80                    | \$ 920.00        |
| Kaua'i Bus                                                          | \$ 11.41*                   | \$ 828.00        |
| SpeediShuttle                                                       | \$ 18.00                    | \$ 1305.99*      |
| TheBus                                                              | \$ 8.40                     | \$ 609.46*       |

\*Costs derived based on a ratio between Hā'ena State Park shuttle scenarios versus 12-hour cost per bus.

## V. CONCLUSIONS

Traffic along Kūhiō Highway along the roads leading to Hā'ena State Park is relatively light. However, minor queuing exists at the 1-way historic bridges between Princeville and Hā'ena State Park. It is estimated that the bridges operate at approximately 39 percent of capacity.

The Hā'ena State Park Master plan seeks to:

1. Limit the number of daily visitors to 900 per day.
2. Reduce the number of on-site parking stalls to a maximum of 100.
3. Consider providing a shuttle between Hā'ena State Park and Princeville as an alternative.

### Traffic Analysis

It is anticipated that the recommended improvements will reduce daily traffic through the 1-way historic bridges by as much as 35 percent during the critical PM peak hour of traffic, and improve operations along the 1-way historic bridges. Refer to Table 3 for a comparative analysis of the different scenarios.

### Shuttle

Implementation of Scenarios 2-5 would require the creation of a shuttle service between Princeville and Hā'ena State Park.

The shuttle would consist of 20-passenger vans that would operate continuously between 6:00 AM and 6:00 PM, with a round-trip duration of 70 minutes. The cost of this service is estimated at between 10 and 11 dollars per round trip. This is consistent with the estimated \$11.41 person/round trip cost for the Kaua'i Bus.

It would appear that all of the bridges along the shuttle route would have adequate capacity to handle the gross vehicle weights.

The effect of the shuttle and vehicle access restrictions to the park would be a reduction in traffic along Kūhiō Highway.

## VI. RECOMMENDATIONS

1. Implement scenarios 1, 2, or 3, described below. Options 4 and 5 are not recommended as they do not meet the objective of limiting the number of visitor arrivals to 900 persons/day.

**Scenario 1: 900-person limit with 100 stalls without shuttle** – It is recommended that parking passes be issued and that carpooling be encouraged.

**Scenario 2: 900-person limit with 50 stalls and shuttle** – Shuttle ridership is estimated to be 775 per day, with the other 125 arriving via vehicles using day-long parking passes; 6 vans necessary to operate continuously to meet this demand.

**Scenario 3: 900-person limit without parking lot and with shuttle** – Shuttle ridership is estimated to be 900 per day; 7 vans necessary to operate continuously to meet this demand.

2. Seek federal funding (if available) for the capital improvement costs.
3. (Scenarios 2-3) Install signage at the Princeville Park 'n Ride location to inform visitors that they must catch the shuttle to visit Hā'ena State Park unless they have obtained a parking pass in advance. Recommend that no entry tickets or parking passes be distributed at the park.
4. Require all persons, even those with annual passes to obtain entry ticket prior to entering Hā'ena State Park. This can be done through receipts, wristbands, or ticket stubs. This will prevent visitors from parking in surrounding communities or other nearby parking lots.

## VII. REFERENCES

1. County of Kaua'i Planning Department, Kaua'i General Plan, 2000.
2. County of Kaua'i Transportation Agency, 2012 Budget Presentation, 2011.
3. FHWA Work Zone, Traffic Analysis Tools Volume IX: Work Zone Modeling and Simulation – A Guide for Analysis, (date unknown).
4. Hawaii Department of Transportation, Kuhio Highway (Route 560) Historic Roadway Corridor Plan, 2005.
5. The Keith Companies, Master Plan and Draft Environmental Impact Statement, 2001.
6. Transportation Research Board, HCM2010: Highway Capacity Manual, 2010.

## APPENDIX A

### TRAFFIC COUNT DATA

| Number      | Date      | Time     | Wed.                 |      | Thu.                 |      | Fri. (Holiday)       |      | Sat.                 |      | Sun.                 |      | Mon.                 |      |
|-------------|-----------|----------|----------------------|------|----------------------|------|----------------------|------|----------------------|------|----------------------|------|----------------------|------|
|             |           |          | 8/13/2008            |      | 8/16/2008            |      | 8/15/2008            |      | 8/17/2008            |      | 8/17/2008            |      | 8/18/2008            |      |
|             |           |          | Enter<br>(Channel 1) | Exit | Enter<br>(Channel 1) | Exit | Enter<br>(Channel 1) | Exit | Enter<br>(Channel 1) | Exit | Enter<br>(Channel 1) | Exit | Enter<br>(Channel 1) | Exit |
|             |           | 12:00 AM |                      |      | 0                    | 0    | 0                    | 0    | 0                    | 0    | 0                    | 0    | 1                    | 1    |
|             |           | 12:15 AM |                      |      | 0                    | 0    | 0                    | 0    | 0                    | 0    | 0                    | 0    | 0                    | 0    |
|             |           | 12:30 AM |                      |      | 0                    | 0    | 0                    | 0    | 0                    | 0    | 0                    | 0    | 0                    | 0    |
|             |           | 12:45 AM |                      |      | 0                    | 0    | 1                    | 0    | 0                    | 1    | 0                    | 0    | 0                    | 0    |
|             |           | 01:00 AM |                      |      | 0                    | 0    | 0                    | 0    | 0                    | 0    | 0                    | 0    | 0                    | 0    |
|             |           | 01:15 AM |                      |      | 0                    | 0    | 0                    | 0    | 0                    | 0    | 2                    | 0    | 0                    | 0    |
|             |           | 01:30 AM |                      |      | 0                    | 0    | 1                    | 0    | 0                    | 0    | 0                    | 0    | 0                    | 0    |
|             |           | 01:45 AM |                      |      | 0                    | 0    | 0                    | 0    | 0                    | 0    | 0                    | 0    | 0                    | 0    |
|             |           | 02:00 AM |                      |      | 0                    | 0    | 0                    | 0    | 0                    | 0    | 0                    | 0    | 0                    | 0    |
|             |           | 02:15 AM |                      |      | 0                    | 0    | 0                    | 0    | 0                    | 0    | 0                    | 0    | 0                    | 0    |
|             |           | 02:30 AM |                      |      | 0                    | 0    | 0                    | 0    | 0                    | 0    | 0                    | 0    | 0                    | 0    |
|             |           | 02:45 AM |                      |      | 0                    | 0    | 0                    | 1    | 0                    | 0    | 0                    | 0    | 0                    | 0    |
|             |           | 03:00 AM |                      |      | 0                    | 0    | 0                    | 0    | 0                    | 0    | 0                    | 0    | 0                    | 0    |
|             |           | 03:15 AM |                      |      | 0                    | 0    | 0                    | 0    | 0                    | 0    | 0                    | 0    | 0                    | 0    |
|             |           | 03:30 AM |                      |      | 0                    | 0    | 0                    | 0    | 0                    | 0    | 0                    | 0    | 0                    | 0    |
|             |           | 03:45 AM |                      |      | 0                    | 0    | 0                    | 0    | 0                    | 0    | 0                    | 0    | 0                    | 0    |
|             |           | 04:00 AM |                      |      | 0                    | 0    | 0                    | 0    | 0                    | 0    | 1                    | 0    | 0                    | 0    |
|             |           | 04:15 AM |                      |      | 0                    | 0    | 0                    | 0    | 0                    | 0    | 0                    | 1    | 0                    | 0    |
|             |           | 04:30 AM |                      |      | 0                    | 0    | 0                    | 0    | 0                    | 0    | 0                    | 0    | 0                    | 0    |
|             |           | 04:45 AM |                      |      | 0                    | 0    | 3                    | 1    | 0                    | 0    | 0                    | 0    | 0                    | 0    |
|             |           | 05:00 AM |                      |      | 0                    | 1    | 0                    | 0    | 0                    | 1    | 0                    | 0    | 0                    | 0    |
|             |           | 05:15 AM |                      |      | 1                    | 0    | 0                    | 0    | 0                    | 1    | 0                    | 0    | 0                    | 0    |
|             |           | 05:30 AM |                      |      | 0                    | 1    | 1                    | 0    | 0                    | 0    | 0                    | 0    | 0                    | 0    |
|             |           | 05:45 AM |                      |      | 2                    | 1    | 0                    | 1    | 1                    | 0    | 0                    | 0    | 0                    | 1    |
|             |           | 06:00 AM |                      |      | 1                    | 1    | 1                    | 0    | 4                    | 0    | 1                    | 1    | 4                    | 0    |
|             |           | 06:15 AM |                      |      | 1                    | 1    | 1                    | 2    | 1                    | 0    | 4                    | 0    | 0                    | 0    |
|             |           | 06:30 AM |                      |      | 3                    | 1    | 5                    | 0    | 3                    | 2    | 1                    | 0    | 1                    | 0    |
|             |           | 06:45 AM |                      |      | 4                    | 1    | 1                    | 0    | 2                    | 1    | 3                    | 0    | 2                    | 1    |
|             |           | 07:00 AM |                      |      | 4                    | 1    | 3                    | 1    | 2                    | 4    | 4                    | 0    | 4                    | 0    |
|             |           | 07:15 AM |                      |      | 11                   | 0    | 2                    | 2    | 6                    | 0    | 12                   | 0    | 3                    | 5    |
|             |           | 07:30 AM |                      |      | 6                    | 2    | 16                   | 5    | 4                    | 0    | 6                    | 0    | 7                    | 2    |
|             |           | 07:45 AM |                      |      | 6                    | 2    | 12                   | 5    | 4                    | 0    | 3                    | 0    | 7                    | 4    |
|             |           | 08:00 AM |                      |      | 12                   | 0    | 9                    | 5    | 10                   | 2    | 8                    | 3    | 6                    | 2    |
|             |           | 08:15 AM |                      |      | 19                   | 7    | 8                    | 6    | 13                   | 5    | 11                   | 3    | 11                   | 6    |
|             |           | 08:30 AM |                      |      | 19                   | 0    | 18                   | 2    | 9                    | 2    | 6                    | 5    | 11                   | 7    |
|             |           | 08:45 AM |                      |      | 23                   | 0    | 14                   | 5    | 19                   | 7    | 8                    | 2    | 7                    | 3    |
|             |           | 09:00 AM |                      |      | 25                   | 0    | 17                   | 7    | 9                    | 4    | 8                    | 4    | 17                   | 2    |
|             |           | 09:15 AM |                      |      | 22                   | 3    | 23                   | 4    | 23                   | 8    | 15                   | 7    | 13                   | 13   |
|             |           | 09:30 AM |                      |      | 26                   | 2    | 18                   | 4    | 14                   | 10   | 8                    | 7    | 33                   | 7    |
|             |           | 09:45 AM |                      |      | 38                   | 0    | 21                   | 6    | 10                   | 8    | 6                    |      |                      |      |
|             |           | 10:00 AM |                      |      | 38                   | 7    | 22                   | 10   | 30                   | 10   | 10                   | 12   |                      |      |
| 1           | 8/13/2008 | 10:15 AM | 25                   | 10   | 27                   | 4    | 23                   | 11   | 17                   | 14   | 16                   | 13   |                      |      |
| 2           | 8/13/2008 | 10:30 AM | 27                   | 11   | 29                   | 13   | 15                   | 7    | 18                   | 10   | 21                   | 10   |                      |      |
| 3           | 8/13/2008 | 10:45 AM | 31                   | 16   | 29                   | 10   | 15                   | 11   | 26                   | 13   | 22                   | 11   |                      |      |
| 4           | 8/13/2008 | 11:00 AM | 31                   | 23   | 28                   | 22   | 16                   | 20   | 22                   | 13   | 16                   | 6    |                      |      |
| 5           | 8/13/2008 | 11:15 AM | 21                   | 27   | 22                   | 14   | 29                   | 17   | 32                   | 23   | 33                   | 12   |                      |      |
| 6           | 8/13/2008 | 11:30 AM | 21                   | 24   | 33                   | 20   | 23                   | 16   | 18                   | 18   | 24                   | 22   |                      |      |
| 7           | 8/13/2008 | 11:45 AM | 18                   | 25   | 14                   | 31   | 19                   | 11   | 20                   | 15   | 17                   | 13   |                      |      |
| 8           | 8/13/2008 | 12:00 PM | 20                   | 18   | 22                   | 31   | 23                   | 20   | 26                   | 21   | 27                   | 17   |                      |      |
| 9           | 8/13/2008 | 12:15 PM | 21                   | 18   | 13                   | 14   | 14                   | 17   | 26                   | 22   | 31                   | 16   |                      |      |
| 10          | 8/13/2008 | 12:30 PM | 21                   | 20   | 18                   | 21   | 18                   | 21   | 20                   | 28   | 24                   | 26   |                      |      |
| 11          | 8/13/2008 | 12:45 PM | 13                   | 16   | 19                   | 29   | 21                   | 17   | 25                   | 14   | 25                   | 26   |                      |      |
| 12          | 8/13/2008 | 01:00 PM | 26                   | 29   | 18                   | 26   | 12                   | 19   | 24                   | 25   | 25                   | 18   |                      |      |
| 13          | 8/13/2008 | 01:15 PM | 24                   | 25   | 31                   | 24   | 28                   | 23   | 14                   | 27   | 18                   | 21   |                      |      |
| 14          | 8/13/2008 | 01:30 PM | 19                   | 15   | 14                   | 32   | 15                   | 15   | 18                   | 17   | 27                   | 21   |                      |      |
| 15          | 8/13/2008 | 01:45 PM | 19                   | 32   | 15                   | 29   | 15                   | 19   | 23                   | 26   | 23                   | 19   |                      |      |
| 16          | 8/13/2008 | 02:00 PM | 21                   | 27   | 15                   | 35   | 23                   | 27   | 27                   | 27   | 27                   | 22   |                      |      |
| 17          | 8/13/2008 | 02:15 PM | 16                   | 23   | 21                   | 22   | 13                   | 17   | 5                    | 18   | 18                   | 24   |                      |      |
| 18          | 8/13/2008 | 02:30 PM | 16                   | 23   | 15                   | 23   | 10                   | 22   | 26                   | 20   | 18                   | 18   |                      |      |
| 19          | 8/13/2008 | 02:45 PM | 14                   | 12   | 18                   | 28   | 15                   | 18   | 19                   | 24   | 19                   | 28   |                      |      |
| 20          | 8/13/2008 | 03:00 PM | 18                   | 26   | 11                   | 26   | 15                   | 18   | 19                   | 16   | 29                   | 20   |                      |      |
| 21          | 8/13/2008 | 03:15 PM | 12                   | 19   | 11                   | 34   | 18                   | 14   | 17                   | 16   | 29                   | 29   |                      |      |
| 22          | 8/13/2008 | 03:30 PM | 17                   | 30   | 16                   | 36   | 11                   | 26   | 18                   | 24   | 19                   | 25   |                      |      |
| 23          | 8/13/2008 | 03:45 PM | 20                   | 28   | 17                   | 24   | 9                    | 13   | 12                   | 25   | 17                   | 20   |                      |      |
| 24          | 8/13/2008 | 04:00 PM | 12                   | 25   | 4                    | 18   | 12                   | 18   | 18                   | 25   | 6                    | 21   |                      |      |
| 25          | 8/13/2008 | 04:15 PM | 8                    | 26   | 15                   | 15   | 16                   | 18   | 13                   | 24   | 11                   | 24   |                      |      |
| 26          | 8/13/2008 | 04:30 PM | 16                   | 26   | 8                    | 19   | 12                   | 11   | 20                   | 30   | 12                   | 15   |                      |      |
| 27          | 8/13/2008 | 04:45 PM | 12                   | 28   | 18                   | 10   | 13                   | 23   | 5                    | 17   | 17                   | 21   |                      |      |
| 28          | 8/13/2008 | 05:00 PM | 10                   | 14   | 9                    | 21   | 13                   | 19   | 8                    | 21   | 14                   | 19   |                      |      |
| 29          | 8/13/2008 | 05:15 PM | 5                    | 18   | 11                   | 10   | 7                    | 19   | 12                   | 23   | 8                    | 17   |                      |      |
| 30          | 8/13/2008 | 05:30 PM | 11                   | 12   | 6                    | 15   | 10                   | 16   | 3                    | 16   | 11                   | 21   |                      |      |
| 31          | 8/13/2008 | 05:45 PM | 9                    | 8    | 8                    | 15   | 11                   | 13   | 9                    | 15   | 7                    | 13   |                      |      |
| 32          | 8/13/2008 | 06:00 PM | 14                   | 9    | 4                    | 7    | 5                    | 10   | 7                    | 8    | 12                   | 17   |                      |      |
| 33          | 8/13/2008 | 06:15 PM | 5                    | 5    | 6                    | 20   | 11                   | 20   | 6                    | 14   | 10                   | 13   |                      |      |
| 34          | 8/13/2008 | 06:30 PM | 10                   | 1    | 7                    | 8    | 9                    | 16   | 5                    | 5    | 12                   | 10   |                      |      |
| 35          | 8/13/2008 | 06:45 PM | 11                   | 6    | 6                    | 4    | 9                    | 10   | 6                    | 8    | 12                   | 12   |                      |      |
| 36          | 8/13/2008 | 07:00 PM | 12                   | 2    | 5                    | 17   | 4                    | 10   | 6                    | 5    | 7                    | 11   |                      |      |
| 37          | 8/13/2008 | 07:15 PM | 7                    | 21   | 0                    | 9    | 4                    | 30   | 3                    | 19   | 3                    | 30   |                      |      |
| 38          | 8/13/2008 | 07:30 PM | 2                    | 22   | 2                    | 7    | 1                    | 11   | 1                    | 9    | 1                    | 17   |                      |      |
| 39          | 8/13/2008 | 07:45 PM | 0                    | 4    | 0                    | 2    | 3                    | 7    | 0                    | 5    | 3                    | 10   |                      |      |
| 40          | 8/13/2008 | 08:00 PM | 0                    | 1    | 3                    | 1    | 0                    | 3    | 2                    | 2    | 0                    | 8    |                      |      |
| 41          | 8/13/2008 | 08:15 PM | 0                    | 0    | 0                    | 2    | 0                    | 0    | 0                    | 3    | 1                    | 3    |                      |      |
| 42          | 8/13/2008 | 08:30 PM | 1                    | 1    | 0                    | 2    | 2                    | 0    | 0                    | 3    | 1                    | 0    |                      |      |
| 43          | 8/13/2008 | 08:45 PM | 0                    | 0    | 0                    | 0    | 0                    | 1    | 0                    | 3    | 1                    | 1    |                      |      |
| 44          | 8/13/2008 | 09:00 PM | 0                    | 0    | 1                    | 0    | 0                    | 1    | 0                    | 0    | 0                    | 1    |                      |      |
| 45          | 8/13/2008 | 09:15 PM | 0                    | 0    | 0                    | 0    | 0                    | 0    | 0                    | 1    | 0                    | 0    |                      |      |
| 46          | 8/13/2008 | 09:30 PM | 0                    | 0    | 0                    | 0    | 1                    | 0    | 0                    | 0    | 0                    | 0    |                      |      |
| 47          | 8/13/2008 | 09:45 PM | 0                    | 0    | 1                    | 0    | 0                    | 0    | 0                    | 0    | 0                    | 0    |                      |      |
| 48          | 8/13/2008 | 10:00 PM | 0                    | 0    | 0                    | 0    | 1                    | 1    | 1                    | 1    | 1                    | 0    |                      |      |
| 49          | 8/13/2008 | 10:15 PM | 0                    | 0    | 0                    | 0    | 0                    | 1    | 0                    | 0    | 0                    | 0    |                      |      |
| 50          | 8/13/2008 | 10:30 PM | 0                    | 0    | 0                    | 1    | 0                    | 2    | 0                    | 0    | 0                    | 1    |                      |      |
| 51          | 8/13/2008 | 10:45 PM | 0                    | 0    | 0                    | 0    | 2                    | 1    | 0                    | 1    | 0                    | 0    |                      |      |
| 52          | 8/13/2008 | 11:00 PM | 0                    | 0    | 0                    | 0    | 0                    | 2    | 0                    | 0    | 0                    | 0    |                      |      |
| 53          | 8/13/2008 | 11:15 PM | 0                    | 0    | 0                    | 0    | 1                    | 1    | 0                    | 0    | 0                    | 0    |                      |      |
| 54          | 8/13/2008 | 11:30 PM | 0                    | 0    | 0                    | 0    | 0                    | 0    | 0                    | 2    | 0                    | 0    |                      |      |
| 55          | 8/13/2008 | 11:45 PM | 0                    | 0    | 0                    | 0    | 0                    | 0    | 0                    | 0    | 0                    | 0    |                      |      |
| Daily Total |           |          |                      |      | 831                  | 781  | 753                  | 736  | 761                  | 773  | 780                  | 776  |                      |      |
|             |           |          |                      |      | 1612                 |      | 1489                 |      | 1534                 |      | 1556                 |      |                      |      |



## APPENDIX B

### CAPACITY ANALYSIS BASIS

#### WORK ZONE MOBILITY AND SAFETY PROGRAM

#### Traffic Analysis Tools Volume IX: Work Zone Modeling and Simulation A Guide for Analysts

##### Wisconsin DOT Work Zone Signal Optimization

| Wisconsin DOT Work Zone Signal Optimization |                             |
|---------------------------------------------|-----------------------------|
| Work Zone Characteristics                   |                             |
| <b>Transportation Analysis:</b>             |                             |
| <b>Approach</b>                             | Traffic Signal Optimization |
| <b>Modeling Tools</b>                       | Synchro/SimTraffic          |
| <b>Work Zones:</b>                          |                             |
| <b>Type</b>                                 | Type I and IV               |
| <b>Network Configuration</b>                | Isolated                    |
| <b>Geographic Scale:</b>                    |                             |
| <b>Work Zone Size</b>                       | Small                       |
| <b>Analysis Area</b>                        | Local                       |

##### Use of Signal Optimization Tools in Work Zone Traffic Analysis

Signal optimization tools such as Passer, Synchro/SimTraffic, and Transyt 7F have a variety of applications for work zone analysis, especially in urban and suburban environments. Broadly speaking, these applications can be grouped in three categories:

1. Preparing timing plans for temporary signals used to manage traffic with in a construction site.
2. Adjusting signal timing on corridors that are directly impacted by construction.
3. Adjusting signal timing to improve progression on corridors that serve as alternate routes or detours around a work zone.

**Temporary Signals.** Figure 29 shows an example of the use of Synchro/SimTraffic to optimize the timing of a temporary traffic signal. In this case, two-way one-lane operation will be in effect during a bridge construction project (in other words, eastbound and westbound traffic will be sharing a single lane). Synchro's Ring/Barrier Editor was used to create a configuration that mimics the operation of the temporary signal by alternately sending eastbound and westbound traffic along the restricted section. Synchro's signal optimization algorithm was then used to establish a timing plan that minimizes traffic delays. The analysis also provides an indication of the extent of queuing on the approaches to the one-lane segment, which is useful in determining whether access to side roads will be blocked by queued traffic.

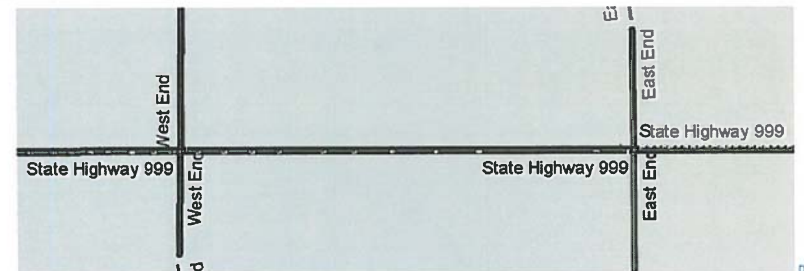


Figure 29 Synchro/SimTraffic Model of a Work Zone with Two-Way One-Lane Operation

\*Note the westbound vehicles queuing while eastbound traffic is allowed to proceed.

This method can also be used to evaluate the impact of work zone length on capacity and throughput for sites with two-way one-lane operations. As shown Figure 30, the capacity of two-way one-lane sections is sensitive to the length of the restricted section. Therefore, in many cases there is a trade-off between what is convenient for construction operations and what is acceptable in terms of traffic impact.

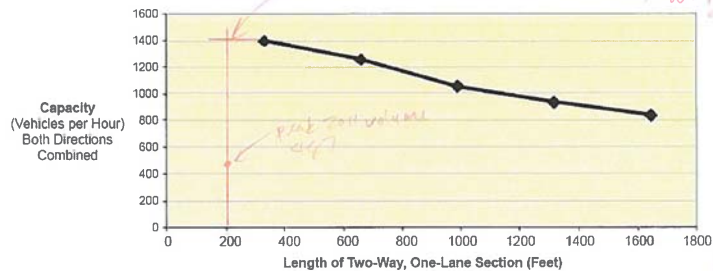


Figure 30 Capacity vs Length for Two-Way One-Lane Flagging Operations

**Adjusting Timing on Corridors Affected by Construction.** Normally, signal timing plans are developed based on the assumption that all of the lanes that exist at each intersection will be available for traffic to use. This assumption may not be true during construction. For example, take an intersection where two of the three lanes have been closed to traffic. In this case, all traffic is directed to use the right lane, severely impacting the capacity of the signalized intersection.

In such situations, to avoid excessive queuing and delay it may be necessary to make fundamental changes in the signal timing at individual intersections along an entire corridor. In the example shown in the photo, it may be desirable to increase the cycle length to compensate for the fact that left, thru, and right turning vehicles are sharing a single lane. To maintain good traffic progression along the corridor, signal offsets may need to be adjusted to account for reduced travel speeds. In addition, temporary changes in access to business properties along the corridor may affect turn patterns, requiring adjustments in signal phasing and splits. The use of a signal optimization tool allows all of these variables to be addressed comprehensively.

**Adjusting Timing on Parallel Routes.** The Daniel Webster Hoan Memorial Bridge carries Interstate 794 over the Milwaukee River in Milwaukee, Wisconsin. As shown in Figure 31, on December 13, 2000 there was a structural failure on one span of the bridge. The failure required immediate lane closures, resulting diversion of all traffic to other routes.

To accommodate increased traffic on the arterial street that runs directly parallel to I-794, the City of Milwaukee used signal optimization tools to prepare a revised traffic signal timing plan for the Kinross Avenue/First Street corridor (WIS 32). The revised signal timing plan was implemented less than 48 hours after the incident occurred (and at minimal cost). It increased the green time allocated to north-south thru traffic, and reduced the amount of time allocated to side streets. The revised signal timing is believed to have been instrumental in reducing traffic delays and minimizing the overall impacts of the bridge failure and subsequent reconstruction activities.

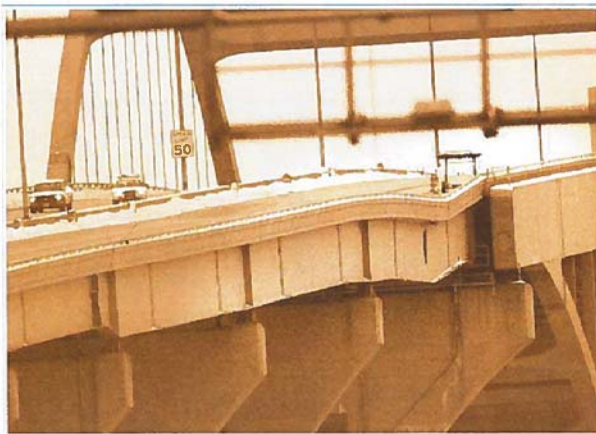


Figure 31 Structural failure on Daniel Webster Hoan Memorial Bridge, December 13, 2000.

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FHWA

Site ID: B73056000391  
Functional Class: RURAL MAJOR COLLECTOR  
Location: Kuho Hwy b/w Waipio BR end of stripe

| DATE : 07/14/2011                 | TIME-AM     | DIR 1 | DIR 2 | TOTAL                      | TIME-AM              | DIR 1                | DIR 2                             | TOTAL                | TIME-PM     | DIR 1                | DIR 2 | TOTAL |                      |       |        |
|-----------------------------------|-------------|-------|-------|----------------------------|----------------------|----------------------|-----------------------------------|----------------------|-------------|----------------------|-------|-------|----------------------|-------|--------|
|                                   | 12:00-12:15 | 4     | 1     | 5                          | 06:00-06:15          | 6                    | 4                                 | 10                   | 12:00-12:15 | 57                   | 36    | 93    |                      |       |        |
|                                   | 12:15-12:30 | 3     | 1     | 4                          | 06:15-06:30          | 9                    | 6                                 | 15                   | 12:15-12:30 | 52                   | 42    | 94    |                      |       |        |
|                                   | 12:30-12:45 | 1     | 2     | 3                          | 06:30-06:45          | 13                   | 13                                | 26                   | 12:30-12:45 | 45                   | 50    | 95    |                      |       |        |
|                                   | 12:45-01:00 | 1     | 1     | 2                          | 06:45-07:00          | 13                   | 15                                | 28                   | 12:45-01:00 | 47                   | 41    | 88    |                      |       |        |
|                                   | 01:00-01:15 | 2     | 0     | 2                          | 07:00-07:15          | 20                   | 12                                | 32                   | 01:00-01:15 | 62                   | 41    | 103   |                      |       |        |
|                                   | 01:15-01:30 | 1     | 1     | 2                          | 07:15-07:30          | 8                    | 18                                | 26                   | 01:15-01:30 | 53                   | 37    | 90    |                      |       |        |
|                                   | 01:30-01:45 | 0     | 0     | 0                          | 07:30-07:45          | 14                   | 22                                | 36                   | 01:30-01:45 | 57                   | 36    | 93    |                      |       |        |
|                                   | 01:45-02:00 | 0     | 2     | 2                          | 07:45-08:00          | 22                   | 29                                | 51                   | 01:45-02:00 | 47                   | 57    | 104   |                      |       |        |
|                                   | 02:00-02:15 | 1     | 1     | 2                          | 08:00-08:15          | 28                   | 19                                | 47                   | 02:00-02:15 | 43                   | 63    | 106   |                      |       |        |
|                                   | 02:15-02:30 | 3     | 1     | 4                          | 08:15-08:30          | 19                   | 15                                | 34                   | 02:15-02:30 | 53                   | 57    | 110   |                      |       |        |
|                                   | 02:30-02:45 | 1     | 0     | 1                          | 08:30-08:45          | 23                   | 27                                | 50                   | 02:30-02:45 | 58                   | 52    | 110   |                      |       |        |
|                                   | 02:45-03:00 | 0     | 0     | 0                          | 08:45-09:00          | 36                   | 27                                | 63                   | 02:45-03:00 | 50                   | 54    | 104   |                      |       |        |
|                                   | 03:00-03:15 | 0     | 0     | 0                          | 09:00-09:15          | 45                   | 29                                | 74                   | 03:00-03:15 | 46                   | 67    | 113   |                      |       |        |
|                                   | 03:15-03:30 | 0     | 1     | 1                          | 09:15-09:30          | 42                   | 20                                | 62                   | 03:15-03:30 | 44                   | 67    | 111   |                      |       |        |
|                                   | 03:30-03:45 | 0     | 0     | 0                          | 09:30-09:45          | 46                   | 23                                | 69                   | 03:30-03:45 | 55                   | 94    | 149   |                      |       |        |
|                                   | 03:45-04:00 | 1     | 0     | 1                          | 09:45-10:00          | 52                   | 37                                | 89                   | 03:45-04:00 | 40                   | 74    | 114   |                      |       |        |
|                                   | 04:00-04:15 | 0     | 0     | 0                          | 10:00-10:15          | 35                   | 24                                | 59                   | 04:00-04:15 | 34                   | 68    | 102   |                      |       |        |
|                                   | 04:15-04:30 | 0     | 1     | 1                          | 10:15-10:30          | 46                   | 26                                | 72                   | 04:15-04:30 | 32                   | 61    | 93    |                      |       |        |
|                                   | 04:30-04:45 | 0     | 2     | 2                          | 10:30-10:45          | 55                   | 28                                | 83                   | 04:30-04:45 | 28                   | 58    | 86    |                      |       |        |
|                                   | 04:45-05:00 | 1     | 1     | 2                          | 10:45-11:00          | 58                   | 36                                | 94                   | 04:45-05:00 | 26                   | 52    | 78    |                      |       |        |
|                                   | 05:00-05:15 | 2     | 3     | 5                          | 11:00-11:15          | 51                   | 46                                | 97                   | 05:00-05:15 | 28                   | 57    | 85    |                      |       |        |
|                                   | 05:15-05:30 | 1     | 7     | 8                          | 11:15-11:30          | 60                   | 39                                | 99                   | 05:15-05:30 | 41                   | 50    | 91    |                      |       |        |
|                                   | 05:30-05:45 | 2     | 1     | 3                          | 11:30-11:45          | 50                   | 38                                | 88                   | 05:30-05:45 | 41                   | 43    | 84    |                      |       |        |
|                                   | 05:45-06:00 | 3     | 4     | 7                          | 11:45-12:00          | 43                   | 38                                | 81                   | 05:45-06:00 | 27                   | 51    | 78    |                      |       |        |
|                                   |             |       |       |                            |                      |                      |                                   |                      |             |                      |       |       |                      |       |        |
| TWO COMPUTER PERIOD (05:00-09:00) |             |       |       | DIR 1                      | DIR 2                | TOTAL                | TWO COMPUTER PERIOD (15:00-19:00) |                      |             |                      | DIR 1 | DIR 2 | TOTAL                |       |        |
| AM - PEAK HR TIME                 |             |       |       | 106                        | 08:00 AM to 09:00 AM | 88                   | 194                               | PM - PEAK HR TIME    |             |                      |       | 185   | 03:00 PM to 04:00 PM | 467   |        |
| AM - K FACTOR (%)                 |             |       |       | 54.64                      | 45.36                | 100.00               | 37.99                             | 62.01                | 100.00      | PM - K FACTOR (%)    |       |       |                      | 62.01 | 100.00 |
| DIRECTIONAL PEAK                  |             |       |       | 08:00 AM to 09:00 AM       | 90                   | 07:45 AM to 08:45 AM | 185                               | 03:00 PM to 04:00 PM | 203         | 03:15 PM to 04:15 PM |       |       |                      |       |        |
| AM - PEAK HR VOLUME               |             |       |       | 106                        | 90                   | 100                  | PM - PEAK HR VOLUME               |                      |             |                      | 185   | 203   | 100                  |       |        |
|                                   |             |       |       |                            |                      |                      |                                   |                      |             |                      |       |       |                      |       |        |
| AM PERIOD (09:00-12:00)           |             |       |       | PM PERIOD (12:00-24:00)    |                      |                      |                                   |                      |             |                      |       |       |                      |       |        |
| TWO DIRECTIONAL PEAK              |             |       |       | TWO DIRECTIONAL PEAK       |                      |                      |                                   |                      |             |                      |       |       |                      |       |        |
| AM - PEAK HR TIME                 |             |       |       | 213                        | 11:00 AM to 12:00 PM | 162                  | 375                               | PM - PEAK HR TIME    |             |                      |       | 185   | 03:00 PM to 04:00 PM | 467   |        |
| AM - K FACTOR (%)                 |             |       |       | 8.28                       | 8.28                 | 100.00               | 10.75                             | 48.7                 | 100.00      | PM - K FACTOR (%)    |       |       |                      | 48.7  | 100.00 |
| AM - D (%)                        |             |       |       | 56.80                      | 43.20                | 100.00               | 37.99                             | 62.01                | 100.00      | PM - D (%)           |       |       |                      | 62.01 | 100.00 |
|                                   |             |       |       |                            |                      |                      |                                   |                      |             |                      |       |       |                      |       |        |
| NON-COMPUTER PERIOD (09:00-15:00) |             |       |       | 6-HR, 12-HR, 24-HR PERIODS |                      |                      |                                   |                      |             |                      |       |       |                      |       |        |
| AM 6-HR PERIOD (09:00-12:00)      |             |       |       | 776                        | 593                  | 1,369                | DIR 1                             |                      |             |                      | DIR 2 | TOTAL |                      |       |        |
| AM 12-HR PERIOD (09:00-12:00)     |             |       |       | 804                        | 632                  | 1,436                | DIR 1                             |                      |             |                      | DIR 2 | TOTAL |                      |       |        |
| AM 6-HR PERIOD (12:00-18:00)      |             |       |       | 1,098                      | 1,631                | 2,729                | DIR 1                             |                      |             |                      | DIR 2 | TOTAL |                      |       |        |
| PM 12-HR PERIOD (12:00-24:00)     |             |       |       | 1,463                      | 1,641                | 3,104                | DIR 1                             |                      |             |                      | DIR 2 | TOTAL |                      |       |        |
| 24 HOUR PERIOD                    |             |       |       | 2,264                      | 2,457                | 4,721                | DIR 1                             |                      |             |                      | DIR 2 | TOTAL |                      |       |        |
| PEAK HR VOLUME                    |             |       |       | 219                        | 229                  | 448                  | DIR 1                             |                      |             |                      | DIR 2 | TOTAL |                      |       |        |
| PEAK HR TIME                      |             |       |       | 01:00 PM to 02:00 PM       | 01:45 PM to 02:45 PM | 01:00 PM to 02:00 PM | DIR 1                             |                      |             |                      | DIR 2 | TOTAL |                      |       |        |
| PEAK HR VOLUME                    |             |       |       | 219                        | 229                  | 448                  | DIR 1                             |                      |             |                      | DIR 2 | TOTAL |                      |       |        |
| PEAK HR TIME                      |             |       |       | 01:00 PM to 02:00 PM       | 01:45 PM to 02:45 PM | 01:00 PM to 02:00 PM | DIR 1                             |                      |             |                      | DIR 2 | TOTAL |                      |       |        |
| PEAK HR VOLUME                    |             |       |       | 219                        | 229                  | 448                  | DIR 1                             |                      |             |                      | DIR 2 | TOTAL |                      |       |        |
| PEAK HR TIME                      |             |       |       | 01:00 PM to 02:00 PM       | 01:45 PM to 02:45 PM | 01:00 PM to 02:00 PM | DIR 1                             |                      |             |                      | DIR 2 | TOTAL |                      |       |        |
| PEAK HR VOLUME                    |             |       |       | 219                        | 229                  | 448                  | DIR 1                             |                      |             |                      | DIR 2 | TOTAL |                      |       |        |
| PEAK HR TIME                      |             |       |       | 01:00 PM to 02:00 PM       | 01:45 PM to 02:45 PM | 01:00 PM to 02:00 PM | DIR 1                             |                      |             |                      | DIR 2 | TOTAL |                      |       |        |
| PEAK HR VOLUME                    |             |       |       | 219                        | 229                  | 448                  | DIR 1                             |                      |             |                      | DIR 2 | TOTAL |                      |       |        |
| PEAK HR TIME                      |             |       |       | 01:00 PM to 02:00 PM       | 01:45 PM to 02:45 PM | 01:00 PM to 02:00 PM | DIR 1                             |                      |             |                      | DIR 2 | TOTAL |                      |       |        |
| PEAK HR VOLUME                    |             |       |       | 219                        | 229                  | 448                  | DIR 1                             |                      |             |                      | DIR 2 | TOTAL |                      |       |        |
| PEAK HR TIME                      |             |       |       | 01:00 PM to 02:00 PM       | 01:45 PM to 02:45 PM | 01:00 PM to 02:00 PM | DIR 1                             |                      |             |                      | DIR 2 | TOTAL |                      |       |        |
| PEAK HR VOLUME                    |             |       |       | 219                        | 229                  | 448                  | DIR 1                             |                      |             |                      | DIR 2 | TOTAL |                      |       |        |
| PEAK HR TIME                      |             |       |       | 01:00 PM to 02:00 PM       | 01:45 PM to 02:45 PM | 01:00 PM to 02:00 PM | DIR 1                             |                      |             |                      | DIR 2 | TOTAL |                      |       |        |
| PEAK HR VOLUME                    |             |       |       | 219                        | 229                  | 448                  | DIR 1                             |                      |             |                      | DIR 2 | TOTAL |                      |       |        |
| PEAK HR TIME                      |             |       |       | 01:00 PM to 02:00 PM       | 01:45 PM to 02:45 PM | 01:00 PM to 02:00 PM | DIR 1                             |                      |             |                      | DIR 2 | TOTAL |                      |       |        |
| PEAK HR VOLUME                    |             |       |       | 219                        | 229                  | 448                  | DIR 1                             |                      |             |                      | DIR 2 | TOTAL |                      |       |        |
| PEAK HR TIME                      |             |       |       | 01:00 PM to 02:00 PM       | 01:45 PM to 02:45 PM | 01:00 PM to 02:00 PM | DIR 1                             |                      |             |                      | DIR 2 | TOTAL |                      |       |        |
| PEAK HR VOLUME                    |             |       |       | 219                        | 229                  | 448                  | DIR 1                             |                      |             |                      | DIR 2 | TOTAL |                      |       |        |
| PEAK HR TIME                      |             |       |       | 01:00 PM to 02:00 PM       | 01:45 PM to 02:45 PM | 01:00 PM to 02:00 PM | DIR 1                             |                      |             |                      | DIR 2 | TOTAL |                      |       |        |
| PEAK HR VOLUME                    |             |       |       | 219                        | 229                  | 448                  | DIR 1                             |                      |             |                      | DIR 2 | TOTAL |                      |       |        |
| PEAK HR TIME                      |             |       |       | 01:00 PM to 02:00 PM       | 01:45 PM to 02:45 PM | 01:00 PM to 02:00 PM | DIR 1                             |                      |             |                      | DIR 2 | TOTAL |                      |       |        |
| PEAK HR VOLUME                    |             |       |       | 219                        | 229                  | 448                  | DIR 1                             |                      |             |                      | DIR 2 | TOTAL |                      |       |        |
| PEAK HR TIME                      |             |       |       | 01:00 PM to 02:00 PM       | 01:45 PM to 02:45 PM | 01:00 PM to 02:00 PM | DIR 1                             |                      |             |                      | DIR 2 | TOTAL |                      |       |        |
| PEAK HR VOLUME                    |             |       |       | 219                        | 229                  | 448                  | DIR 1                             |                      |             |                      | DIR 2 | TOTAL |                      |       |        |
| PEAK HR TIME                      |             |       |       | 01:00 PM to 02:00 PM       | 01:45 PM to 02:45 PM | 01:00 PM to 02:00 PM | DIR 1                             |                      |             |                      | DIR 2 | TOTAL |                      |       |        |
| PEAK HR VOLUME                    |             |       |       | 219                        | 229                  | 448                  | DIR 1                             |                      |             |                      | DIR 2 | TOTAL |                      |       |        |
| PEAK HR TIME                      |             |       |       | 01:00 PM to 02:00 PM       | 01:45 PM to 02:45 PM | 01:00 PM to 02:00 PM | DIR 1                             |                      |             |                      | DIR 2 | TOTAL |                      |       |        |
| PEAK HR VOLUME                    |             |       |       | 219                        | 229                  | 448                  | DIR 1                             |                      |             |                      | DIR 2 | TOTAL |                      |       |        |
| PEAK HR TIME                      |             |       |       | 01:00 PM to 02:00 PM       | 01:45 PM to 02:45 PM | 01:00 PM to 02:00 PM | DIR 1                             |                      |             |                      | DIR 2 | TOTAL |                      |       |        |
| PEAK HR VOLUME                    |             |       |       | 219                        | 229                  | 448                  | DIR 1                             |                      |             |                      | DIR 2 | TOTAL |                      |       |        |
| PEAK HR TIME                      |             |       |       | 01:00 PM to 02:00 PM       | 01:45 PM to 02:45 PM | 01:00 PM to 02:00 PM | DIR 1                             |                      |             |                      | DIR 2 | TOTAL |                      |       |        |
| PEAK HR VOLUME                    |             |       |       | 219                        | 229                  | 448                  | DIR 1                             |                      |             |                      | DIR 2 | TOTAL |                      |       |        |
| PEAK HR TIME                      |             |       |       | 01:00 PM to 02:00 PM       | 01:45 PM to 02:45 PM | 01:00 PM to 02:00 PM | DIR 1                             |                      |             |                      | DIR 2 | TOTAL |                      |       |        |
| PEAK HR VOLUME                    |             |       |       | 219                        | 229                  | 448                  | DIR 1                             |                      |             |                      | DIR 2 | TOTAL |                      |       |        |
| PEAK HR TIME                      |             |       |       | 01:00 PM to 02:00 PM       | 01:45 PM to 02:45 PM | 01:00 PM to 02:00 PM | DIR 1                             |                      |             |                      | DIR 2 | TOTAL |                      |       |        |
| PEAK HR VOLUME                    |             |       |       | 219                        | 229                  | 448                  | DIR 1                             |                      |             |                      | DIR 2 | TOTAL |                      |       |        |
| PEAK HR TIME                      |             |       |       | 01:00 PM to 02:00 PM       | 01:45 PM to 02:45 PM | 01:00 PM to 02:00 PM | DIR 1                             |                      |             |                      | DIR 2 | TOTAL |                      |       |        |
| PEAK HR VOLUME                    |             |       |       | 219                        | 229                  | 448                  | DIR 1                             |                      |             |                      | DIR 2 | TOTAL |                      |       |        |
| PEAK HR TIME                      |             |       |       | 01:00 PM to 02:00 PM       | 01:45 PM to 02:45 PM | 01:00 PM to 02:00 PM | DIR 1                             |                      |             |                      | DIR 2 | TOTAL |                      |       |        |
| PEAK HR VOLUME                    |             |       |       | 219                        | 229                  | 448                  | DIR 1                             |                      |             |                      | DIR 2 | TOTAL |                      |       |        |
| PEAK HR TIME                      |             |       |       | 01:00 PM to 02:00 PM       | 01:45 PM to 02:45 PM | 01:00 PM to 02:00 PM | DIR 1                             |                      |             |                      | DIR 2 | TOTAL |                      |       |        |
| PEAK HR VOLUME                    |             |       |       | 219                        | 229                  | 448                  | DIR 1                             |                      |             |                      | DIR 2 | TOTAL |                      |       |        |
| PEAK HR TIME                      |             |       |       | 01:00 PM to 02:00 PM       | 01:45 PM to 02:45 PM | 01:00 PM to 02:00 PM | DIR 1                             |                      |             |                      | DIR 2 | TOTAL |                      |       |        |
| PEAK HR VOLUME                    |             |       |       | 219                        | 229                  | 448                  | DIR 1                             |                      |             |                      | DIR 2 | TOTAL |                      |       |        |
| PEAK HR TIME                      |             |       |       | 01:00 PM to 02:00 PM       | 01:45 PM to 02:45 PM | 01:00 PM to 02:00 PM | DIR 1                             |                      |             |                      | DIR 2 | TOTAL |                      |       |        |
| PEAK HR VOLUME                    |             |       |       | 219                        | 229                  | 448                  | DIR 1                             |                      |             |                      | DIR 2 | TOTAL |                      |       |        |
| PEAK HR TIME                      |             |       |       | 01:00 PM to 02:00 PM       | 01:45 PM to 02:45 PM | 01:00 PM to 02:00 PM | DIR 1                             |                      |             |                      | DIR 2 | TOTAL |                      |       |        |
| PEAK HR VOLUME                    |             |       |       | 219                        | 229                  | 448                  | DIR 1                             |                      |             |                      | DIR 2 | TOTAL |                      |       |        |
| PEAK HR TIME                      |             |       |       | 01:00 PM to 02:00 PM       | 01:45 PM to 02:45 PM | 01:00 PM to 02:00 PM | DIR 1                             |                      |             |                      | DIR 2 | TOTAL |                      |       |        |
| PEAK HR VOLUME                    |             |       |       | 219                        | 229                  | 448                  | DIR 1                             |                      |             |                      | DIR 2 | TOTAL |                      |       |        |
| PEAK HR TIME                      |             |       |       | 01:00 PM to 02:00 PM       | 01:45 PM to 02:45 PM | 01:00 PM to 02:00 PM | DIR 1                             |                      |             |                      | DIR 2 | TOTAL |                      |       |        |
| PEAK HR VOLUME                    |             |       |       | 219                        | 229                  | 448                  | DIR 1                             |                      |             |                      | DIR 2 | TOTAL |                      |       |        |
| PEAK HR TIME                      |             |       |       | 01:00 PM to 02:00 PM       | 01:45 PM to 02:45 PM | 01:00 PM to 02:00 PM | DIR 1                             |                      |             |                      | DIR 2 | TOTAL |                      |       |        |
| PEAK HR VOLUME                    |             |       |       | 219                        | 229                  | 448                  | DIR 1                             |                      |             |                      | DIR 2 | TOTAL |                      |       |        |
| PEAK HR TIME                      |             |       |       | 01:00 PM to 02:00 PM       | 01:45 PM to 02:45 PM | 01:00 PM to 02:00 PM | DIR 1                             |                      |             |                      | DIR 2 | TOTAL |                      |       |        |
| PEAK HR VOLUME                    |             |       |       | 219                        | 229                  | 448                  | DIR 1                             |                      |             |                      | DIR 2 | TOTAL |                      |       |        |
| PEAK HR TIME                      |             |       |       | 01:00 PM to 02:00 PM       | 01:45 PM to 02:45 PM | 01:00 PM to 02:00 PM | DIR 1                             |                      |             |                      | DIR 2 | TOTAL |                      |       |        |
| PEAK HR VOLUME                    |             |       |       | 219                        | 229                  | 448                  | DIR 1                             |                      |             |                      | DIR 2 | TOTAL |                      |       |        |
| PEAK HR TIME                      |             |       |       | 01:00 PM to 02:00 PM       | 01:45 PM to 02:45 PM | 01:00 PM to 02:00 PM | DIR 1                             |                      |             |                      | DIR 2 | TOTAL |                      |       |        |
| PEAK HR VOLUME                    |             |       |       | 219                        | 229                  | 448                  | DIR 1                             |                      |             |                      | DIR 2 | TOTAL |                      |       |        |
| PEAK HR TIME                      |             |       |       | 01:00 PM to 02:00 PM       | 01:45 PM to 02:45 PM | 01:00 PM to 02:00 PM | DIR 1                             |                      |             |                      | DIR 2 | TOTAL |                      |       |        |
| PEAK HR VOLUME                    |             |       |       | 219                        | 229                  | 448                  | DIR 1                             |                      |             |                      | DIR 2 | TOTAL |                      |       |        |
| PEAK HR TIME                      |             |       |       | 01:00 PM to 02:00 PM       | 01:45 PM to 02:45 PM | 01:00 PM to 02:00 PM | DIR 1                             |                      |             |                      | DIR 2 | TOTAL |                      |       |        |
| PEAK HR VOLUME                    |             |       |       | 219                        | 229                  | 448                  | DIR 1                             |                      |             |                      | DIR 2 | TOTAL |                      |       |        |
| PEAK HR TIME                      |             |       |       | 01:00 PM to 02:00 PM       | 01:45 PM to 02:45 PM | 01:00 PM to 02:00 PM | DIR 1                             |                      |             |                      | DIR 2 | TOTAL |                      |       |        |
| PEAK HR VOLUME                    |             |       |       | 219                        | 229                  | 448                  | DIR 1                             |                      |             |                      | DIR 2 | TOTAL |                      |       |        |
| PEAK HR TIME                      |             |       |       | 01:00 PM to 02:00 PM       | 01:45 PM to 02:45 PM | 01:00 PM to 02:00 PM | DIR 1                             |                      |             |                      | DIR 2 | TOTAL |                      |       |        |
| PEAK HR VOLUME                    |             |       |       | 219                        | 229                  | 448                  | DIR 1                             |                      |             |                      | DIR 2 | TOTAL |                      |       |        |
| PEAK HR TIME                      |             |       |       | 01:00 PM to 02:00 PM       | 01:45 PM to 02:45 PM | 01:00 PM to 02:00 PM | DIR 1                             |                      |             |                      | DIR 2 | TOTAL |                      |       |        |
| PEAK HR VOLUME                    |             |       |       | 219                        | 229                  | 448                  | DIR 1                             |                      |             |                      | DIR 2 | TOTAL |                      |       |        |
| PEAK HR TIME                      |             |       |       | 01:00 PM to 02:00 PM       | 01:45 PM to 02:45 PM | 01:00 PM to 02:00 PM | DIR 1                             |                      |             |                      | DIR 2 | TOTAL |                      |       |        |
| PEAK HR VOLUME                    |             |       |       | 219                        | 229                  | 448                  | DIR 1                             |                      |             |                      | DIR 2 | TOTAL |                      |       |        |
| PEAK HR TIME                      |             |       |       | 01:00 PM to 02:00 PM       | 01:45 PM to 02:45 PM | 01:00 PM to 02:00 PM | DIR 1                             |                      |             |                      | DIR 2 | TOTAL |                      |       |        |
| PEAK HR VOLUME                    |             |       |       | 219                        | 229                  | 448                  | DIR 1                             |                      |             |                      | DIR 2 | TOTAL |                      |       |        |
| PEAK HR TIME                      |             |       |       | 01:00 PM to 02:00 PM       | 01:45 PM to 02:45 PM | 01:00 PM to 02:00 PM | DIR 1                             |                      |             |                      | DIR 2 | TOTAL |                      |       |        |
| PEAK HR VOLUME                    |             |       |       | 219                        | 229                  | 448                  | DIR 1                             |                      |             |                      | DIR 2 | TOTAL |                      |       |        |
| PEAK HR TIME                      |             |       |       | 01:00 PM to 02:00 PM       | 01:45 PM to 02:45 PM | 01:00 PM to 02:00 PM | DIR 1                             |                      |             |                      | DIR 2 | TOTAL |                      |       |        |
| PEAK HR VOLUME                    |             |       |       | 219                        | 229                  | 448                  | DIR 1                             |                      |             |                      | DIR 2 | TOTAL |                      |       |        |
| PEAK HR TIME                      |             |       |       | 01:00 PM to 02:00 PM       | 01:45 PM to 02:45 PM | 01:00 PM to 02:00 PM | DIR 1                             |                      |             |                      | DIR 2 | TOTAL |                      |       |        |
| PEAK HR VOLUME                    |             |       |       | 219                        | 229                  | 448                  | DIR 1                             |                      |             |                      | DIR 2 | TOTAL |                      |       |        |
| PEAK HR TIME                      |             |       |       | 01:00 PM to 02:00 PM       | 01:45 PM to 02:45 PM | 01:00 PM to 02:00 PM | DIR 1                             |                      |             |                      | DIR 2 | TOTAL |                      |       |        |
| PEAK HR VOLUME                    |             |       |       | 219                        | 229                  | 448                  | DIR 1                             |                      |             |                      | DIR 2 | TOTAL |                      |       |        |
| PEAK HR TIME                      |             |       |       | 01:00 PM to 02:00 PM       | 01:45 PM to 02:45 PM | 01:00 PM to 02:00 PM | DIR 1                             |                      |             |                      | DIR 2 | TOTAL |                      |       |        |
| PEAK HR VOLUME                    |             |       |       | 219                        | 229                  | 448                  | DIR 1                             |                      |             |                      | DIR 2 | TOTAL |                      |       |        |
| PEAK HR TIME                      |             |       |       | 01:00 PM to 02:00 PM       | 01:45 PM to 02:45 PM | 01:00 PM to 02:00 PM | DIR 1                             |                      |             |                      | DIR 2 | TOTAL |                      |       |        |
| PEAK HR VOLUME                    |             |       |       | 219                        | 229                  | 448                  | DIR 1                             |                      |             |                      | DIR 2 | TOTAL |                      |       |        |
| PEAK HR TIME                      |             |       |       | 01:00 PM to 02:00 PM       | 01:45 PM to 02:45 PM | 01:00 PM to 02:00 PM | DIR 1                             |                      |             |                      | DIR 2 | TOTAL |                      |       |        |
| PEAK HR VOLUME                    |             |       |       | 219                        | 229                  | 448                  | DIR 1                             |                      |             |                      | DIR 2 | TOTAL |                      |       |        |
| PEAK HR TIME                      |             |       |       | 01:00 PM to 02:00 PM       | 01:45 PM to 02:45 PM | 01:00 PM to 02:00 PM | DIR 1                             |                      |             |                      | DIR 2 | TOTAL |                      |       |        |
| PEAK HR VOLUME                    |             |       |       | 219                        | 229                  | 448                  | DIR 1                             |                      |             |                      | DIR 2 | TOTAL |                      |       |        |
| PEAK HR TIME                      |             |       |       | 01:00 PM to 02:00 PM       | 01:45 PM to 02:45 PM | 01:00 PM to 02:00 PM | DIR 1                             |                      |             |                      | DIR 2 | TOTAL |                      |       |        |
| PEAK HR VOLUME                    |             |       |       | 219                        | 229                  | 448                  | DIR 1                             |                      |             |                      | DIR 2 | TOTAL |                      |       |        |
| PEAK HR TIME                      |             |       |       | 01:00 PM to 02:00 PM       | 01:45 PM to 02:45 PM | 01:00 PM to 02:00 PM | DIR 1                             |                      |             |                      | DIR 2 | TOTAL |                      |       |        |
| PEAK HR VOLUME                    |             |       |       | 219                        | 229                  | 448                  | DIR 1                             |                      |             |                      | DIR 2 | TOTAL |                      |       |        |
| PEAK HR TIME                      |             |       |       | 01:00 PM to 02:00 PM       | 01:45 PM to 02:45 PM | 01:00 PM to 02:00 PM | DIR 1                             |                      |             |                      | DIR 2 | TOTAL |                      |       |        |
| PEAK HR VOLUME                    |             |       |       | 219                        | 229                  | 448                  | DIR 1                             |                      |             |                      | DIR 2 | TOTAL |                      |       |        |
| PEAK HR TIME                      |             |       |       | 01:00 PM to 02:00 PM       | 01:45 PM to 02:45 PM | 01:00 PM to 02:00 PM |                                   |                      |             |                      |       |       |                      |       |        |



## Appendix G



## I. INTRODUCTION

### A. Project Location and Description

Haena State Park is located on the north shore of Kauai, at the end of Kuhio Highway. It is bounded by the Na Pali Cliffs to the west, the base of Makana to the south, Limahuli Stream to the east and the Pacific Ocean to the north.

There are three (3) TMK parcels within the Park boundary. The parcel north of Kuhio Highway is identified by TMK 5-9-008:001 and encompasses approximately 52 acres. South of Kuhio Highway, parcels TMK 5-9-001:022 and 025 encompass approximately 180 acres.

The parcels identified by TMK 5-9-008:001 and 5-9-001:022, are owned by the State of Hawaii. The third parcel, TMK 5-9-001:025 contains the Kauluapaoa Heiau and Keahualaka hula platform, is owned by the County of Kauai and managed by the State Historic Preservation Division (SHPD), Department of Land and Natural Resources (DLNR). Haena State Park utilizes approximately 65.7 acres of the coastal area for recreational uses.

The Park experiences heavy usage throughout the week and is considered one of the highest utilized parks in the State. It is used by the public for picnics, snorkeling, swimming and hiking. It is estimated approximately 708,400 visitors experienced the many geological and cultural features of this unique park in 2007.

## II. EXISTING SITE CONDITIONS

### A. Soils

Based on Soil Survey of Islands of Kauai, Oahu, Maui, Molokai, and Lanai, State of Hawaii, five soil classes are present at Haena State Park. Its western coastline consists of Mokuleia fine sandy loam (Mr), while its northern coast is defined as Beach (BS). Marsh (MZ), Hanalei silty clay (HnA) and Hanalei silty clay with deep water table (HrB) are present further inland.

Beach soil extends up to 150 feet inland from the northern coast. This soil consists of light-colored sands resulting from the breakdown of coral and seashells.

Mokuleia fine sandy loam extends up to 800 feet inland from the western coast. Its surface layer contains 16 inches of fine sandy loam and its subsurface contains 34 to 48 inches of single-grain and loamy sand. This soil exhibits moderately rapid permeability in its surface layer and rapid permeability in its subsurface.

Marsh soil is present approximately 800 feet inland from the western coast of Haena State park. This soil type covers small, low-elevation areas where water

stands at the ground surface. Grasses, bulrushes and other herbaceous plants thrive in these areas.

Hanalei silty clay (HnA) soil is present in the western and inland portions of the Park. Its surface layer contains 13 inches of dark-gray, silty clay, of which the top 10 inches contain brown and red mottles. Its subsoil contains 13 inches of dark-gray and dark grayish-brown silty clay loam. The water table in this soil type is typically less than 3 feet below the ground surface. This soil experiences moderate permeability and is strongly acidic in its surface layer.

Hanalei silty clay with deep water table is present in the eastern and inland portions of the Park. This soil is similar to Hanalei silty clay; however it contains fewer mottles and is located in areas where the water table is greater than 3 feet below the ground surface.

Soil test borings and percolation tests were not performed specifically for this preliminary engineering report. Instead, the previously performed percolation test results at the existing comfort station are referenced to preliminarily size the disposal fields. A percolation rate of 4.14 minutes/inch was obtained in December 2009 for the constructed wetland project at the existing Ke'e comfort station.

### B. Topography

The ground elevation in the area north of Kuhio Highway ranges from approximately 70.0 feet above mean sea level (MSL) at the entrance to the Park to sea level at the coast line. This area is where the majority of recreational and cultural activity and usage is currently occurring as the area is relatively level.

The ground elevation south of the Kuhio Highway rises sharply with steep slopes and forms the cliffs of Na Pali, beyond the shoulder of the roadway.

The 100-year base flood elevation ranges from sea level to elevation 24.0 feet above MSL.

### C. Site Access, Roadways, Parking and Safety

Kuhio Highway is owned by the State of Hawaii, Department of Transportation (DOT) and provides the only access to and through Haena State Park. Prior to entering the Park, Kuhio Highway is a two lane roadway with gravel and AC pavement shoulders. Entry to the park requires crossing Limahuli Stream over a single lane, 10-foot wide x 12-foot long x 12-inch thick concrete bridge. Past the bridge, Kuhio Highway again becomes a two lane road, measuring approximately 24 feet wide, and continues approximately 0.5 miles to the end of the park at Ke'e Beach. The actual pavement structure within the roadway is not known, but is assumed to be a minimum of 2-1/2 inches of AC pavement over 8 inches of base course. It is in fair condition with some cracking and potholes in concentrated areas.



The paved shoulder lanes were added in 1985 under DOT Project No. 560A-01-86M, which resurfaced approximately 1.43 miles of Kuhio Highway. The guardrails were added in 2002 under DOT Project No. 560A-03-99 because the steep slopes on either side of Kuhio Highway and winding roads posed a threat to driver's safety. Kuhio Highway continues in an east-west direction through the southern portion of the Park until its termination at Ke'e Beach. The 2.0 foot shoulder pavement structure consists of a minimum of 1.5 inches of AC pavement over 6 inches of base course.



Figure 1: Haena State Park Entrance Crossing Limahuli Stream

Currently, pedestrian access to Haena State Park is limited. Within the Park, there are no pedestrian walkways along Kuhio Highway. Pedestrians typically walk on the side of the road or in the paved shoulder lane. However, there are many areas where rock slopes, vegetation, and/or guard rails force pedestrians to walk in the paved vehicular lanes.

Although a few hiking trails are scattered around the south areas of the site, there is only one marked pedestrian trail along the coast area traversing within the Park. It is an approximately 10-foot wide dirt trail beginning at the end of Kuhio Highway. The path is delineated with logs. The trail was intended to lead to other areas of the Park along the shoreline, but overgrown vegetation and fallen trees have blocked the path beyond the existing comfort station. Observations reveal visitors tend to walk in a direct path between the end of the paved road and the beach, in lieu of the dirt trail and do not venture into the overgrown areas.

Bicyclists encounter the same dangers as pedestrians due to similar reasons. There are currently no designated biking lanes or pathways in Haena State Park.

There are two authorized parking areas within Haena State Park, one approximately 800 feet from the entrance to the Park and one at the end of Kuhio

Highway. The parking lot near the entrance to the Park consists of a dirt and gravel clearing, approximately 30,000 square feet (sf) in area with a 12-foot wide driveway entrance from Kuhio Highway. The parking area is approximately 3.0 to 4.0 feet below the highway. Parking stall markings are non-existent and their absence causes inefficient usage of the designated parking areas. The parking area near Ke'e Beach is off-street parking, consisting of an approximately 10-foot wide cleared dirt strip to the north and south of Kuhio Highway. Although two parking areas are available, there is a shortage of parking stalls during high usage. Limited parking exacerbates the pedestrian and bicyclist safety problem. Currently, "No Parking" signs are present throughout Haena State Park along Kuhio Highway. However as parking fills up within the designated areas, visitors disregard posted signs and park in "No Parking" zones along the shoulder lanes. These vehicles force pedestrians to walk in vehicular lanes.

A helicopter landing area is currently located to the east of the gravel parking lot. The area is grassed, fenced and well maintained. Typically, it is used for emergency rescues and fires.

#### D. Drainage and Stormwater Management

The coastal areas of Haena State Park are located within the 100 year flood plain. Also, most of the Park is classified as estuarine and marine wetlands.

The only perennial stream within the Park is Limahuli Stream, but during periods of heavy rainfall, there are several intermittent streams flowing north through natural swales in the Park. During these times, storm water runoff is typically full of sediment, soil, stream fish, logs, plants and other debris material. The runoff creates a muddy plume at the stream outfall, but is part of the naturally occurring drain pattern in Haena State Park.

Drainage improvements on the site consist of five 18-inch RCP drain culverts that allow storm water to cross beneath Kuhio Highway from south to north. It is estimated approximately 56.8 cubic feet per second (cfs) and 37.9 cfs of runoff from approximately 14.2 acres above Kuhio Highway flows down Maunahou into the five culverts, during the 10-year and 2-year storm, respectively. See Appendix A for drainage calculations. Three 3'x4' drain inlets are located on the south edge of the roadway to collect runoff originating from the south and discharge through endwalls located along the north edge of Kuhio Highway. The other two culverts have concrete headwalls located on the south edge of the road and discharge through endwalls located immediately north of Kuhio Highway. The drain culverts satisfy the requirements set forth in the County of Kauai Department of Public Works Storm Drainage Standard.

The remainder of the site discharges stormwater runoff directly into the Pacific Ocean. It is estimated that approximately 7,300 cfs of runoff flows directly to the ocean during a 50-year storm. This includes the runoff from the west end of Maunahou that flows over Kuhio Highway and the entire area of the Park below Kuhio Highway. During heavy rain storms the entire Park is inundated with rushing waters from this surge of rainwater. The existing drainage improvements

do not have the capacity and were not designed to handle the larger storm events.



Figure 2: Typical Existing Drain Inlet along Kuhio Highway

Figure 3: Typical Existing Drain Outlet along Kuhio Highway with 3 Water Line and Telephone Lines

#### E. Water System

##### 1. Potable Water

The Kauai Department of Water provides potable water to the site through a 4-inch PVC water line that terminates at the entrance to the Park with a 1-inch water meter (Water Meter No. 083000140). Water is gravity fed from a 0.1 million gallon (MG) reservoir 1.1 miles away, located at ground elevation 126.5 feet above MSL. The spillway elevation is at 144 feet above MSL. In 1996, a standpipe pressure test was conducted by the Kauai Department of Water near Limahuli Stream. The test revealed a static pressure of 27 pounds per square inch (psi) and a 6 psi residual pressure at 103 gallons per minute (gpm) on the 4-inch pipe.

Within Haena State Park, a 3-inch galvanized iron pipe runs along the edge of Kuhio Highway in an east-west direction until its terminus at the Ke'e beach comfort station. Most of the 3-inch galvanized iron pipe within the Park is installed above ground. Buried pipe depths are unknown, but assumed to have a minimum cover of 3.0 feet. Existing 2-inch and 1-inch water laterals are assumed to have 1.5 feet of cover. At the parking lot entrance, the 3-inch water line is embedded under 1-inch of AC pavement.

Recorded water usage from October 2003 to November 2006 is documented to average 2,125 gallons per day (gpd).

At the comfort station, the existing water fixtures are currently being replaced under DLNR Job No. H10C663A with the following:

1. 2" PVC water lateral serving 3 water closets, 1 urinal, 2 lavatories, 1 drinking fountain with a drywell, and 2 hose bibs
2. 1" PVC water lateral serving an outdoor shower

These improvements were under construction in September 2008, but have since been completed. It is anticipated these new fixtures will decrease water demands by 4 gpm.



Figure 4: Ke'e Beach Comfort Station and Existing Leach Field Location

There is no fire protection water system within the Park. If needed, bucketing seawater is used. The last fire hydrant/standpipe on the potable water system is outside of the Park, 75 feet away.

##### 2. Non-Potable Water

A non-potable, irrigation, gravity fed HDPE pipe diverts an average of 760,000 gpd of water from Limahuli Stream. The diversion was installed south of Kuhio Highway and discharges into the taro patches north of Kuhio Highway and west of the parking lot. The irrigation water line begins as an 8-inch HDPE line at elevation 95.9 feet above MSL and transitions to a 6-inch HDPE line at elevation 57.5 feet above MSL. It crosses Kuhio Highway through one of the 18-inch RCP drain pipes.

#### F. Wastewater System

The original comfort station at Ke'e Beach was constructed in 1979 under DLNR Job No. 54-KP-11. It consisted of 3 water closets, 1 urinal and 2 lavatories. These fixtures drained into a 6.0 to 8.0 foot diameter cesspool, approved by DOH.

In 2001, the cesspool was replaced by a 2,500 gallon septic tank and approximately 2,700 square foot (sf) leach field located to the north and east of the comfort station. Record drawings for the construction of the individual wastewater system replacement were not available.

In 2008, the existing comfort station was demolished and replaced, under DLNR Project No. H10C663A. The new comfort station retains the same fixture count as its predecessor; 3 water closets, 1 urinal and 2 lavatories, which is estimated to generate 2,016 gpd.

The outdoor shower is located to the south of the comfort station. Greywater from the showers is allowed to drain and infiltrate into the surrounding soils.

In the Fall of 2010, the wastewater system for Ke'e Beach comfort station will be modified and upgraded to add a subsurface constructed wetland to further treat and improve water quality of the wastewater before discharging into the ground, at the request of the community. The planned system consists of 4-inch diversion valves and piping; 2-1,500 gallon primary treatment fiberglass tanks with battery-operated alarm control and panel; 968 sf of constructed wetland and 1,358 sf of infiltration field and appurtenances. The existing septic tank and leach field will continue to serve as an emergency backup system in the event the constructed wetlands system goes down.

Electric power is currently not available anywhere within Haena State Park and has been a limiting factor in the development of other wastewater treatment options.

In addition to the existing wastewater system for the comfort station, an abandoned cesspool was found at the old house site near Limahuli Stream. The existing Allerton House and Caretaker's cottage should also have abandoned cesspool(s). If any of these facilities are renovated the wastewater systems should also be upgraded or abandoned completely.

The comfort station renovation drawings call for the installation of a 30-inch diameter drywell to service a relocated drinking fountain near Ke'e beach. This drywell was not constructed as of September 2008.

#### **G. Electrical and Communication**

There is no electrical service currently available on-site. Service stops at the entry to the Park.

A ¾-inch telephone line runs along the same alignment as the 3-inch water line. It services a payphone and an emergency phone at the end of the Park, near the existing comfort station.

#### **H. Solid Waste**

Trash receptacles and recycle bins are available and maintained in the Ke'e beach area.

### **III. MASTER PLAN IMPROVEMENTS**

#### **A. Site Access, Roadways, Parking and Safety**

The Master Plan greatly improves the safety and experience of the Park for visitors by closing down Kuhio Highway beyond the existing parking lot. By allowing only emergency and maintenance vehicles beyond this point, pedestrians and bicycles can safely navigate the Park and enjoy its beauty without having to co-exist with vehicular traffic.

The proposed Plan also provided for a delineated parking areas and controlled access. The existing parking lot should be raised, leveled, stabilized and resurfaced with a pervious, geogrid surface to allow for drainage while not increasing runoff. It should be striped to maximize parking spaces and control traffic flow.

Well marked, stabilized pedestrian trails are proposed throughout the Park to provide access and visual appreciation to cultural sites, while protecting these significant sites from being disturbed. These trails, like the parking lot should be stabilized with a geogrid base.

The helicopter pad will remain where currently sited. No planned improvements are anticipated.

#### **B. Recommended Areas for Development**

Areas recommended for development are based on avoiding existing low-lying and coastal areas subject to flooding and utilizing areas where the terrain is sloped less than 10% to avoid massive excavation. These areas include:

- 1.) The 100-year flood zone, which reaches elevations of 18 feet along the coastline, and
- 2.) The coastal 10-year flood zone with wave velocity hazards, which reaches elevations of 21 feet.

In addition, interior areas with elevations less than 15 feet above mean sea level and areas adjacent to stream flood plain zones were eliminated.

However, the location of Limahuli stream within the previous Master plan and on TMK maps differs from the location shown on FEMA maps, the Kauai Online Hazard Assessment (KOHA) database, and the Hawaii National Flood Insurance Program (NFIP) database. The Department of Land and Natural Resources (DLNR) is currently working out this issue with the Environmental Protection Agency (EPA) Region 9. Until this issue is resolved, it is not recommended that development be considered in the vicinity of Limahuli Stream.

Figure 5 shows the limited area where these conditions apply and development can occur.



**E. Wastewater System**

The proposed wastewater system is discussed under a separate cover, Wastewater Preliminary Engineering Report for Haena State Park Master Plan, dated November 2010. Recommendations are summarized as follows:

During the community meetings, it was agreed that any proposed wastewater system should treat the wastewater effluent for potential reuse, to protect the grounds and surrounding environment of the Park from any on-site disposal. It is believed by being good stewards of the Park, the environment will be preserved for future generations.

Therefore, at a minimum, aerobic treatment units with absorption beds should be considered. Beyond this, water resource management and reuse options should be seriously taken into consideration during design.

Also discussed at the community meeting were the following to be considered in the design:

1. Providing R-2 water quality effluent at the Orientation and Cultural Center, with additional treatment for reuse.
2. Placing the absorption bed under the parking lot to provide separation of effluent from ground water and avoid contamination of the loi patches.
3. Providing aeration to the existing constructed wetlands primary treatment tanks through the use of a photovoltaic system.
4. Considering compost toilets only for low usage areas, if at all.

**F. Electrical and Communication**

Electrical service currently terminates at the entrance to Haena State Park. In order to provide electrical service to the new Orientation and Cultural Center, approximately 1,000 feet of overhead electrical line must be installed. Kauai Island Utility Cooperative (KIUC) provided a budgetary construction cost of \$33,000 to install 1,000 feet of 1-phase, 2-wire primary conductor that will service the Orientation and Cultural Center (cost is KIUC cost only and does not include connections to the building). 3-phase service terminates at Hanalei and is not feasible for this project.

Due to the winding nature of Kuhio Highway, overhead electrical poles will require anchoring at all corners. Easements will need to be granted to KIUC before the line extension can be executed.

We recommend overhead electrical power be extended from the Park entrance to the Orientation and Cultural Center. Beyond that point, photovoltaic systems and other sustainable power sources should be utilized.

**APPENDIX A  
CALCULATIONS**



# Kennedy/Jenks Consultants

By Michael Bungcayao Date 11/16/10 Project Haena State Park MP Project No. 1000711\*00

Checked By Ramon Sera Date 11/17/10 Sheet 1 3

## Find:

Flow entering the five (5) existing culverts, crossing Kuhio Highway within Haena State Park (2-year, 1-hour storm and 10-year, 1-hour storm)

## References:

- County of Kauai – Department of Public Works – Storm Drainage Standard, February 1972
- County of Kauai – Department of Public Works – Storm Drainage Standard, July 2001\*

\*Section references within calculations refer to the July 2001 edition unless otherwise noted.

## Assumptions:

- Run-Off coefficients (Attachment 2) were calculated from the February 1972 version for a conservative, representative estimate.
- Assume watercourse slope = 50%
- Intensity of the 10-year storm was calculated from the February 1972 version. Intensity of the 10-year storm not provided in Reference 2.

## Calculation:

Drainage Area = 14.17 Acres (Local Drainage System) [§ 1.7(m)]  
Although  $T_m = 2$  years per Reference 2, [§ 3.3(c)(1)]  
Q will be calculated for both  $T_m = 2$  years and  $T_m = 10$  years  
Also, Rational Method shall be used (Q = CIA) [§ 3.3(d)(1)]  
Where:  
Q = Flow Rate, in cubic feet per second  
C = Runoff Coefficient  
I = Rainfall Intensity, in inches per hour for a duration equal to time of concentration  
A = Drainage Area, in acres

Run-Off Coefficient, C (Attachment 2): [See Assumption 1]

For all zones –

|                                     |      |
|-------------------------------------|------|
| Moderate Infiltration               | 0.07 |
| Extreme Relief                      | 0.08 |
| Good Vegetal Cover                  | 0.03 |
| Agricultural                        | 0.15 |
| Total C = 0.07 + 0.08 + 0.03 + 0.15 |      |
| = 0.33                              |      |

Area, A (Attachment 1 and 1A):

|                                       |
|---------------------------------------|
| Zone 1 Area = 3.43 Acres              |
| Zone 2 Area = 4.05 Acres              |
| Zone 3 Area = 2.55 Acres              |
| Zone 4 Area = 1.76 Acres              |
| Zone 5 Area = 2.38 Acres              |
| Total Area = 3.43+4.05+2.55+1.76+2.38 |
| = 14.17 Acres                         |

Intensity, I: [§ 4.4.3]

Strip Length –

|                             |      |
|-----------------------------|------|
| Zone 1 Strip Length = 1,251 | Feet |
| Zone 2 Strip Length = 1,405 | Feet |
| Zone 3 Strip Length = 824   | Feet |
| Zone 4 Strip Length = 1,066 | Feet |
| Zone 5 Strip Length = 742   | Feet |

# Kennedy/Jenks Consultants

By Michael Bungcayao Date 11/16/10 Project Haena State Park MP Project No. 1000711\*00

Checked By Ramon Sera Date 11/17/10 Sheet 2 3

For All Zones –

Using Plate 1, (Attachment 3) –

First 300 feet of strip length, use *Forest with Heavy Ground Litter and Meadow*

Remaining Length, use *Grassed Waterway*

Velocity for first 300 feet = 1.8 feet per second

Velocity for remaining length = 11 feet per second

Time of Concentration,  $T_c$ :

Zone 1  $T_c = \frac{300 \text{ ft}}{1.8 \text{ fps}} + \frac{1,251 \text{ ft} - 300 \text{ ft}}{11 \text{ fps}} = 253 \text{ seconds}$

Zone 2  $T_c = \frac{300 \text{ ft}}{1.8 \text{ fps}} + \frac{1,405 \text{ ft} - 300 \text{ ft}}{11 \text{ fps}} = 267 \text{ seconds}$

Zone 3  $T_c = \frac{300 \text{ ft}}{1.8 \text{ fps}} + \frac{824 \text{ ft} - 300 \text{ ft}}{11 \text{ fps}} = 214 \text{ seconds}$

Zone 4  $T_c = \frac{300 \text{ ft}}{1.8 \text{ fps}} + \frac{1,066 \text{ ft} - 300 \text{ ft}}{11 \text{ fps}} = 236 \text{ seconds}$

Zone 5  $T_c = \frac{300 \text{ ft}}{1.8 \text{ fps}} + \frac{742 \text{ ft} - 300 \text{ ft}}{11 \text{ fps}} = 207 \text{ seconds}$

\*Minimum  $T_c = 300$  seconds (5 minutes)

Therefore for all zones,  $T_c = 5$  minutes

For All Zones –

Using Plate 2, (Attachment 3)

Intensity correction factor = 2.7

Intensity, I –

From Plate 3, (Attachment 4)

Intensity of 1-hr Rainfall for a 2 year storm = 3 inches

2-year storm corrected intensity = 3 inches \* 2.7  
= 8.1 inches

From Plate 1, (Attachment 4A)

Intensity of 1-hr Rainfall for a 10 year storm = 4.5 inches

10-year storm corrected intensity = 4.5 inches \* 2.7  
= 12.2 inches

Flow Rate, Q = CIA

Zone 1, 2-year storm flow rate =  $0.33 * 8.1 * 3.43$   
= 9.2 cubic feet per second

Zone 2, 2-year storm flow rate =  $0.33 * 8.1 * 4.05$   
= 10.8 cubic feet per second

Zone 3, 2-year storm flow rate =  $0.33 * 8.1 * 2.55$   
= 6.8 cubic feet per second

Zone 4, 2-year storm flow rate =  $0.33 * 8.1 * 1.76$   
= 4.7 cubic feet per second

Zone 5, 2-year storm flow rate =  $0.33 * 8.1 * 2.38$   
= 6.4 cubic feet per second

2-year, 1 hour storm – Total Flow in all 5 Zones =  $9.2 + 10.8 + 6.8 + 4.7 + 6.4$  cubic feet per second  
= 37.9 cubic feet per second

**Kennedy/Jenks Consultants**

By Michael Bungcayao Date 11/16/10 Project Haena State Park MP Project No. 1000711\*00

Checked By Ramon Sera Date 11/17/10 Sheet 3 3

Zone 1, 10-year flow rate =  $0.33 * 12.15 * 3.43$   
= 13.8 cubic feet per second

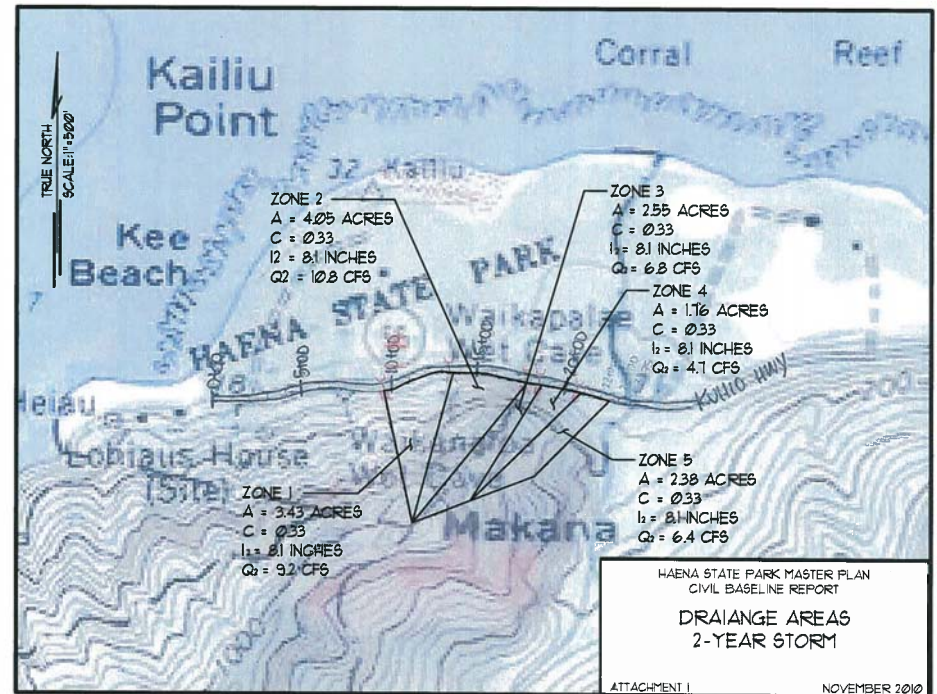
Zone 2, 10-year flow rate =  $0.33 * 12.15 * 4.05$   
= 16.2 cubic feet per second

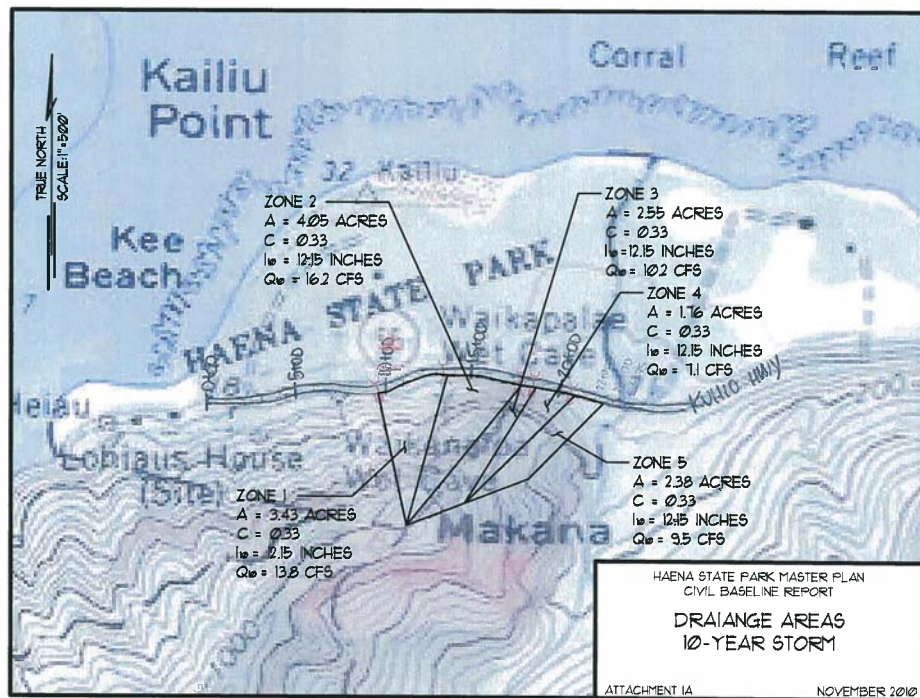
Zone 3, 10-year flow rate =  $0.33 * 12.15 * 2.55$   
= 10.2 cubic feet per second

Zone 4, 10-year flow rate =  $0.33 * 12.15 * 1.76$   
= 7.1 cubic feet per second

Zone 5, 10-year flow rate =  $0.33 * 12.15 * 2.38$   
= 9.5 cubic feet per second

10-year, 1 hour storm – Total Flow in all 5 Zones =  $13.8 + 16.2 + 10.2 + 7.1 + 9.5$  cubic feet per second  
= 56.8 cubic feet per second





**Table 1**

GUIDE FOR THE DETERMINATION OF RUNOFF COEFFICIENTS FOR BUILT-UP AREAS\*

| WATERSHED CHARACTERISTICS | EXTREME                       | HIGH                        | MODERATE                     | LOW                       |
|---------------------------|-------------------------------|-----------------------------|------------------------------|---------------------------|
| INFILTRATION              | NEGLIGIBLE<br>0.20            | SLOW<br>0.14                | MEDIUM<br>0.07               | HIGH<br>0.0               |
| RELIEF                    | STEEP<br>(> 25%)<br>0.08      | HILLY<br>(15 - 25%)<br>0.06 | ROLLING<br>(5 - 15%)<br>0.03 | FLAT<br>(0 - 5%)<br>0.0   |
| VEGETAL COVER             | NONE<br>0.07                  | POOR<br>(< 10%)<br>0.05     | GOOD<br>(10 - 50%)<br>0.03   | HIGH<br>(50 - 90%)<br>0.0 |
| DEVELOPMENT TYPE          | INDUSTRIAL & BUSINESS<br>0.55 | HOTEL - APARTMENT<br>0.45   | RESIDENTIAL<br>0.40          | AGRICULTURAL<br>0.15      |

\*NOTE: The design coefficient "c" must result from a total of the values for all four watershed characteristics of the site.

**Table 2**

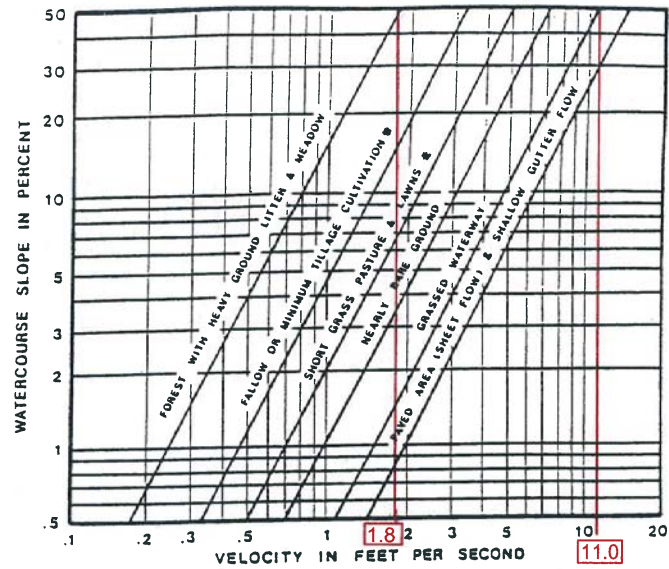
APPROXIMATE AVERAGE VELOCITIES OF RUNOFF FOR CALCULATING TIME OF CONCENTRATION

| TYPE OF FLOW                           | VELOCITY IN FPS FOR SLOPES<br>(in percent) INDICATED |      |       |        |
|----------------------------------------|------------------------------------------------------|------|-------|--------|
| <b>OVERLAND FLOW:</b>                  | 0-3%                                                 | 4-7% | 8-11% | 12-15% |
| Woodlands                              | 1.0                                                  | 2.0  | 3.0   | 3.5    |
| Pastures                               | 1.5                                                  | 3.0  | 4.0   | 4.5    |
| Cultivated                             | 2.0                                                  | 4.0  | 5.0   | 6.0    |
| Pavements                              | 5.0                                                  | 12.0 | 15.0  | 18.0   |
| <b>OPEN CHANNEL FLOW:</b>              | Determine Velocity by Manning's Formula              |      |       |        |
| Improved Channels                      | 1.0                                                  | 3.0  | 5.0   | 8.0    |
| Natural Channel*<br>(not well defined) |                                                      |      |       |        |

\*These values vary with the channel size and other conditions so that the ones given are the averages of a wide range. Wherever possible, more accurate determinations should be made for particular conditions by Manning's formula.

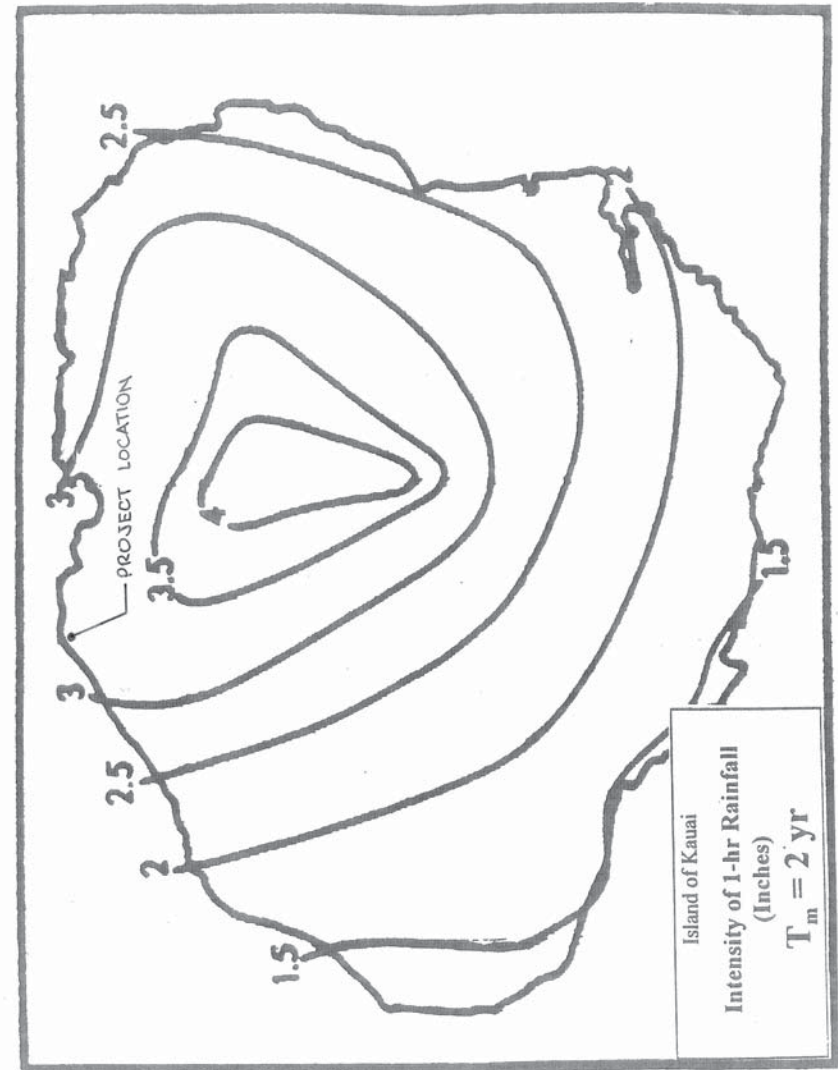


PLATE 1



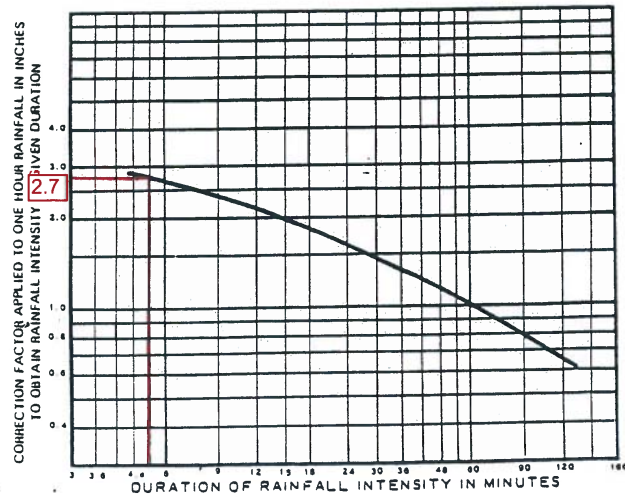
ESTIMATE OF AVERAGE FLOW VELOCITY FOR USE WITH THE RATIONAL FORMULA.

PLATE 3



Island of Kauai  
Intensity of 1-hr Rainfall  
(inches)  
 $T_m = 2 \text{ yr}$

PLATE 2

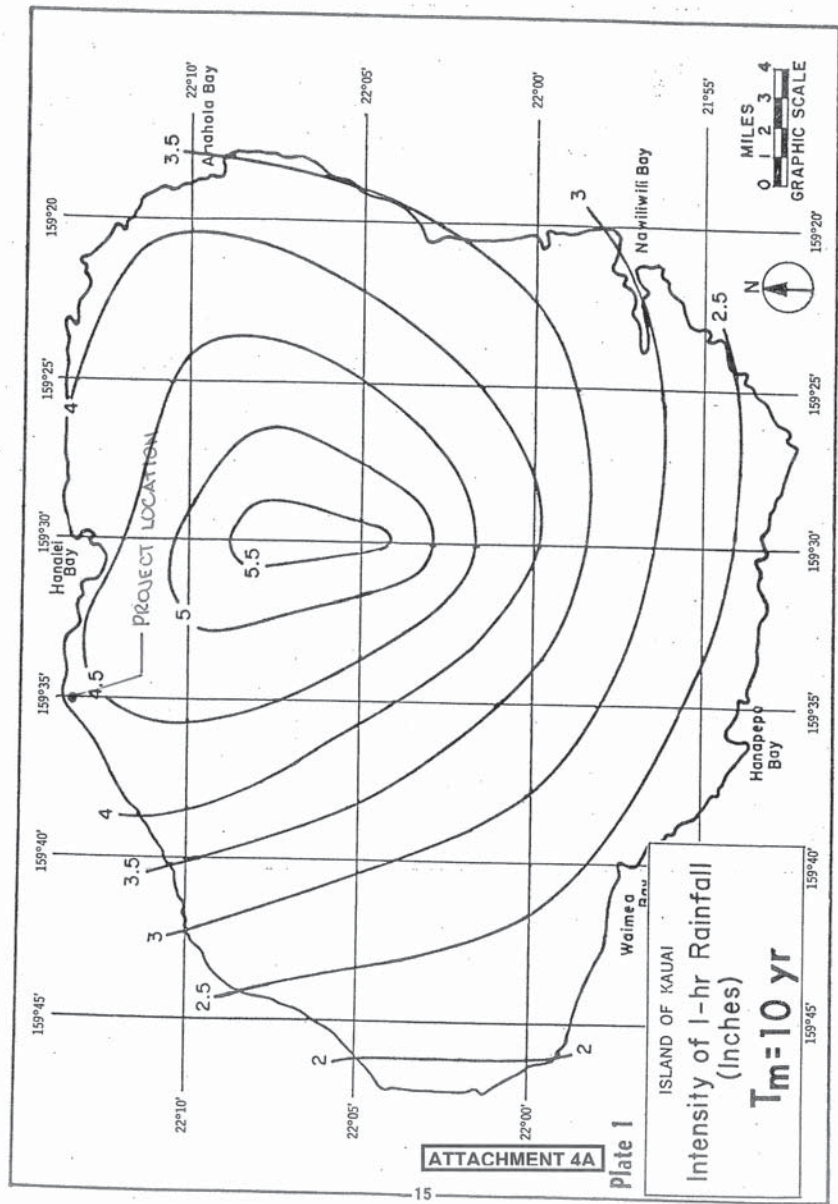


CORRECTION FACTOR  
FOR CONVERTING 1 HR. RAINFALL  
TO RAINFALL INTENSITY  
OF VARIOUS DURATIONS

TO BE USED FOR AREA  
LESS THAN 100 ACRES

ATTACHMENT 3

ATTACHMENT 4







## Appendix H

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### Wastewater Preliminary Engineering Report

#### Haena State Park Master Plan



Prepared for

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November 2010

K/J Project No. 1000711.00

## WASTEWATER PRELIMINARY ENGINEERING REPORT HAENA STATE PARK MASTER PLAN

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Appendix A: Table 3-1 Summary of Suitable Uses for Recycled Water (from *Guidelines for the Treatment and Use of Recycled Water*, May 15, 2002)

Appendix B: Wastewater Treatment and Disposal Alternatives – Fact Sheets (from *On-Site Treatment Survey and Assessment Study*, January 2008)

## I. INTRODUCTION

### A. Project Location and Description

Haena State Park is located on the north shore of Kauai, at the end of Kuhio Highway. It is bounded by the Na Pali Cliffs to the west, the base of Makana to the south, Limahuli Stream to the east and the Pacific Ocean to the north.

There are three (3) TMK parcels within the Park boundary. The parcel north of Kuhio Highway is identified by TMK 5-9-008:001 and encompasses approximately 52 acres. South of Kuhio Highway, parcels TMK 5-9-001:022 and 025, encompasses approximately 180 acres.

The parcels identified by TMK 5-9-008:001 and 5-9-001:022, are owned by the State of Hawaii. The third parcel, TMK 5-9-001:025 contains the Kauluapaoa Heiau and Keahualaka hula platform and is owned by the County of Kauai and managed by the State Historic Preservation Division (SHPD), Department of Land and Natural Resources (DLNR). Haena State Park utilizes approximately 65.7 acres of the coastal area for recreational uses.

The Park experiences heavy usage throughout the week and is considered one of the highest utilized parks in the State. It is used by the public for picnics, snorkeling, swimming and hiking. It is estimated approximately 708,400 visitors experienced the many geological and cultural features of this unique park in 2007.

## II. EXISTING SITE CONDITIONS

### A. Soil

Based on *Soil Survey of Islands of Kauai, Oahu, Maui, Molokai, and Lanai, State of Hawaii*, five soil classes are present at Haena State Park. Its western coastline consists of Mokuleia fine sandy loam (Mr), while its northern coast is defined as Beach (BS). Marsh (MZ), Hanalei silty clay (HnA) and Hanalei silty clay with deep water table (HrB) are present further inland.

Beach soil extends up to 150 feet inland from the northern coast. This soil consists of light-colored sands resulting from the breakdown of coral and seashells.

Mokuleia fine sandy loam extends up to 800 feet inland from the western coast. Its surface layer contains 16 inches of fine sandy loam and its subsurface contains 34 to 48 inches of single-grain and loamy sand. This soil exhibits moderately rapid permeability in its surface layer and rapid permeability in its subsurface.

Marsh soil is present approximately 800 feet inland from the western coast of Haena State park. This soil type covers small, low-elevation areas where water stands at the ground surface. Grasses, bulrushes and other herbaceous plants thrive in these areas.

Hanalei silty clay (HnA) soil is present in the western and inland portions of the Park. Its surface layer contains 13 inches of dark-gray, silty clay, of which the top 10 inches

contain brown and red mottles. Its subsoil contains 13 inches of dark-gray and dark grayish-brown silty clay loam. The water table in this soil type is typically less than 3 feet below the ground surface. This soil experiences moderate permeability and is strongly acidic in its surface layer.

Hanalei silty clay with deep water table is present in the eastern and inland portions of the Park. This soil is similar to Hanalei silty clay; however it contains fewer mottles and is located in areas where the water table is greater than 3 feet below the ground surface.

Soil test borings and percolation tests were not performed specifically for this preliminary engineering report. Instead, the previously performed percolation test results at the existing comfort station are referenced to preliminarily size the disposal fields. Percolation rates test results of 4.14 minutes/inch were obtained in December 2009 for the constructed wetland project at the existing Ke'e comfort station.

### B. Topography

The Master Plan incorporates improvements and facilities north of Kuhio Highway and leaves the areas south of Kuhio Highway virtually untouched. The ground elevation in this area ranges from sea level to approximate 70.0 feet above mean sea level (MSL) at the entrance to the Park.

The ground elevation south of the Kuhio Highway rises sharply with steep slopes and form the cliffs of Napali beyond the shoulder of the roadway.

The 100-year base flood elevation ranges from sea level to elevation 24.0 feet above MSL.

### C. Wastewater System

The original comfort station at Ke'e Beach was constructed in 1979 under DLNR Job No. 54-KP-11. It consisted of 3 water closets, 1 urinal and 2 lavatories. These fixtures drained into a 6.0 to 8.0 foot diameter cesspool, approved by DOH.

In 2001, the cesspool was replaced by a 2,500 gallon septic tank and approximately 2,700 square foot (sf) leach field located to the north and east of the comfort station. Record drawings for the construction of the individual wastewater system replacement were not available.

In 2008, the existing comfort station was demolished and replaced, under DLNR Project No. H10C663A. The new comfort station retains the same fixture count as its predecessor; 3 water closets, 1 urinal and 2 lavatories, which is estimated to generate 2,016 gpd.

The outdoor shower is located to the south of the comfort station. Greywater from the showers is allowed to drain and infiltrate into the surrounding soils.

In the Fall of 2010, the wastewater system for Ke'e Beach comfort station will be modified and upgraded to add a subsurface constructed wetland to further treat and improve water quality of the wastewater before discharging into the ground, at the request of the community. The system consists of 4-inch diversion valves and piping; 2-

1,500 gallon primary treatment fiberglass tanks with battery-operated alarm control and panel; 968 sf of constructed wetland and 1,358 sf of infiltration field and appurtenances. The existing septic tank and leach field will continue to serve as an emergency backup system in the event the constructed wetlands system goes down.

Electric power is currently not available anywhere within Haena State Park and has been a limiting factor in the development of other wastewater treatment options.

In addition to the existing wastewater system for the comfort station, an abandoned cesspool was found at the old house site near Limahuli Stream. The existing Allerton House and Caretaker's cottage should also have abandoned cesspool(s). If any of these facilities are renovated the wastewater systems should also be upgraded or abandoned completely.

### III. DESIGN PARAMETERS

In 2001, The Keith Companies developed a Community Preferred Master Plan for Haena State Park. The Community Preferred Master Plan and all other alternatives discussed proposed two (2) restroom facilities. This included restoration and retrofit of the existing comfort station at Ke'e Beach and a new facility near the visitors center consisting of either chemical or compost toilets. In addition, the wastewater facilities for the caretaker's cottage and the DLNR Park's baseyard would have had to be considered although they were not specifically discussed in the report.

The 2010 revised version of the 2001 draft Master Plan consolidates any new facilities to a central area around the existing parking lot, thereby consolidating the wastewater treatment and disposal system. In addition, electrical power will be brought in to the existing parking lot to service the new visitors center and other facilities.

Based on the new concept and on-going community meeting discussions, the following parameters were used to evaluate wastewater alternatives and provided initial guidelines and recommendations.

#### A. Existing Comfort Station and other Wastewater Facilities

The existing comfort station at Ke'e Beach and its individual wastewater system consisting of primary treatment tanks, constructed wetlands and infiltration field will remain in service. Other existing wastewater system on existing facilities, specifically cesspools, will be abandoned and not utilized even if the facility it is serving is renovated. A new individual wastewater system will be required.

#### B. Wastewater Flow

The treatment and disposal of wastewater is regulated by the State of Hawaii Department of Health, under the Hawaii Administrative Rules (HAR) Title 11, Chapter 62. Because there is no public county sewer system in the area, the State Department of Health (DOH) regulates and oversee the wastewater system at Haena State Park.

The existing comfort station at Ke'e Beach is sized to handle 2,016 gallons per day (gpd) which currently handles the entire population of the Park. Any additional restroom facilities would help reduce and split this flow amongst the various restroom facilities.

As it is the goal of the community to limit the usage of the Park and protect its ecology, the 2,016 gpd of generated wastewater flow should be initially used as the estimated quantity for design. This equates to approximately 403 visitors per day, based on 5 gallon per person per day for picnic parks (toilet wastes only) per DOH standards.

#### C. Water Quality and Reuse

To use treated wastewater for any other use then disposal is regulated the "Guidelines for the Treatment and Use of Reclaimed Water", prepared by Hawaii State Department of Health (DOH), Wastewater Branch, May 15, 2002. In essence the DOH recognizes three (3) levels of recycled water, simply defined as follows:

**R-1 water**, the highest level of treatment is wastewater treated by oxidation to secondary effluent (Biochemical Oxygen Demand (BOD) <30, Total Suspended Solid (TSS) <30), then filtered to 2 NTU turbidity and disinfected with fecal coliform shall not exceed 2.2 per 100 ml using 7 days of results, 23 per 100 ml in more than one sample in 30 day period and 200 per 100 ml in any sample.

**R-2 water** is disinfected, secondary treated wastewater with effluent fecal coliform shall not exceed 23 per 100 ml using 7 days of results and 200 per 100 ml in more than one sample in a 30 day period.

**R-3 water** is an undisinfected, oxidized, wastewater effluent.

A summary of suitable uses for the various levels of treated wastewater is provided on Table 3-1 from their Guidelines, which can be found in Appendix A.

### IV. WASTEWATER TREATMENT ALTERNATIVES

The various possible wastewater treatment alternatives discussed below are summarized on fact sheets from the State of Hawaii, Department of Health, "On-Site Wastewater Treatment Survey and Assessment Study", January 2008. These fact sheets can be found in Appendix B.

#### A. Holding Tanks

Holding tanks do not provide any treatment, but also do not discharge treated wastewater effluent on-site. Holding vessels are sized to temporarily handle a few days' supply of wastewater and allow the pumper truck to periodically remove the wastewater from the Park.

Because of the remoteness of Haena State Park, narrow roadways and multiple one-lane bridges leading to the Park, this is not a very attractive option for pumper trucks and not economically viable.



## B. Waterless/Low Water Systems including Compost Toilets

Composting toilets have been implemented in unsewered, rural, and suburban areas for over 30 years. These toilets do not require water and process human waste with aerobic digestion in unsaturated conditions. If used correctly, solid waste is reduced to 10 to 30% of its original volume. However, it takes a long period of time to decompose before it is suitable for soil amendment. They are not meant for high usage. In addition, the waste material may have to be removed by a septage vacuum pump truck periodically, therefore the toilets should be placed in an area accessible to a truck.

Composting toilets are environmentally friendly if used correctly. They have been installed at various places in Kauai, including trails at Hanakapi'ai, Hanakoa, and Kalalau as well as at the adjacent, Limahuli Garden.

Two main types of composting toilets are available, one with the decomposition chamber attached to the toilet and one with the chamber separated from the toilet. Aside from the two main types, there are many composting toilet modifications available to facilitate the aerobic treatment process. Oxygen is required for an aerobic treatment process and a constant supply and concentration of oxygen will accelerate the treatment process. Also, odor reductions incurred by the modifications also reduce vector (pest) attraction to fresh waste. Some of the available modifications are as follows:

- a. Waste can be periodically separated into different containers based on its age, allowing older wastes to continue the process of decomposition without being contaminated by fresh waste. Urine is evaporated while aerobic digestion decomposes fecal material.
- b. Electric fans can be added to facilitate the aerobic digestion process within the decomposition chamber by exchanging gaseous by-products of aerobic digestion with oxygen from outside of the chamber. The addition of a fan will require electric power to the site.
- c. A mechanical device can be installed to churn decomposing material to ensure an adequate oxygen supply for aerobic bacteria. The addition of a churning device will require electric power to the site.
- d. Cover materials including saw dust, peat moss, rotted leaves, straw, grass clippings and other organic materials can be used to soak up liquid and eliminate odors. This method separates the urine from the feces and allows fecal decomposition to continue without odors. Cover materials must be restocked as needed and users are given the responsibility of maintaining them.
- e. Separate chambers for urine and feces will allow urine to undergo nitrification. This process turns urine into an odor free and nearly pathogen free liquid. Fecal matter will still decompose through aerobic digestion.
- f. In the absence of electric service, non-electric toilets or solar power can be used. Non-electric toilets are limited to 4 persons a day for vacation use and 2 persons a day for continuous use, assuming 3 uses per person every day. A solar panel can be installed to power a ventilation fan. Solar powered toilets are limited to 6

persons a day for vacation use and 4 persons a day for continuous use, assuming 3 uses per person every day.

Composting toilets have an expected service life of over 25 years. Installation can be moderately priced, depending on the type and number of composting toilets. For electric versions, there is a small daily electric cost associated with powering the fans and churning equipment. Power consumption for the fans and churners typically range between 365 to 3000 kWh/year.

## C. Septic Tanks

Septic tanks are the traditional way of disposing of on-site wastewater from remote locations. They are generally used to remove scum, grease and solids while providing some primary anaerobic treatment before discharge into the disposal system. Inert material, slow decomposing solids, grease and scum will accumulate in the septic tank and must be periodically removed. Septic tanks are sensitive to soaps, chemicals and large flows of water as the system relies on anaerobic bacteria growth to breakdown biological wastes. If the septic tank is upset due to these factors, wastewater will not receive normal treatment and effluent may shorten the lifespan of the disposal system.

There are two types of septic tanks available for commercial use, single chambered and double chambered. Both types of septic tanks rely on tank volume to provide wastewater detention times long enough to separation of solids from the wastewater flow. As wastewater influent enters the tank, its velocity is slowed to a rate where particles mixed with the water can settle out of the liquid either by sinking or floating. In a healthy septic tank, there are distinguishable sludge and scum layers on the bottom of the tank and on the water surface, respectively. A baffle on the effluent end of the septic tank allows clarified water, from between the sludge and scum layers in the tank, to drain into the disposal system.

Double chamber septic tanks are similar to single chamber tanks with the exception of a concrete separator that forces the wastewater to enter two chambers before leaving the tank. The first chamber typically utilizes the first two-thirds of the tank length and works similarly to a single chamber septic tank. Holes in the concrete separator at 40% the depth of the tank allows clarified water to enter the second chamber of the tank, while sludge and scum on the tank bottom and water surface are detained in the first chamber. The second chamber acts similarly to a single chamber septic tank, allowing some anaerobic treatment while remaining solids are allowed to separate from the wastewater. Much like the single chamber septic tank, a baffle is used on the effluent end of double chamber tanks. The result of using two chambers is a better quality effluent with less suspended solids that could "boil over" into the disposal system.

Commercial septic tanks in Hawaii are made of pre-cast concrete or fiberglass and are typically available in sizes between 750 and 5,000 gallons. Some sizes can be cast in Honolulu, but most must be shipped from the continental United States. Access to the site may be a limiting factor in the maximum size of tank provided.

Septic tanks have an expected service life of 50 years or more. The cost of installation and materials is moderate, depending on the type of tank and the site conditions present. Periodic maintenance costs include the removal of grease, scum and solids by a vacuum septic pump truck. Areas where septic tanks are installed must be accessible



by these trucks. Due to the differing conditions, some tanks may accumulate solids faster than others, making it difficult to determine a "rule-of-thumb" time period for pumping. Most public facilities should be initially pumped and monitored quarterly until a required frequency pattern is established.

#### D. Aerobic Treatment Units

Aerobic treatment units (ATU) are typically used when wastewater effluent quality must be higher than produced by septic tanks. ATU generally uses mechanical components to oxidize organic material, decrease suspended solids and reduce pathogens.

The standard aerobic treatment process consists of the following four stages:

- Solid Removal – A pre-loader receives wastewater from the building sewer before it reaches the aerobic treatment unit. The pre-loader works like a septic tank to remove solids from the wastewater flow.
- Aeration – After solid removal, the wastewater flows into the aerobic tank's first compartment, where mechanical blowers introduce oxygen into the compartment to fuel the aerobic treatment of biological waste.
- Settling – Wastewater then flows into the next compartment, where activated sludge are allowed to settle out of the wastewater.
- Disinfection – The final stage is an optional disinfection stage. This stage can be implemented or omitted depending on the quality of effluent required or preferred before disposal. Disinfection is typically accomplished through the use of chlorine tablets. Other disinfection options include liquid chlorine or ultra-violet (UV) light. By providing disinfection, R-2 water quality is achieved.

Aerobic treatment unit efficiency is dependent on temperature, tank geometry, tank material, concentration of solids, and type of mixing/aeration device. It is also, highly sensitive to changes in wastewater composition.

Aerobic treatment unit mechanical components have a service life of 10 to 20 years. They cost significantly more than septic tanks because of the higher material costs and extra equipment that must be installed with the aerobic unit. Also, there is a small daily electric cost associated with the aeration equipment, pumps and disinfection equipment. Power consumption for an aerobic treatment unit is typically 700 to 3,600 kWh/year.

A form of an aerobic treatment unit is a sequence batch reactor (SBR), with the characterizing difference of a single chamber used for all processes including equalization, biological treatment, and secondary clarification. It is a fill-and-draw activated sludge system that requires two or more reactors in a pre-programmed sequence of operation of at least 4 steps.

The SBR produces better effluent quality than septic tanks and aerobic units, but requires sophisticated equipment and higher levels of maintenance. Electrical power is required for this alternative. According to the EPA, the SBR uses approximately 1100 to 3650 kWh/year.

#### E. Centralized Wastewater Treatment Systems

In a centralized treatment system, waste from each facility are collected, treated and disposed of at a central location. This alternative may require some sites to install a small pump station to lift the wastewater to the central treatment plant, if located at a lower elevation than the treatment plant and are not able to be piped by gravity.

A conventional package treatment plant, like the ATU and SBR, is able to provide reliable, high quality secondary effluent and with continuous disinfection, at least R-2 water for reuse. With additional filtration and disinfection, these systems could produce R-1 water.

They are available in concrete, fiberglass and corrosion control coated steel. Experienced labor and a certified wastewater operator are required to maintain a package treatment plant due its sophisticated control system and monitoring and recordkeeping requirements. Electrical power is required for this alternative. Mechanical components for the treatment plant and lift stations have service life of 10 to 20 years.

#### F. Natural Systems including Constructed Wetlands

Of the natural treatment systems, a constructed wetlands system as being installed at the existing comfort station was evaluated for its cost effectiveness treatment. There are two (2) types of constructed wetlands used in the United States as briefly described in "Natural Systems for Wastewater Management and Treatment", by Reed, Crites and Middlebrooks:

"Free-water surface (FWS) wetland. In this type, the water surface is exposed to the atmosphere, the bed contains emergent aquatic vegetation, a layer of soil to serve as a root media, a liner if necessary to protect the groundwater, and appropriate inlet and outlet structures. The water depth in this type of wetland can range from a few centimeters to 0.8 meter or more, depending on the purpose of the wetland. Normal depth of 0.3 m (1 foot) is typical.

Subsurface-flow (SF) wetland. In this case the excavated basin is filled with a porous media, usually gravel and the water level is maintained below the top of the gravel. The same species of vegetation are used in both types of wetlands. In the SF case the vegetation is planted in the upper part of the gravel media. A liner is also used, if necessary to protect groundwater quality. The depth of the media is typical 0.3-0.6 m (1-2 feet)."

These systems require pretreatment to remove the solids before biological treatment. Aeration is also recommended to improve water quality, if possible. These systems generally require more land area than most on-site systems, require start-up periods to establish vegetation and may require backup systems for rainfall.

Currently, there are no regulations in Hawaii governing the construction and management of these systems and require special approval on a case by case bases from DOH.

## V. WASTEWATER DISPOSAL ALTERNATIVES

The various possible wastewater disposal alternatives discussed below are summarized on fact sheets from the State of Hawaii, Department of Health, "On-Site Wastewater Treatment Survey and Assessment Study", January 2008. These fact sheets can also be found in Appendix B.

### A. Absorption Bed

An absorption bed is the typical disposal system for individual wastewater systems, unless conditions require a smaller disposal area. Synonymous to the term leach field, it consists of leaching chambers placed on a level sub-grade surface. Traditionally, perforated pipe with gravel beds had previously been used, but is no longer preferred as it tends to clog and eventually lead to failure. Perforated pipe also provides a lower available detention volume than leaching chambers. The size of the absorption bed is dependent on the amount of flow and the soil percolation rate in the installation area.

This disposal system can be used with septic tanks, aerobic units, natural systems and as redundant, backup systems for wastewater treatment with reuse. As with any constantly used systems, suspended solids in effluent and bacteria in the soil will accumulate in the absorption bed until the soil can no longer handle its hydraulic loading. This failure usually occurs 20 to 30 years after installation. However, the leaching chambers make this system easier to maintain and rehabilitate.

### B. Seepage Pit

Seepage pits are not usually used unless special conditions warrant it. It is the preference of DOH to use absorption bed versus seepage pit for disposal as the absorption beds distributes the wastewater load over a larger area versus a concentrated discharge. Seepage pits are classified as underground injection wells in the State of Hawaii and may require yearly monitoring and sampling as determined by DOH.

Existing cesspools have been converted to seepage pits in cases where site area is limited and the groundwater table is not affected.

### C. Water Resource Management and Reuse

The Kauai Department of Water provides potable water to the site through a 4-inch PVC water line that terminates at the entrance to the Park with a 1-inch water meter (Water Meter No. 083000140). Within Haena State Park, a 3-inch galvanized iron pipe runs along the edge of Kuhio Highway in an east-west direction until its terminus at the Ke'e beach comfort station. Recorded water usage from October 2003 to November 2006 is documented to average 2,125 gpd. It should be noted these records are before the showers were installed. The average usage matches closely to the estimated wastewater generated.

A non-potable, 6-inch HDPE pipe diverts an average of 760,000 gallons per day (gpd) of water from Limahuli Stream to irrigate the loi (taro patches) field north of Kuhio Highway

and west of the parking lot.

Besides these 2 water sources, rainwater and natural springs provide water for the abundant plant life around the Park.

Depending on the quality of the treated effluent, use of the reclaimed water for various irrigation and other non-potable uses can be identified and implemented with the Master Plan based on the DOH Recycled Water Table 3-1. Consideration should be given to the following:

1. Reusing treated wastewater for the landscaping around the new Visitors Center, Maintenance Baseyard and Caretaker's Cottage.
2. Reusing wastewater and stormwater off the existing parking lot for toilet flushing at the Visitors Center to conserve water.
3. Reducing stream diversion by collecting, storing and using rainwater.
4. Capturing and storing rainwater for non-potable uses.
5. Using non-potable water for fire protection.

## VI. SUMMARY AND EVALUATION OF ALTERNATIVES

A matrix summarizing the various treatment alternatives advantage, disadvantage, impacts on the park and potential uses is provided on the following table.

Disposal options are limited and in this case dependent on the treatment option selected. In all cases where wastewater effluent disposal is on-site, an absorption bed will need to be provided.

## HAENA STATE PARK MASTER PLAN WASTEWATER TREATMENT ALTERNATIVE MATRIX

| ADVANTAGES                                          | HOLDING TANKS                                                                                                                                                                                                                                                                                       | COMPOSTING TOILETS                                                                                                                                                                                                                                                                                                                                                                                                                        | SEPTIC TANK                                                                                                                                                                                                                                                                                                                                                                                                                                                | AEROBIC TREATMENT UNIT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | CONSTRUCTED WETLANDS (Subsurface Flow)                                                                                                                                                                                                                                                                                                           | GRAVITY SEWER AND PUMP STATIONS TO WASTEWATER PACKAGE PLANT FOR REUSE                                                                                                                                                                                                       | RECIRCULATING SAND FILTER FOR REUSE (not discussed in report)                                                                                                                                                                                                       |
|-----------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                     | <ul style="list-style-type: none"> <li>• Electrical power not required</li> <li>• Will not discharge nutrients or pathogens into the environment.</li> </ul>                                                                                                                                        | <ul style="list-style-type: none"> <li>• Does not require water</li> <li>• Will not discharge nutrients or pathogens into the environment.</li> <li>• Environmentally friendly.</li> </ul>                                                                                                                                                                                                                                                | <ul style="list-style-type: none"> <li>• Electrical power not required</li> <li>• Simple operation.</li> </ul>                                                                                                                                                                                                                                                                                                                                             | <ul style="list-style-type: none"> <li>• Better quality effluent provided</li> <li>• Effluent is allowed to be discharged to groundwater with disinfection.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                           | <ul style="list-style-type: none"> <li>• Better quality effluent provided</li> <li>• Subsurface design provides for water table attraction and potential of public contact with the wetlands.</li> <li>• Passive, natural treatment process.</li> </ul>                                                                                          | <ul style="list-style-type: none"> <li>• Recycled water is considered zero discharge</li> <li>• Highest quality effluent can be provided</li> <li>• Effluent is allowed to be discharged to groundwater.</li> <li>• Reduces potable water demand for irrigation.</li> </ul> | <ul style="list-style-type: none"> <li>• Recycled water is considered zero discharge.</li> <li>• High quality effluent provided.</li> <li>• Effluent is allowed to be discharged to groundwater.</li> <li>• Reduces potable water demand for irrigation.</li> </ul> |
| DISADVANTAGES                                       | <ul style="list-style-type: none"> <li>• Content of tank must be pumped on a regular basis and disposed of off-site.</li> <li>• Must be monitored and routinely checked to assess water levels</li> <li>• No treatment provided.</li> <li>• Possible odors from wastewater going applic.</li> </ul> | <ul style="list-style-type: none"> <li>• If not properly maintained, composting toilets have a potential for odors and vector attraction.</li> <li>• Purchase cost for specific composting toilets may vary greatly and may not properly maintain the composting system.</li> <li>• Without proper ventilation or maintenance, odors may be generated. Requires power.</li> <li>• Possible odors from wastewater going applic.</li> </ul> | <ul style="list-style-type: none"> <li>• Only primary treatment is provided.</li> <li>• Treatment process is easily upset with the introduction of toxic substances, like into the system, shortening the life of disposal systems.</li> <li>• DOH requires a 3 foot vertical separation between the disposal system and groundwater.</li> <li>• The soil desorption areas in wastewater treatment plants are unsaturated to function properly.</li> </ul> | <ul style="list-style-type: none"> <li>• Electrical power is required for continuous operation of the aerobic units.</li> <li>• The aerobic treatment process is sensitive to toxic substances, like into the system, shortening the life of disposal systems.</li> <li>• Treatment process is easily upset with the introduction of toxic substances, like into the system, shortening the life of disposal systems.</li> <li>• Increased operation and maintenance with the potential for odors and vector attraction and failures.</li> </ul> | <ul style="list-style-type: none"> <li>• Phosphorus, metals and other pollutants from the wastewater are bound in wetland sediments and accumulate over time.</li> <li>• Requires pretreatment.</li> <li>• Effluent quality not totally dependable or consistent.</li> <li>• Requires ability to fence for plants to get established.</li> </ul> | <ul style="list-style-type: none"> <li>• Great benefit derived from sufficient flows. No infiltration</li> </ul>                                                                                                                                                            | <ul style="list-style-type: none"> <li>• Great benefit derived from sufficient flows.</li> </ul>                                                                                                                                                                    |
| APPROPRIATE SIZE FOR USE                            | • Single family residences                                                                                                                                                                                                                                                                          | • Low use application only                                                                                                                                                                                                                                                                                                                                                                                                                | • Recommend flow range of 1,000 gpd to 5,000 gpd.                                                                                                                                                                                                                                                                                                                                                                                                          | • Recommend flow range of 1,000 gpd to 5,000 gpd                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | • The larger the flow the greater the land area required. The existing wetlands are approximately 1,550 square feet of constructed wetlands. Areas must be fenced and will be restricted from park usage.                                                                                                                                        | • Large                                                                                                                                                                                                                                                                     | • Large                                                                                                                                                                                                                                                             |
| IMPACT ON PARK OPERATION AND MAINTENANCE            | None                                                                                                                                                                                                                                                                                                | None                                                                                                                                                                                                                                                                                                                                                                                                                                      | None                                                                                                                                                                                                                                                                                                                                                                                                                                                       | None                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | None                                                                                                                                                                                                                                                                                                                                             | None                                                                                                                                                                                                                                                                        | None                                                                                                                                                                                                                                                                |
| AREA OF DISTURBANCE                                 | • Minimal                                                                                                                                                                                                                                                                                           | • Small                                                                                                                                                                                                                                                                                                                                                                                                                                   | • Existing comfort station requires 2,500 square feet and approximately 2,700 square feet leach field                                                                                                                                                                                                                                                                                                                                                      | • Same as for a septic tank and leach field                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | • Existing comfort station requires 2,500 square feet and approximately 1,550 square feet of constructed wetlands and 1,560 square feet disposal field                                                                                                                                                                                           | • Large                                                                                                                                                                                                                                                                     | • Large                                                                                                                                                                                                                                                             |
| WATER QUALITY IMPACT ON ENVIRONMENT AND COS IMPACTS | None                                                                                                                                                                                                                                                                                                | None                                                                                                                                                                                                                                                                                                                                                                                                                                      | Medium-High                                                                                                                                                                                                                                                                                                                                                                                                                                                | Medium                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Medium-High                                                                                                                                                                                                                                                                                                                                      | Low                                                                                                                                                                                                                                                                         | Medium                                                                                                                                                                                                                                                              |
| CONSTRUCTION COST IMPACTS                           | Low                                                                                                                                                                                                                                                                                                 | Medium                                                                                                                                                                                                                                                                                                                                                                                                                                    | Medium                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Medium-High                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Medium-High                                                                                                                                                                                                                                                                                                                                      | High                                                                                                                                                                                                                                                                        | Medium-High                                                                                                                                                                                                                                                         |

## HAENA STATE PARK MASTER PLAN WASTEWATER TREATMENT ALTERNATIVE MATRIX (Continued)

|                                                                 | HOLDING TANKS                               | COMPOSTING TOILETS                            | SEPTIC TANK                        | AEROBIC TREATMENT UNIT                            | CONSTRUCTED WETLANDS (Subsurface Flow)    | GRAVITY SEWER AND PUMP STATIONS TO WASTEWATER PACKAGE PLANT FOR REUSE      | RECIRCULATING SAND FILTER FOR REUSE (not discussed in report) |
|-----------------------------------------------------------------|---------------------------------------------|-----------------------------------------------|------------------------------------|---------------------------------------------------|-------------------------------------------|----------------------------------------------------------------------------|---------------------------------------------------------------|
| OPERATION & MAINTENANCE SPECIAL FACTS                           | High                                        | Medium-High                                   | Low                                | Medium                                            | Medium                                    | High                                                                       | Medium-High                                                   |
| MAINTENANCE REQUIREMENTS                                        | None                                        | Require continuous ventilation                | None                               | Requires continuous application of compressed air | Requires maintenance and upkeep of plants | Requires certified operator maintenance of equipment                       | Requires continuous energy consumption                        |
| REGULATORY IMPACTS (including recording and special operations) | • Continuous monitoring of tank water level | • Quarterly inspection                        | • Annual inspections for residence | • Quarterly inspections                           | • Require special approval from DOH.      | Requires certified operator treatment and water reuse required by the DOH. | • Monitoring and recordkeeping required by the DOH.           |
| ADDITIONAL SPECIAL OPERATIONS                                   |                                             | • Quarterly inspections for public facilities |                                    |                                                   | • Quarter inspections                     | • A wastewater grade operator license is required                          | • A wastewater grade operator license is required.            |
| ADDITIONAL SPECIAL OPERATIONS                                   | • Maintenance Bayside                       | • Maintenance Bayside                         | • All Facilities                   | • All Facilities                                  | • Visitor Center / Comfort Station        | • All Facilities                                                           | • Visitor Center / Comfort Station                            |
| ADDITIONAL SPECIAL OPERATIONS                                   | • Caretaker's Cottage                       | • Caretaker's Cottage at trail head           |                                    |                                                   |                                           |                                                                            |                                                               |

## VII. RECOMMENDATIONS

During the community meetings, it was agreed that any wastewater system proposed treat the wastewater effluent for potential reuse, to protect the grounds and surrounding environment of the Park from any on-site disposal. It is believed by being good stewards of the Park, the environment will be preserved for future generations.

Therefore, at a minimum, aerobic treatment units with absorption beds should be consider. Beyond this, water resource management and reuse options as discussed hereinbefore should be seriously taken into consideration during design.

Also, specifically, discussed were:

1. R-2 water quality effluent be provided at the visitor's center, with additional treatment for reuse.
2. The absorption bed be placed under the parking lot to provide separation and avoid contamination of the loi patches.
3. Providing aeration to the existing constructed wetlands primary treatment tanks through the use of a photovoltaic system.
4. Compost toilets only be considered for low usage areas, if at all.

## APPENDIX A

### TABLE 3-1 SUMMARY OF SUITABLE USES FOR RECYCLED WATER

*(from Guidelines for the Treatment and  
Use of Recycled Water, May 15, 2002)*

TABLE 3-1 SUMMARY OF SUITABLE USES FOR RECYCLED WATER

| SUITABLE USES OF RECYCLED WATER                                                                                 | R1 | R2  | R3 |
|-----------------------------------------------------------------------------------------------------------------|----|-----|----|
| IRRIGATION: (S)pray, (D)rip & Surface, S(U)bsurface, (A)LL=S<br>D & U, Spray with (B)uffer, (N)ot allowed, /-or |    |     |    |
| Golf course landscapes                                                                                          | A  | U/B | N  |
| Freeway and cemetery landscapes                                                                                 | A  | A   | N  |
| Food crops where recycled water contacts the edible portion of the crop, including all root crops               | A  | N   | N  |
| Parks, elementary schoolyards, athletic fields and landscapes around some residential property                  | A  | U   | N  |
| Roadside and median landscapes                                                                                  | A  | U/B | N  |
| Non-edible vegetation in areas with limited public exposure                                                     | A  | AB  | U  |
| Sod farms                                                                                                       | A  | AB  | N  |
| Ornamental plants for commercial use                                                                            | A  | AB  | N  |
| Food crops above ground & not contacted by irrigation                                                           | A  | U   | N  |
| Pastures for milking and other animals                                                                          | A  | U   | N  |
| Fodder, fiber, and seed crops not eaten by humans                                                               | A  | AB  | DU |
| Orchards and vineyards bearing food crops                                                                       | A  | D/U | DU |
| Orchards and vineyards not bearing food crops during irrigation                                                 | A  | AB  | DU |
| Timber and trees not bearing food crops                                                                         | A  | AB  | DU |
| Food crops undergoing commercial pathogen destroying process before consumption                                 | A  | AB  | DU |
| SUPPLY TO IMPOUNDMENTS: (A)llowed (N)ot allowed                                                                 |    |     |    |
| Restricted recreational impoundments                                                                            | A  | N   | N  |
| Basins at fish hatcheries                                                                                       | A  | N   | N  |
| Landscape impoundments without decorative fountain                                                              | A  | A   | N  |
| Landscape impoundments with decorative fountain                                                                 | A  | N   | N  |
| SUPPLY TO OTHER USES: (A)llowed (N)ot allowed                                                                   |    |     |    |

TABLE 3-1 SUMMARY OF SUITABLE USES FOR RECYCLED WATER

| SUITABLE USES OF RECYCLED WATER                                                                                 | R1 | R2  | R3 |
|-----------------------------------------------------------------------------------------------------------------|----|-----|----|
| IRRIGATION: (S)pray, (D)rip & Surface, S(U)bsurface, (A)LL=S<br>D & U, Spray with (B)uffer, (N)ot allowed, /-or |    |     |    |
| Golf course landscapes                                                                                          | A  | U/B | N  |
| Freeway and cemetery landscapes                                                                                 | A  | A   | N  |
| Food crops where recycled water contacts the edible portion of the crop, including all root crops               | A  | N   | N  |
| Parks, elementary schoolyards, athletic fields and landscapes around some residential property                  | A  | U   | N  |
| Roadside and median landscapes                                                                                  | A  | U/B | N  |
| Non-edible vegetation in areas with limited public exposure                                                     | A  | AB  | U  |
| Sod farms                                                                                                       | A  | AB  | N  |
| Ornamental plants for commercial use                                                                            | A  | AB  | N  |
| Food crops above ground & not contacted by irrigation                                                           | A  | U   | N  |
| Pastures for milking and other animals                                                                          | A  | U   | N  |
| Fodder, fiber, and seed crops not eaten by humans                                                               | A  | AB  | DU |
| Orchards and vineyards bearing food crops                                                                       | A  | D/U | DU |
| Orchards and vineyards not bearing food crops during irrigation                                                 | A  | AB  | DU |
| Timber and trees not bearing food crops                                                                         | A  | AB  | DU |
| Food crops undergoing commercial pathogen destroying process before consumption                                 | A  | AB  | DU |
| SUPPLY TO IMPOUNDMENTS: (A)llowed (N)ot allowed                                                                 |    |     |    |
| Restricted recreational impoundments                                                                            | A  | N   | N  |
| Basins at fish hatcheries                                                                                       | A  | N   | N  |
| Landscape impoundments without decorative fountain                                                              | A  | A   | N  |
| Landscape impoundments with decorative fountain                                                                 | A  | N   | N  |
| SUPPLY TO OTHER USES: (A)llowed (N)ot allowed                                                                   |    |     |    |



| Table 5-1 Summary of Typical Onsite Wastewater Treatment System Effluent Water Quality |           |          |                     |                       |                            |                                                                              |
|----------------------------------------------------------------------------------------|-----------|----------|---------------------|-----------------------|----------------------------|------------------------------------------------------------------------------|
| TREATMENT SYSTEM                                                                       | BOD mg/L  | TSS mg/L | Total Nitrogen mg/L | Total Phosphorus mg/L | Fecal Coliforms Per 100 mL | COMMENTS                                                                     |
| Septic Tank                                                                            | 132 - 217 | 49 - 161 | 39 - 82             | 11 - 22               | 40,000 - 160 million       | (USEPA, 2002 and Hallahan, 2002)                                             |
| Low water/Waterless Toilets                                                            | -         | -        | -                   | -                     | -                          | No effluent. By-products require disposal/use outside scope of this handbook |
| Continuous Flow, Suspended Growth                                                      | 10 - 60   | 15 - 60  | 30 - 40% removal    | 10 - 20% removal      |                            | (USEPA, 2002)                                                                |
| Continuous Flow w/ fixed internal packing                                              | 10        | 15       | 7 - 22              |                       |                            |                                                                              |
| Sequenced Batch Reactor                                                                | 5 - 15    | 10 - 30  |                     |                       |                            |                                                                              |
| ATU                                                                                    | 2 - 4     | 3 - 16   | 0.5 - 6             | 40% removal           | 60-1500                    |                                                                              |
| Single Pass Sand Filter                                                                | 3 - 10    | 3 - 9    | 3 - 8               |                       | 10-25                      |                                                                              |
| Recirculating Sand Filter                                                              | -         | -        | -                   | 1 - 2 mg/L            | -                          |                                                                              |
| Enhanced Phosphorus Removal                                                            | -         | -        | 40 - 80% removal    | -                     | -                          |                                                                              |
| Enhanced Nitrogen Removal                                                              | -         | -        | -                   | -                     | -                          |                                                                              |
| Emerging Trace Contaminant Removal                                                     | -         | -        | -                   | -                     | -                          |                                                                              |
| Chlorine Disinfection                                                                  | -         | -        | -                   | -                     | Reduction of 99.0-99.9%    |                                                                              |
| UV Disinfection                                                                        | -         | -        | -                   | -                     | Reduction of 99.9%         |                                                                              |

**APPENDIX B**  
**WASTEWATER TREATMENT AND**  
**DISPOSAL ALTERNATIVES - FACT SHEETS**  
*(from On-Site Wastewater Treatment Survey  
and Assessment Study, January 2008)*

## Septic Tanks

## Fact Sheet P-1

A septic tank is a tank that serves as both a settling and skimming tank. Grit and other solids settle to the bottom of the tank and create a layer of sludge. Oil, grease, fat, and other floatables rise to the top creating a layer of scum. Accumulated sludge and scum must be removed on a regular basis; failure to do so will lead to carryover of these materials into downstream systems leading to their failure. Where site conditions indicate higher quality effluent is required, septic tanks are used as pretreatment for other treatment systems, including biological treatment systems.

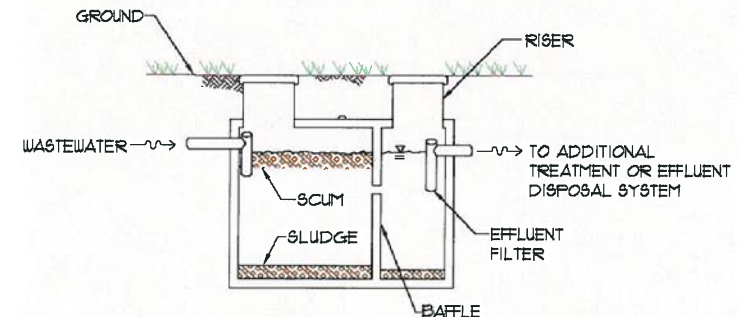


Figure 5-2 Typical Double Chambered Septic Tank

### Considerations and Restrictions

A septic tank is purchased prefabricated, made of concrete or fiberglass, and it must meet the International Association of Plumbing and Mechanical Officials (IAPMO) material and property standards for prefabricated septic tanks. However, depending on site conditions, sometimes it is easier to construct a tank in-place. A constructed in-place septic tank must be designed in accordance with IAPMO specifications and stamped by a licensed structural engineer. Regardless of how a tank is constructed, it must be waterproof to prevent leakage and protected from corrosion in accordance with HAR 11-62, Subchapter 3.

The capacity of a septic tank is an important aspect in the treatment of wastewater prior to disposal. The required capacity of residential septic tanks can be referenced using HAR 11-62, Subchapter 3. The City and County of Honolulu "Design Standards of the Department of Wastewater Management" or the applicable county publication must be consulted.

A septic tank must be installed by a licensed contractor to comply with spacing and minimum distance requirements, as described in Chapter 3 of this document. Use of a septic tank requires the selection of a downstream disposal system (see Chapter 4).

Table 5-3 Summary of Advantages and Disadvantages of Typical Onsite Wastewater Treatment Systems

| Treatment System                      | Advantages                                                                                                                                                                                                                                                                                                                    | Disadvantages or Limitations                                                                                                                                                                                                                                                                                                                                                                                              |
|---------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Septic Tank                           | <ul style="list-style-type: none"> <li>▪ No moving parts</li> <li>▪ Easily maintained with periodic pumping</li> </ul>                                                                                                                                                                                                        | <ul style="list-style-type: none"> <li>▪ Only primary treatment provided</li> </ul>                                                                                                                                                                                                                                                                                                                                       |
| Low water/Waterless Toilets           | <ul style="list-style-type: none"> <li>▪ Incinerators – waste is sterile and can be thrown away like household rubbish</li> <li>▪ Composting toilets – offer recycling of waste</li> <li>▪ Chemical – viable temporary system</li> </ul>                                                                                      | <ul style="list-style-type: none"> <li>▪ Incinerators – require other utilities such as electricity or natural gas</li> <li>▪ Composting – long periods of treatment</li> <li>▪ Chemical – usually temporary, must be pumped often</li> <li>▪ Continuous energy requirements</li> <li>▪ Poor maintenance leads to degraded effluent quality</li> <li>▪ Requires long startup times-not good for seasonal flows</li> </ul> |
| Continuous Flow, Suspended Growth ATU | <ul style="list-style-type: none"> <li>▪ Habitually meets Class I effluent standards</li> </ul>                                                                                                                                                                                                                               | <ul style="list-style-type: none"> <li>▪ Energy consumption</li> <li>▪ Requires long startup times-not good for seasonal flows</li> </ul>                                                                                                                                                                                                                                                                                 |
| Continuous Flow, w/ Fixed Packing     | <ul style="list-style-type: none"> <li>▪ Habitually meets Class I effluent standards</li> </ul>                                                                                                                                                                                                                               | <ul style="list-style-type: none"> <li>▪ Energy consumption is costly</li> <li>▪ Requires computer controls</li> <li>▪ High cost associated with media</li> <li>▪ Maintenance required to prevent biomat clogging and ponding</li> </ul>                                                                                                                                                                                  |
| Sequenced Batch Reactor ATU           | <ul style="list-style-type: none"> <li>▪ High Nitrification/Denitrification</li> <li>▪ High TSS removal</li> <li>▪ Proven technology</li> </ul>                                                                                                                                                                               | <ul style="list-style-type: none"> <li>▪ Energy consumption with recirculating pump</li> <li>▪ Cost of media</li> <li>▪ Maintenance required of the bed and the pump</li> <li>▪ For media filters, construction costs can double due to expense associated with phosphorus attenuating media</li> </ul>                                                                                                                   |
| Single Pass Sand Filter               | <ul style="list-style-type: none"> <li>▪ High denitrification</li> </ul>                                                                                                                                                                                                                                                      | <ul style="list-style-type: none"> <li>▪ Requires aerobic and anoxic cycles or stages for biological removal of nitrogen</li> <li>▪ Plumbing code does not regulate separate black- and graywater plumbing</li> <li>▪ Added expense associated with powdered activated carbon or other chemical absorbents</li> </ul>                                                                                                     |
| Recirculating Sand Filter             | <ul style="list-style-type: none"> <li>▪ Removes phosphorus in areas that have low calcium, low iron, or low aluminum soils</li> <li>▪ Helps protect surface water in soils that fail to remove phosphorus</li> <li>▪ Helps prevent groundwater contamination</li> <li>▪ Prevents eutrophication of surface waters</li> </ul> | <ul style="list-style-type: none"> <li>▪ Requires aerobic and anoxic cycles or stages for biological removal of nitrogen</li> <li>▪ Plumbing code does not regulate separate black- and graywater plumbing</li> <li>▪ Added expense associated with powdered activated carbon or other chemical absorbents</li> </ul>                                                                                                     |
| Enhanced Phosphorus Removal           | <ul style="list-style-type: none"> <li>▪ Necessary to remove medication and hormones that are not consumed by biological treatment</li> </ul>                                                                                                                                                                                 | <ul style="list-style-type: none"> <li>▪ Requires monitoring to ensure chloride tablets are always present to provide chloride</li> <li>▪ Residual chlorine may harm downstream organisms</li> <li>▪ Bulbs are expensive</li> <li>▪ Requires power</li> <li>▪ Can be ineffective in high TSS environments</li> </ul>                                                                                                      |
| Enhanced Nitrogen Removal             | <ul style="list-style-type: none"> <li>▪ Safest and simplest with chloride tablets</li> <li>▪ Cheapest means of disinfection</li> </ul>                                                                                                                                                                                       | <ul style="list-style-type: none"> <li>▪ No residual chemicals disposed in environment</li> </ul>                                                                                                                                                                                                                                                                                                                         |
| Enhanced Emerging Contaminant Removal | <ul style="list-style-type: none"> <li>▪ No residual chemicals disposed in environment</li> </ul>                                                                                                                                                                                                                             | <ul style="list-style-type: none"> <li>▪ No residual chemicals disposed in environment</li> </ul>                                                                                                                                                                                                                                                                                                                         |
| Chlorine Disinfection                 | <ul style="list-style-type: none"> <li>▪ No residual chemicals disposed in environment</li> </ul>                                                                                                                                                                                                                             | <ul style="list-style-type: none"> <li>▪ No residual chemicals disposed in environment</li> </ul>                                                                                                                                                                                                                                                                                                                         |
| UV Disinfection                       | <ul style="list-style-type: none"> <li>▪ No residual chemicals disposed in environment</li> </ul>                                                                                                                                                                                                                             | <ul style="list-style-type: none"> <li>▪ No residual chemicals disposed in environment</li> </ul>                                                                                                                                                                                                                                                                                                                         |

### Effluent Quality

In accordance with HAR 11-62, Subchapter 33, septic tank effluent must be discharged into a soil absorption system, a sand filter, a subsurface irrigation system (with director approval), or another treatment system. Septic tanks remove approximately 30% of BOD and 30% of TSS from typical domestic wastewater resulting in effluent quality of BOD ranging between 138 mg/L and 240 mg/L, and suspended solids in the range of 49 to 155 mg/L.

The DOH requires the installation of a screen on the effluent end of the septic tank to enhance solids removal and thereby prevent clogging of disposal systems. The effluent filter can be installed on the effluent tee on the inside of the septic tank, or in a separate structure outside the tank to facilitate access for required periodic cleaning, without which backups will occur.

### Typical Installed Costs (2007)

A 1,000-1,250 gallon residential septic tank costs approximately \$5,000-\$12,000 installed, including material, equipment, and labor. An effluent filter is about \$200-\$700 installed. The cost of a septic tank does not include the disposal system (see Chapter 4).

### Operation and Maintenance Costs

The decomposition rate of the solids that settle to the bottom of the tank and those that accumulate in the scum layer on the surface is slow, resulting in the accumulation of solids in the septic tank. Because of the accumulation of solids and scum, periodic pumping is required (every 2-3 yrs) to keep the tank functioning as designed and prevent solids from breaking and overflowing to the soil absorption system. The estimated cost for these pumping services range between \$150 and \$550 per visit. Assuming that the septic tank is pumped every 2-3 years, the equivalent cost is about \$50-\$200 per year. Pumping costs vary due to difficulty accessing the tank, haul distances, and limited pump truck capacity. Minimal use of kitchen sink grinders will help reduce the solids load, and extend the time between pumping of the septic tank and any downstream treatment units.

The effluent filter must be cleaned on a regular basis because of the growth of bacteria that will clog the filter. Frequency of cleaning is dependent on the size of the screen, environmental conditions, and type of wastewater entering the septic systems. Some manufacturers recommend cleaning every 1-3 years depending on level of use and site conditions. Cleaning consists of hosing off the filter into the septic tank and can be done by the homeowner.

#### Septic Tank Summary

|                                     |                             |
|-------------------------------------|-----------------------------|
| Meets NSF 40 Standards              | No                          |
| Effluent BOD:                       | 132-217 mg/L                |
| Effluent TSS                        | 49-161 mg/L                 |
| Removes 50% total influent nitrogen | No                          |
| Effluent Nitrogen:                  | 39-82 mg/L                  |
| Effluent Phosphorus:                | 11-22 mg/L                  |
| Effluent Fecal Coliform:            | 1,000,000 /100 mL           |
| Maintenance Level:                  | 2-3 yrs                     |
| Power Required:                     | No                          |
| Typical Installed Cost:             | \$5,000-\$12,000 /1,000 gal |

## **Waterless/Low Water Systems      Fact Sheet P-2**

Low water or waterless system is a broad, generic term given to a range of treatment systems that use little water or no water in collecting or treating human waste. It includes incinerating toilets, composting toilets, and chemical toilets.

Incinerating toilets use heat or combustion to degrade human waste into water, carbon dioxide, and ash. Incinerating toilets are one of a few treatment technologies that do not require a soil disposal system. However, the ash from the incineration must be disposed of, usually with municipal refuse in a landfill. Incinerating toilets may use natural gas, liquid propane, or electricity to incinerate the human waste, and are usually designed to handle only feces, urine, and paper. Ventilation for the toilet must be supplied.

Composting toilets receive human waste and stabilize it through natural degradation. The waste is mixed with starting mulch, and allowed to degrade and dehydrate for a period of up to 12 months, depending on usage. The composted material removed from composting toilets is suitable as a soil amendment, however, such use is restricted as described in HAR 11-62 in order to protect public health. The toilets come in automatic, semi-automatic, and manual versions. The automated models usually include heaters, ventilation fans, and a mechanical means to mix or aerate the compost.

Chemical toilets are toilets which have a chemical reservoir beneath them that catches the human waste. The chemicals in the toilet slightly disinfect the human waste and also provide a deodorant. Chemical toilets do not completely break down human waste and must be pumped frequently due to a very limited holding capacity. The contents of chemical toilets must be taken to a local wastewater treatment facility. The contents should not be poured into a home septic tank or aerobic treatment unit as the chemicals will have adverse effects on the biology of the treatment system.

### Considerations and Restrictions

Incinerating toilets are acceptable, long-term treatment systems, but they are typically only found in temporary or seasonal housing. The by-products (ash) must be periodically removed, but because it is sterile after incineration and poses no nutrient threat to the environment, it can generally be disposed of as household garbage. Without proper ventilation, odors may be generated (both from the human waste and the process of combustion.) Additional utilities are required (natural gas, propane, or electricity).

Composting toilets are also acceptable long term treatment systems, but are also an item typically only found in seasonal housing, campsites or other locations not occupied fulltime. Composting requires long periods of time to stabilize the human waste and may create odor problems. Those systems that do not use electricity for evaporative fans or mixing require more attention from the operator to maintain function. The produced compost is suitable as a soil applied fertilizer, but cannot be used for crops meant for human consumption, and its use is restricted by HAR 11-62.

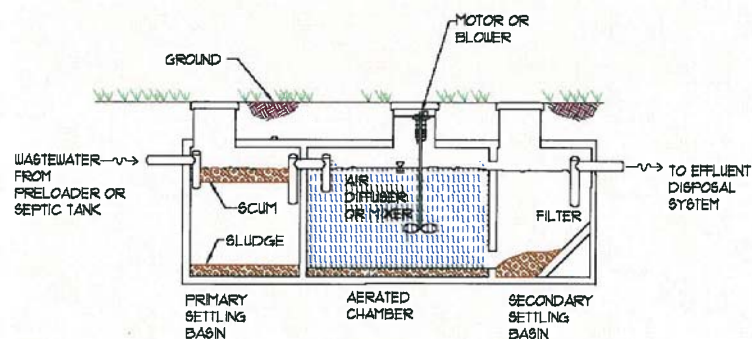
Chemical toilets are a temporary means of treatment. The limited capacity and frequent pumping lend the system for uses that are of short duration, such as a few days. As anyone who has been to a large public gathering knows, chemical toilets are also a good augmentation to existing restroom facilities during short events or festivities.



## Suspended Growth Aerobic Treatment Systems **Fact Sheet B-1**

A suspended growth aerobic treatment system (one type of ATU) is a biological treatment system where microorganisms are kept in suspension by mixing air with wastewater influent and concentrated underflow or sludge (from a clarifier) in an aeration tank.

From the aeration tank, the mixture is passed into a settling basin (clarifier), where microorganisms settle to the bottom forming a layer of sludge. The liquid is passed to a disposal system or another process for additional treatment. Some of the sludge solids in the settling basin will undergo decomposition, while the remainder accumulates and must periodically be removed (pumped out) and properly/legally disposed of offsite.



**Figure 5-3 Continuous Flow, Suspended Growth Aerobic System with Settling Basins**

### Considerations and Restrictions

If the suspended-growth aerobic treatment system does not include an integral primary settling basin, a separate septic tank or pre-loader should be installed upstream of the aerobic treatment unit. The purpose of this additional tank is to remove readily settleable solids and floating matter that will reduce suspended solids loading and protect downstream mechanical equipment.

Consideration should be given to determine how best to use the existing grades to allow gravity flow from septic tank to aerobic treatment system to disposal system.

Power is needed to serve the blowers, pumps, controls, and monitoring and alarm systems in the ATU.

Use of a suspended-growth ATU requires the selection of a disposal system (see Chapter 4).

### Effluent Quality

Suspended-growth aerobic treatment systems can treat domestic wastewater and achieve effluent quality of BOD concentrations in the range of 5-50 mg/L and TSS concentrations of 5-60 mg/L. However, it should be noted that suspended-growth ATUs are not the most optimal to reduce nitrogen or phosphorus.

### Typical Installed Costs (2007)

Complete installation including materials, equipment and labor can range between \$20,000-30,000. This cost does not include the cost for a preloader/septic tank, if required, or the cost for a disposal system. See Septic Tanks (Sheet P-1) for a cost range for preloaders. See Chapter 4 for the costs of disposal systems.

### Operation and Maintenance Costs

Operation and maintenance costs are dependent on labor costs and electricity but range from \$400 to \$600 a year. Trained professionals should manage the aerobic system which should be inspected every 3-4 months with sludge/scum pumping performed as needed.

These systems are sensitive to high and low temperatures, heavy loading of solids, toxic chemicals (including chemical cleansers and the like), power failures, and influent flow variability.

### Suspended Growth Summary

|                                     |                                  |
|-------------------------------------|----------------------------------|
| Meets NSF 40 Standards              | Yes                              |
| Effluent BOD:                       | 5-50 mg/L                        |
| Effluent TSS                        | 5-60 mg/L                        |
| Removes 50% total influent nitrogen | No                               |
| Effluent Nitrogen:                  | 10-60 mg/L                       |
| Effluent Phosphorus:                | 4-18 mg/L                        |
| Effluent Fecal Coliform:            | 1,000,000 /100 mL                |
| Maintenance Level:                  | Quarterly                        |
| Power Required:                     | Yes                              |
| Typical Installed Cost:             | \$20,000-\$30,000 /1,000 gallons |

## Combined Attached and Suspended Growth Aerobic Treatment Systems

### Fact Sheet B-2

Combined attached and suspended growth systems are a type of ATU in which microorganisms form a slime layer on the surface of submerged or semi-submerged media. Treatment occurs as the wastewater passes over the microorganisms.

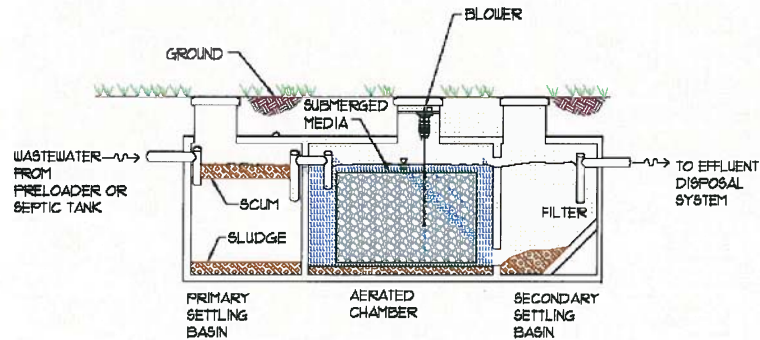


Figure 5-4 Combined Attached and Suspended Growth Reactor

#### Considerations and Restrictions

If the combined growth ATU does not include an integral primary settling basin, a separate septic tank or pre-loader should be installed upstream of the aerobic treatment unit. The purpose of this additional tank is to remove readily settleable solids and floating matter that will reduce suspended solids loading and protect downstream mechanical equipment.

Consideration should be given to determine how best to use the existing grades to allow gravity flow from septic tank to aerobic treatment system to disposal system. In addition, the system should be sited such that it can easily be accessed and inspected.

Use of a combined attached and suspended growth ATU system requires the selection of a disposal system (see Chapter 4).

#### Effluent Quality

Effluent BOD and TSS concentrations of 5-40 mg/L are expected from a combined growth system. Complete nitrification is expected (conversion of ammonia to nitrate) and phosphorus removal is expected to be between 10 and 15%.

#### Typical Installed Costs (2007)

Installation costs range from \$20,000 to \$30,000. This cost does not include the cost for a preloader, if required, or the cost for a disposal system. See Septic Tanks (Sheet P-1) for a cost range for preloaders. See Chapter 4 for the costs of disposal systems.

#### Operation and Maintenance Costs

Costs to operate combined growth ATU systems range from \$35-\$100 per year in energy, and management (pumping, inspection, and analysis) can cost \$100-\$200 per year. Energy consumption is on the order of 1-8 kW-h/day. Extended power outages will result in odorous conditions. Trained professionals should manage the ATU system which should be inspected every 3-4 months with sludge/scum pumping as needed.

These systems are sensitive to high and low temperatures, heavy loading of solids, toxic chemicals (including chemical cleansers and the like), power failures, and influent flow variability.

#### Attached and Suspended Growth Summary

|                                     |                                  |
|-------------------------------------|----------------------------------|
| Meets NSF 40 Standards              | Yes                              |
| Effluent BOD:                       | 10-30 mg/L                       |
| Effluent TSS                        | 15-60 mg/L                       |
| Removes 50% total influent nitrogen | Possible                         |
| Effluent Nitrogen:                  | 7-22 mg/L                        |
| Effluent Phosphorus:                | 2-10 mg/L                        |
| Effluent Fecal Coliform:            | 1,000,000 /100 mL                |
| Maintenance Level:                  | Quarterly                        |
| Power Required:                     | Yes                              |
| Typical Installed Cost:             | \$20,000-\$30,000 /1,000 gallons |



## Sequencing Batch Reactors (SBR)

## Fact Sheet B-3

A Sequencing Batch Reactor (SBR) is a form of ATU in which all of the aerobic and clarifying processes occur within a single tank. The tank may be constructed from concrete, fiberglass, or high-density polyethylene (HDPE). A SBR is designed to operate by sequencing through at least four (4) steps as follows:

- 1) **FILL:** tank is filled with wastewater to a predetermined volume or time;
- 2) **AERATION:** aeration is started with the suspended microorganisms in the wastewater;
- 3) **SETTLE:** aeration is turned off and the microorganisms settle to the bottom of the tank;
- 4) **DECANT:** decant the clarified portion as effluent.

After decanting, the cycle repeats with filling again. By allowing the tank water level to vary, providing influent stilling zones, and only decanting during aeration off cycles, these single-tank systems can be designed to operate continuously. Of great importance to the SBR process is the control system consisting of timers, level sensors, and microprocessors.

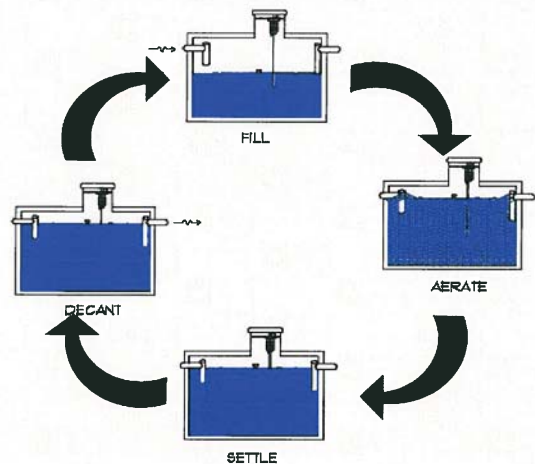


Figure 5-5 Cycles of an SBR / CBT

### Considerations and Restrictions

SBRs are a type of suspended-growth ATU that can oxidize BOD and provide both nitrification and denitrification (enhanced nitrogen removal). SBRs require power, control, and monitoring and alarm systems. SBRs have mechanical equipment (pumps, blowers, decanters) which must be properly maintained to ensure optimal operation.

Use of an SBR system requires the selection of a disposal system (see Chapter 4).

### Effluent Quality

Effluent from SBRs is of very good quality in terms of BOD and TSS. Typical ranges are from 5 -15 mg/L BOD and 10-30 mg/L of TSS.

SBRs will completely oxidize ammonia to nitrate via nitrification during the aeration cycle (aerobic cycle), and then facilitate nitrogen removal via denitrification during the settle and decant cycles (cycles that are anoxic). They can also provide enhanced biological phosphorus removal. The higher quality of effluent produced reduces the organic loading on the disposal system. SBRs also provide a consistent effluent, eliminating the fluctuations caused by varying influent loads.

### Typical Installed Costs (2007)

Equipment costs range from \$7,000-\$9,000 with installation costs of \$1,500-\$3,000 based on Mainland costs. Current costs to install in Hawaii are in the range of \$20,000 - \$30,000. This cost does not include the cost for a preloader, if required, or the cost for a disposal system. See Septic Tanks (Sheet P-1) for a cost range for preloaders. See Chapter 4 for the costs of disposal systems.

### Operation and Maintenance Costs

Annual energy costs are less than \$600 and pumping and inspection costs are greater than \$100. Trained professionals should manage the SBR system, which should be inspected every 3-4 months with sludge/scum pumping as needed. Homeowner neglect and/or interference can lead to operational malfunction. Alarms to warn of system failures are critical. Energy requirements are between 3 and 10 kW-h/day.

### SBR Summary

|                                     |                                  |
|-------------------------------------|----------------------------------|
| Meets NSF 40 Standards              | Yes                              |
| Effluent BOD:                       | 5-15 mg/L                        |
| Effluent TSS                        | 10-30 mg/L                       |
| Removes 50% total influent nitrogen | Yes                              |
| Effluent Nitrogen:                  | 7-45 mg/L                        |
| Effluent Phosphorus:                | 2-10 mg/L                        |
| Effluent Fecal Coliform:            | 1,000,000 /100 mL                |
| Maintenance Level:                  | Quarterly                        |
| Power Required:                     | Yes                              |
| Typical Installed Cost:             | \$20,000-\$30,000 /1,000 gallons |

## Packed Bed Reactors

## Fact Sheet B-4

A packed-bed reactor is an attached-growth biological treatment process that can be aerobic or anaerobic, upflow or downflow, continuous or intermittent dosing, single-media or multi-media and arranged in one or multiple stages. The most common prefabricated packed-bed reactor is an aerobic, down flow, continuous dosing, and continuous media type reactor. The packed-bed filter is a large excavation lined with an impermeable material that is filled with sand or other media placed over an underdrain. Wastewater is dosed at the top of the media bed, and allowed to percolate through the media (filter) to an underdrain. The aerobic biological treatment usually occurs in the first six inches of the filter surface, and chemical treatment, in the form of adsorption, occurs throughout the filter.

Packed bed reactors can be single pass (intermittent sand filters) or they can recirculate the effluent to treat the wastewater multiple times (recirculating sand filters or RSF). Ultimately, the effluent is discharged to a disposal system, similar to those discussed in Chapter 4.

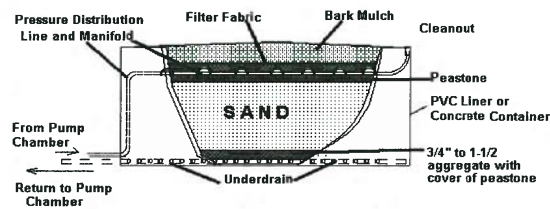


Figure 5-6 Packed Bed Filter (Adapted from USEPA)

### Considerations and Restrictions

Sand filters are usually sized using hydraulic data, but consideration must also be given to the organic loading since it acts as a biofilm reactor. This type of system requires significant land area. Based on a typical application rate of 1-2 gallons per day per square foot (gpd/ft<sup>2</sup>), it will require 500-1,000 square feet for the treatment of 1,000 gpd.

Filters may need to be covered to ensure protection against accumulation of debris from the surrounding environment, algae fouling, and an increased hydraulic load from precipitation. Coverings may be as simple as a tarp canopy, which allows ample ventilation of the bed. Otherwise, the filter may be buried in the ground to provide protection and aesthetic concealment. Extra care must be given to filters buried in the ground to ensure ventilation of the bed. Mechanical aeration (blowers) may be required.

A pump station or recycle tank is required prior to the packed-bed filters to assist with equal distribution in the dosing pipelines across the media bed area.

Use of a packed bed system requires the selection of a disposal system (see Chapter 4).

### Effluent Quality

Effluent BOD is typically 5 mg/L and TSS is typically about 10 mg/L. Biological nitrogen removal is approximately 18-33%. Fecal coliforms are reduced by 99 to 99.99%.

### Typical Installed Costs (2007)

This cost includes the excavation, the media, the underdrain, and the dosing pump. The price range for media is \$10-\$15 per square foot of bed area. For a 250-1,000 square foot media filter, costs should range between \$15,000 and \$30,000. This cost does not include the cost for a preloader, if required, or the cost for a disposal system. See Septic Tanks for a cost range for preloaders. See Chapter 4 for the costs of disposal systems.

### Operational and Maintenance Costs

Operational costs include electricity for pumping and semi-skilled labor. Electrical costs can be estimated at \$20-30 a year at 0.3-0.4 kW-h/day, and management costs at \$150-200 per year. Every 3-4 months the filter should be inspected, and the top layer (1 inch) of media should be scraped off periodically (3 months-1 year) and properly disposed. Power outages affect the performance of sand filters, and extended outages may result in odors.

### Packed-bed Reactor Summary

|                                     |                                |
|-------------------------------------|--------------------------------|
| Meets NSF 40 Standards              | Yes                            |
| Effluent BOD:                       | 2-10 mg/L                      |
| Effluent TSS:                       | 3-16 mg/L                      |
| Removes 50% total influent nitrogen | Possible                       |
| Effluent Nitrogen:                  | 0.5-8 mg/L                     |
| Effluent Phosphorus:                | 3-12 mg/L                      |
| Effluent Fecal Coliform:            | 1,000 /100 mL                  |
| Maintenance Level:                  | Quarterly                      |
| Power Required:                     | No                             |
| Typical Installed Cost:             | \$15,000-30,000 /1,000 gallons |

## Chlorination

## Fact Sheet C-1

Chlorine is the most commonly used chemical and/or method for disinfection of water and wastewater, and has a long history of use in the US. Chlorine is effective against a wide range of pathogenic organisms. Common forms of chlorine include chlorine gas, solid or liquid chlorine (calcium hypochlorite and sodium hypochlorite), and chlorine dioxide.

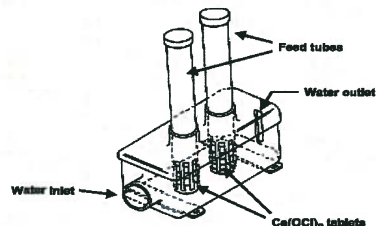


Figure 5-8 Tablet Chlorination Chamber (Adapted from USEPA)

### Considerations and Restrictions

Gaseous chlorine is the most commonly used form; however, due to its highly corrosive nature and significant safety concerns, it is generally not recommended for onsite applications. Liquid hypochlorite solutions are commonly used at small treatment plants, where safety and simplicity are top priorities. Solid hypochlorite (powder or tablets) is common for onsite treatment systems (the same materials used for swimming pools and hot-tubs). All forms of chlorine are generally toxic and corrosive. They require careful handling and storage. The residual chlorine is effective as a disinfectant after the initial treatment. However, even at low concentrations, it can be toxic to aquatic life, and de-chlorination is necessary for discharges to (or impacting) surface waters.

### Effluent Quality

One advantage of using chlorine as a disinfectant is its ability to exist as a residual in wastewater effluent even after initial treatment. Chlorine has been shown to reduce fecal coliforms by 99-99.99%.

### Typical Installed Costs (2007)

A hypochlorite tablet feed system could cost \$800-\$1,000 for 1,000 gallons per day for the system itself. Labor and material costs vary depending on whether the tablet feeder is part of a pre-packaged system or added to an existing system. A gas chlorine system may cost \$75,000 to treat 100,000 gallons per day.

### Operation and Maintenance Costs

Operational costs for a tablet system are approximately \$30-\$50 per year for tablets, \$75-\$100 per year in labor, and \$15-\$25 per year in repairs and replacements.

Estimated cost for a gaseous chlorine system is approximately \$4,500 for chemicals, \$4,000 for labor, \$4,000 for power, and \$6,000 for materials.

Operating and maintenance cost and tasks include power consumption, cleaning, chemicals and supplies, repairs, and labor.

#### Chlorination Summary

|                                     |                              |
|-------------------------------------|------------------------------|
| Meets NSF 40 Standards              | NA                           |
| Effluent BOD:                       | - mg/L                       |
| Effluent TSS                        | - mg/L                       |
| Removes 50% total influent nitrogen | NA                           |
| Effluent Nitrogen:                  | - mg/L                       |
| Effluent Phosphorus:                | - mg/L                       |
| Effluent Fecal Coliform:            | 1000-10000 /100 mL           |
| Maintenance Level:                  | Quarterly                    |
| Power Required:                     | No                           |
| Typical Installed Cost:             | \$800-\$1,000 /1,000 gallons |

## UV Disinfection

## Fact Sheet C-2

Ultraviolet (UV) light is a physical disinfection agent that takes advantage of the germicidal properties of UV in the range of 240-270 nm. This radiation penetrates the cell wall of organisms, preventing reproduction. The effectiveness of UV disinfection depends on the characteristics of wastewater (particularly clarity as measured by turbidity), UV intensity, time of exposure, and reactor configuration.

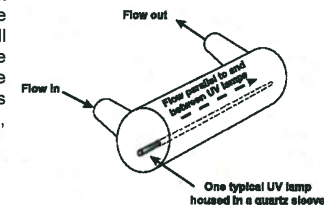


Figure 5-9 Ultraviolet Radiation Chamber (Adapted from USEPA)

### Considerations and Restrictions

UV is effective in the inactivation of most viruses, spores, and cysts. UV eliminates the handling and storage of hazardous or toxic chlorine chemicals. However, UV performance is highly dependent on the quality of the wastewater it is disinfecting. High turbidity and total suspended solids will shield bacteria, making UV treatment ineffective.

### Effluent Quality

UV disinfection is lacking in field studies, but typical units treating sand filter effluents can reduce fecal coliforms by 99.9%.

### Typical Installed Costs (2007)

The component cost for a UV system is between \$1,000-\$2,000 per 1,000 gpd. Labor and material costs vary depending on whether the system is a built-in component of a packaged treatment system or added as an off-the-shelf component to enhance an existing system.

### Operation and Maintenance Costs

Annual power costs are \$35-\$45, labor \$50-\$100, and lamp replacement \$70-\$80 per year. Power consumption is about 35 W or 307 kW-h/y.

#### UV Disinfection Summary

|                                     |                                |
|-------------------------------------|--------------------------------|
| Meets NSF 40 Standards              | NA                             |
| Effluent BOD:                       | - mg/L                         |
| Effluent TSS                        | - mg/L                         |
| Removes 50% total influent nitrogen | NA                             |
| Effluent Nitrogen:                  | - mg/L                         |
| Effluent Phosphorus:                | - mg/L                         |
| Effluent Fecal Coliform:            | ~1,000 /100 mL                 |
| Maintenance Level:                  | Quarterly                      |
| Power Required:                     | Yes                            |
| Typical Installed Cost:             | \$1,000-\$2,000 /1,000 gallons |

| Table 6-1 Typical Small Flows Wastewater Treatment System Effluent Water Quality |             |                              |                                         |                          |                                  |                                   |
|----------------------------------------------------------------------------------|-------------|------------------------------|-----------------------------------------|--------------------------|----------------------------------|-----------------------------------|
| SYSTEM                                                                           | BOD<br>mg/L | TSS mg/L                     | Total<br>Nitrogen<br>mg/L               | Total Phosphorus<br>mg/L | Fecal Coliforms<br>per 100 mL    | COMMENTS                          |
| Cluster systems                                                                  | 132-217     | 49-161                       | 39-82                                   | 11-22                    | 1 – 100 million                  | Assuming STEP system              |
| Lagoons                                                                          | 60-140      | Variable                     | Up to 60% removal                       | Minimal Removal          | Variable                         |                                   |
| Oxidation Ditches                                                                | <10         | <10 if settling tank is used | Total removal with designed anoxic zone | Minimal Removal          | Variable                         |                                   |
| Attached Growth<br>Aerobic reactors                                              | <30         | <30                          | <30                                     | ~10                      | >2000                            | California Water Boards           |
| Constructed Wetlands                                                             | 2-7         | <20                          | <30                                     | Minimal removal          | 90-99% removal w/HRT of 3-7 days |                                   |
| Membrane Bioreactors                                                             | <5          | <2                           | 3                                       | 0.5                      | <200                             | Data from manufacturers' websites |

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| Table 6-2 Advantages and Disadvantages of Small Flows Wastewater Treatment and Disposal Systems |                                                                                                                                                                                                                                                                       |  |                                                                                                                                                                                                                          |
|-------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| System                                                                                          | Advantages                                                                                                                                                                                                                                                            |  | Disadvantages or Limitations                                                                                                                                                                                             |
| Cluster systems                                                                                 | <ul style="list-style-type: none"> <li>May be economical for small communities without sewers</li> <li>Transfers non-point discharges to a point discharge that may be more easily monitored and managed</li> <li>Requires less space than reliance on IWS</li> </ul> |  | <ul style="list-style-type: none"> <li>Concentrates pollutants in one location for disposal</li> <li>Requires very structured and delineated management system to assign responsibility to designated parties</li> </ul> |
| Lagoons                                                                                         | <ul style="list-style-type: none"> <li>Passive system with little or no energy requirements</li> <li>Large volume able to buffer shock loads</li> </ul>                                                                                                               |  | <ul style="list-style-type: none"> <li>Vector control (mosquitoes) must be managed</li> <li>Nuisance odors may be caused by anaerobic conditions</li> </ul>                                                              |
| Oxidation Ditches                                                                               | <ul style="list-style-type: none"> <li>High BOD removal</li> <li>Can be engineered to remove almost all nitrogen</li> </ul>                                                                                                                                           |  | <ul style="list-style-type: none"> <li>Aeration or mixing require power consumption</li> </ul>                                                                                                                           |
| Attached Growth<br>Reactors                                                                     | <ul style="list-style-type: none"> <li>Can reduce energy costs per unit of organic removal</li> </ul>                                                                                                                                                                 |  | <ul style="list-style-type: none"> <li>Odors and poor effluent quality may result from poor design.</li> </ul>                                                                                                           |
| Constructed Wetlands                                                                            | <ul style="list-style-type: none"> <li>Natural process</li> <li>Good process to treat wastewater prior to discharge to surface water</li> <li>Nitrification and denitrification occur</li> </ul>                                                                      |  | <ul style="list-style-type: none"> <li>Demands large land area</li> <li>If free surface wetlands are constructed, there is a threat of mosquitoes or other insect vectors.</li> </ul>                                    |
| Membrane Bioreactors                                                                            | <ul style="list-style-type: none"> <li>Extremely high quality effluent in small space</li> </ul>                                                                                                                                                                      |  | <ul style="list-style-type: none"> <li>Costly to build</li> <li>Operating conditions may cause fouling which leads to more frequent and costly cleaning</li> </ul>                                                       |



## Constructed Wetlands Fact Sheet SF-5

A constructed wetland (CW) is a man-made, marsh-like area that is designed and built to provide wastewater treatment. A lined bed of washed gravel is planted with hydroponic species whose roots absorb nutrients and create areas for aerobic treatment to take place. CWs can be designed for discharge to SWIS and will require disinfection for reuse or discharge to surface or groundwater. CWs can be generally categorized into two categories: subsurface and free flowing or surface constructed wetlands. Subsurface wetlands are designed for fluid flow that is below ground level, whereas free flow wetlands allow for wastewater to approach the surface.

### Considerations and Restrictions

Wastewater pretreatment is required prior to the use of CWs. These operations include settling with a septic tank and/or screening mechanisms. CWs generally require more land space than other treatment methods, require a start-up period to establish the vegetation, must be designed such that rainfall runoff will not collect in the bed, and be designed to receive ample sunlight. Currently, there are no regulations in HAR 11-62 governing CWs, so the use of such systems requires approval. Safety issues and public access should be considered when designing and constructing CWs. Vector problems, such as mosquitoes, must be considered.

### Effluent Quality

The expected BOD and TSS removal can be 60-80% for BOD and 50-90% for TSS, but depends on the nature and characteristics of the influent. Removal of nitrogen can be effective. For the typical constructed wetland located at the Riveredge Nature Center, effluent quality for a system receiving 2,000-9,300 gpd of wastewater is about 3.7 mg/L of BOD, 17.2 mg/L of TSS, and fecal coliforms of 54 per 100 mL.

### Typical Installed Costs (2007)

According to the USEPA, a free flow, surface wetland should cost about \$2,000-\$4,000 per 1,000 gpd treated. However, for large disposal flows, the costs could approach \$15,000 per 1,000 gpd treated.

### Operation and Maintenance Costs

Operation and maintenance required for a CW is minimal and may include mosquito control. Occasional maintenance of the vegetation to promote growth of desired vegetation and maintaining hydraulic capacity is required. Proper maintenance of upstream processes is necessary to prevent clogging of the gravel bed.

#### Constructed Wetlands Summary

|                                     |                                 |
|-------------------------------------|---------------------------------|
| Meets NSF 40 Standards              | No                              |
| Effluent BOD                        | <10 mg/L                        |
| Effluent TSS                        | <20 mg/L                        |
| Removes 50% total influent nitrogen | Possibly                        |
| Effluent Nitrogen                   | <20 mg/L                        |
| Effluent Phosphorus                 | - mg/L                          |
| Effluent Fecal Coliform             | <100 /100 mL                    |
| Maintenance Level:                  | Medium                          |
| Power Required:                     | No                              |
| Typical Installed Cost:             | \$2,000-\$15,000 /1,000 gallons |

Table 4-1 Summary of Typical Disposal System Effluent Water Quality

| DISPOSAL SYSTEM                                    | BOD mg/L          | TSS mg/L         | Total Nitrogen mg/L | Total Phosphorus mg/L | Fecal Coliforms Per 100 mL | COMMENTS                                                     |
|----------------------------------------------------|-------------------|------------------|---------------------|-----------------------|----------------------------|--------------------------------------------------------------|
| Holding Tank (Septic Tank effluent in parenthesis) | 100-400 (132-217) | 100-400 (49-161) | 14-40 (39-82)       | 5-20 (11-22)          | 1 - 100 million            |                                                              |
| Cesspool                                           | 100-400           | 100-400          | 15-90               | 5-20                  | 1-100 million              |                                                              |
| Seepage Pit                                        |                   |                  | 78 mg/kg soil       |                       | ~10,000                    | Reported by Field et al at 3 m below pit and 30 cm from edge |
| Absorption Trenches                                | <30               | 4                | 1                   | <2                    | 13                         |                                                              |
| Absorption Beds                                    | <30               | 4                | 1                   | <2                    | 13                         |                                                              |
| Elevated Mounds                                    | <30               | <20              | <15                 | <2                    | 13                         |                                                              |
| Evapotranspiration                                 | Varies            | Varies           | Varies              | Varies                | Varies                     |                                                              |
| Water Reuse                                        | < 30 mg/L         | < 30 mg/L        | No specs.           | No specs              | < 23                       | Requirements for R-2 water                                   |



## Holding Tanks

## Fact Sheet D-1

A holding tank is a watertight concrete or plastic tank that receives either raw or treated wastewater and stores it until a pumping contractor can haul the wastewater away. Typically, holding tanks are used only as a temporary disposal system until a connection to a public system is established or an existing disposal system can be repaired or upgraded. The tank should be able to hold 2-3 days worth of storage, requiring a hauler to remove wastewater every other day before it becomes septic or overflows. Holding tanks are only allowed in public facilities.

### Considerations and Restrictions

Holding tanks must be structurally sound and must remain watertight. Holding tanks are considered a temporary system until a better system can be installed. Consideration should be given to providing venting for odor control and sizing of the tank to account for any gases that may be produced due to anaerobic reactions occurring in the tank. Alarms for overflow or strict monitoring of the holding tanks is necessary to prevent overflowing wastewater.

### Effluent Quality

If any treatment occurs, it is anaerobic in nature, producing odorous gases. No treatment can be assumed.

### Typical Installed Costs (2007)

Assuming the excavation and cost of the tank itself are the slightly higher than septic tanks, the cost of installing a complete holding tank is \$10,000-\$25,000.

### Operation and Maintenance Costs

Periodic pumping is required in order to prevent backups into the plumbing leading to the holding tank. For pumping up to 2 to 3 times per week, the cost would be \$1,600 -\$2,400 per month or \$19,200 to \$28,800 per year.

### Holding Tanks Summary

|                                                             |                                   |
|-------------------------------------------------------------|-----------------------------------|
| Use in Steep Terrain                                        | Any terrain                       |
| Use in High Ground Water Areas                              | Yes                               |
| Percolation Rate                                            | N/A                               |
| Relative Footprint When Compared To Conventional Drainfield | Small                             |
| Maintenance Level:                                          | High                              |
| Power Required:                                             | No                                |
| Typical Installed Cost:                                     | \$10,000 -\$25,000 /1,000 gallons |

**Table 4-3 Advantages and Disadvantages of Typical Disposal Systems**

| Disposal System     | Advantages                                                                                                                                                   | Disadvantages or Limitations                                                                                                                                                                                                                                                                                                                                                                      |
|---------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Holding Tank        | <ul style="list-style-type: none"> <li>Zero discharge to surrounding area</li> </ul>                                                                         | <ul style="list-style-type: none"> <li>Generally a temporary solution to a problem</li> <li>Must be pumped on regular basis</li> <li>Possible odors</li> <li>Minimal treatment of sewage</li> </ul>                                                                                                                                                                                               |
| Cesspool            | <ul style="list-style-type: none"> <li>May already exist</li> <li>No power consumption</li> </ul>                                                            | <ul style="list-style-type: none"> <li>Surface area needed for percolation may make pit so deep it discharges to groundwater</li> <li>Large percolation area may require multiple pits, increasing price drastically</li> <li>Limited by steep terrain and land area</li> <li>Sides of the trenches are not credited to percolation area</li> </ul>                                               |
| Seepage Pit         | <ul style="list-style-type: none"> <li>Can be easily installed where a cesspool once existed</li> <li>Can be used in very steep terrain locations</li> </ul> | <ul style="list-style-type: none"> <li>Surface area needed for percolation may make pit so deep it discharges to groundwater</li> <li>Large percolation area may require multiple pits, increasing price drastically</li> <li>Limited by steep terrain and land area</li> <li>Sides of the trenches are not credited to percolation area</li> </ul>                                               |
| Absorption Trenches | <ul style="list-style-type: none"> <li>Most common means of disposal</li> <li>Excavation does not disturb soil properties</li> </ul>                         | <ul style="list-style-type: none"> <li>Extremely limited by steep terrain</li> </ul>                                                                                                                                                                                                                                                                                                              |
| Absorption Beds     | <ul style="list-style-type: none"> <li>Area of the entire bed bottom is credited to percolation area</li> </ul>                                              | <ul style="list-style-type: none"> <li>Extremely limited by steep terrain</li> </ul>                                                                                                                                                                                                                                                                                                              |
| Elevated Mounds     | <ul style="list-style-type: none"> <li>A soil absorption system to overcome limitations regarding poor soil or proximity to groundwater</li> </ul>           | <ul style="list-style-type: none"> <li>Increased cost due to additional backfill requirements</li> <li>Requires energy consumption due to pumping wastewater to above ground dispersion system</li> </ul>                                                                                                                                                                                         |
| Evapotranspiration  | <ul style="list-style-type: none"> <li>Non-leaching system</li> <li>Can be used above U/C line with approval</li> </ul>                                      | <ul style="list-style-type: none"> <li>Works well in arid areas where the rate of evaporation is greater than the rate of precipitation</li> <li>Requires energy</li> <li>Requires additional storage capacity</li> <li>Requires lysimeter monitoring</li> <li>May be best suited to daily flow rates larger than the scope of this study</li> <li>Requires backup disposal or storage</li> </ul> |
| Water Reuse         | <ul style="list-style-type: none"> <li>Reduces water demand for potable water for irrigation</li> <li>Considered zero discharge</li> </ul>                   | <ul style="list-style-type: none"> <li>Reduces water demand for potable water for irrigation</li> <li>Considered zero discharge</li> </ul>                                                                                                                                                                                                                                                        |

## Cesspools

## Fact Sheet D-2

Cesspools are generally large, cylindrical, lined excavations used to receive untreated wastewater. Solids are retained and the liquid percolates into the surrounding soil. A cesspool is either lined with rock, or constructed with mortar-less brick or perforated concrete rings. Cesspools are not considered a treatment system because virtually no treatment occurs that would protect the surrounding environment. Therefore, cesspools are considered to be only a disposal device.

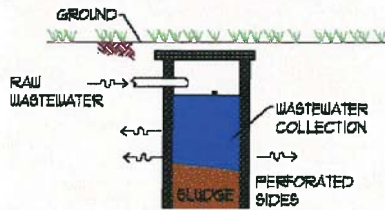


Figure 4-1 Cesspool

### Considerations and Restrictions

New cesspools are severely restricted and prohibited in designated critical wastewater disposal area on all islands as defined in the HAR 11-62. New cesspools are currently still legal in specific areas of Hawaii County. Refer to the CWDA maps in Appendix C. Because of the slow decomposition rate, the solids in the wastewater will eventually clog the cesspool. The pores of the lining can be re-opened using caustic soda or a very strong acid. However, even these solvents will eventually fail to open the pores, and the cesspool will have to be closed and replaced.

### Effluent Quality

Effluent quality is only slightly better than the quality of raw wastewater as only large solids are removed from the wastewater. When used following a treatment system, no treatment is assumed and the cesspool functions as a seepage pit (see D-3).

### Typical Installed Costs (2007)

\$15,000 for excavation, lining and backfill.

### Operation and Maintenance Costs

The organic solids that settle to the bottom of the cesspool decompose at a very slow rate, resulting in accumulation of solids. Because of this accumulation, periodic pumping is required, ranging from \$150 to \$550 per visit, depending on site conditions and volume pumped.

#### Cesspools Summary

|                                                             |                               |
|-------------------------------------------------------------|-------------------------------|
| Use in Steep Terrain                                        | Yes                           |
| Use in High Ground Water Areas                              | No                            |
| Percolation Rate                                            | Designated by DOH             |
| Relative Footprint When Compared To Conventional Drainfield | Small                         |
| Maintenance Level:                                          | Low                           |
| Power Required:                                             | No                            |
| Typical Installed Cost:                                     | up to \$15,000 /1,000 gallons |

## Seepage Pits

## Fact Sheet D-3

The construction of a seepage pit is similar to that of a cesspool. The difference between the two is that the seepage pit receives treated wastewater, whereas a cesspool receives untreated wastewater. The effective absorption area of a seepage pit is measured along the sidewalls of the pit. No allowance is made for the bottom of the pit according to HAR 11-62.

### Considerations and Restrictions

Seepage pits should be considered when the land area available to dispose of effluent is insufficient for absorption beds/trenches, when the terrain is too steep for other disposal systems or when an impermeable layer overlies more suitable soil. Design criteria should be referenced in HAR 11-62.

Seepage pits are often found where cesspools once existed. The addition of a septic tank or other treatment system upstream from the cesspools enables the owner to consider converting the cesspool into a seepage pit, if the cesspool does not have any problems like spills or overflows. However, in cases where a new seepage pit is to be installed, it may be more expensive than other systems due to the greater depth of excavation. Seepage pits may also be sited such that they are below the aerobic zone in soil, resulting in little or no oxidation of organic compounds as compared to shallower systems such as absorption systems.

### Effluent Quality

There have been few studies that have investigated the effluent characteristics of seepage pits. It is commonly believed that seepage pits do not provide the same level of treatment as other disposal systems. However, in a 2007 study, it was shown that seepage pits in loamy soil eliminated E. Coli, a fecal coliform, from wastewater as well as absorption trenches did. Organic loads adjacent to the absorption trenches were actually higher than they were for the seepage pits. Effluent from seepage pits was also lacking in ammonia nitrogen, indicating effective nitrification. Total nitrogen was similar to background levels within six feet of the bottom of the seepage pits.

### Typical Installed Costs (2007)

Conversion of a cesspool into a seepage pit will cost approximately \$5,000. Installing a new seepage pit is much more expensive, depending on the soil conditions, but will generally cost approximately \$10,000 each. Multiple seepage pits may be required, depending upon site-specific percolation rates.

### Operation and Maintenance Costs

The overwhelming issue for seepage pits is not the maintenance of the pits themselves, but the maintenance of the treatment systems preceding the pits. Proper operation and maintenance of the septic tank(s) or ATU(s), extends the life of the seepage pit and decreases the likelihood of solids clogging in the seepage pit. If upstream processes allow passage of solids to the seepage pit, periodic sludge pumping will be required.

#### Seepage Pits Summary

|                                                             |                         |
|-------------------------------------------------------------|-------------------------|
| Use in Steep Terrain                                        | Yes                     |
| Use in High Ground Water Areas                              | Usually no              |
| Percolation Rate                                            | Faster than 60 min/in   |
| Relative Footprint When Compared To Conventional Drainfield | Small                   |
| Maintenance Level:                                          | Low                     |
| Power Required:                                             | No                      |
| Typical Installed Cost:                                     | \$10,000 /1,000 gallons |

## Absorption Beds

## Fact Sheet D-5

Absorption beds are subsurface wastewater infiltration systems (SWIS) that have beds at least three feet wide. Absorption beds are similar to absorption trenches. For an absorption trench system, there is a distinct section of undisturbed soil between the absorption trenches. With an absorption bed, the area designated for disposal is excavated, and a layer of gravel is installed with the distribution pipe laid atop. In the case of gravelless systems, the plastic chambers are laid on the exposed soil. In essence, the wastewater will be spread over the entire area, instead of restricted to beneath the distribution pipe.

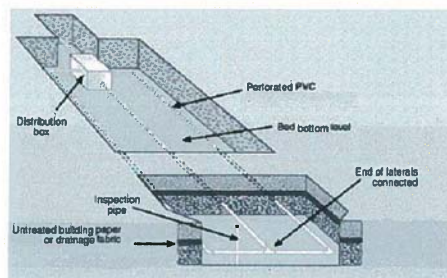


Figure 4-3 Bed disposal system (Adapted from Kent County, DE DPW)

### Considerations and Restrictions

Beds are not allowed in terrain with slopes exceeding 8%. Since the entire area of the bed is considered as absorption area the total amount of land required is smaller compared to an absorption trench system. Roots from bushes and trees will damage the performance of the absorption system, therefore, root barriers should be utilized.

### Effluent Quality

Effluent quality from an absorption bed will be similar to that of absorption trenches (see D-4).

### Typical Installed Costs (2007)

These costs include excavation, gravel, piping, and/or plastic chambers/storage panels. Typical costs are about \$7,000-\$18,000 per 1,000 gpd of treated wastewater.

### Operation and Maintenance Costs

Operational and maintenance issues are the same as for trenches. See Appendix A for tips extending the functional life of SWIS.

#### Absorption Beds Summary

|                                                             |                                 |
|-------------------------------------------------------------|---------------------------------|
| Use in Steep Terrain                                        | <8% slope                       |
| Use in High Ground Water Areas                              | No                              |
| Percolation Rate                                            | Faster than 60 min/in           |
| Relative Footprint When Compared To Conventional Drainfield | Medium                          |
| Maintenance Level:                                          | Low                             |
| Power Required:                                             | No                              |
| Typical Installed Cost:                                     | \$7,000-\$18,000 /1,000 gallons |

## Elevated Mounds

## Fact Sheet D-6

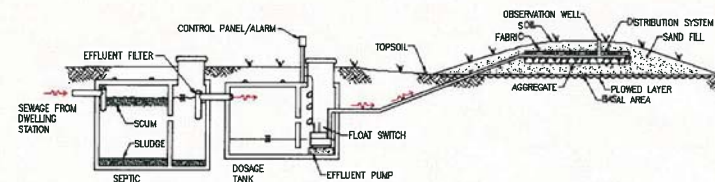


Figure 4-4 Elevated Mound System

Elevated mound systems are engineered mounds of sand/soil used to create acceptable soil conditions for effluent disposal and/or to create vertical separation from groundwater. The land on which the mound will be placed is first tilled, and a layer of sand and distribution system is placed over the tilled surface. The top of the mound is covered with surrounding soil and aesthetically landscaped.

### Considerations and Restrictions

Mounds are commonly used in areas where absorption trenches and beds cannot be used, such as when the terrain is excessively steep, when there is a high groundwater table, or when the soil percolation rate is not conducive for a SWIS. Landscaping is required as the mounds could reach a height of three feet. As shown in the figure above, the disposal point is higher than the treatment system, therefore a pump system will be required.

### Effluent Quality

Effluent quality for an elevated mound system is similar to that of an absorption trench or bed (see D-4).

### Typical Installed Costs (2007)

Construction costs range from \$10,000 to \$15,000, but can go as high as \$25,000 per 1,000 gpd of treated wastewater in Hawaii.

### Operation and Maintenance Costs

Since the elevated mound system requires a pump to lift the effluent to the specific elevation, the pump's power costs need to be budgeted. The estimated power consumption is approximately 100 - 300 kW-h per year. The same care must be provided to the mound as would be provided to trenches or beds. See Appendix A for tips on maintenance.

#### Elevated Mounds Summary

|                                                             |                               |
|-------------------------------------------------------------|-------------------------------|
| Use in Steep Terrain                                        | Yes                           |
| Use in High Ground Water Areas                              | Yes                           |
| Percolation Rate                                            | All                           |
| Relative Footprint When Compared To Conventional Drainfield | Large                         |
| Maintenance Level:                                          | Medium                        |
| Power Required:                                             | Yes                           |
| Typical Installed Cost:                                     | up to \$25,000 /1,000 gallons |



## Evapotranspiration

## Fact Sheet D-7

Evapotranspiration (ET) is the combined effect of wastewater disposal by direct evaporation and by plant transpiration. ET is the discharge of pretreated effluent to a porous bed containing water-tolerant plants. Wastewater effluent is discharged into the bed, and wicking or capillary action draws the water to the surface where it is either taken up by the plants and transpired or evaporated from the surface of the bed. These systems may or may not be designed with an impermeable liner. If the system is designed with a liner, the system is considered "zero-discharge", and disposal is strictly dependent on transpiration through the plants and evaporation. However, if the liner is not used, the disposal system sizing criteria can also account for absorption via the soil. This type of system is known as evapotranspiration-infiltration (ETI). ET and ETI require large surface areas for year round disposal and are most suited for very arid climates where evaporation rates are much higher than precipitation rates.

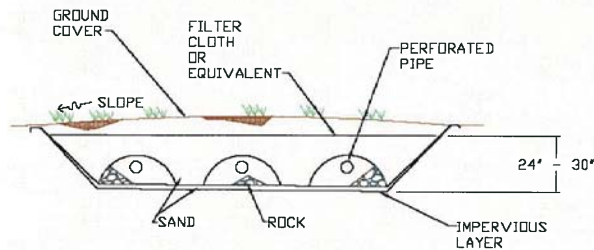


Figure 4-5 Cross Section of an ET Bed

Typical components of an ET system may include drip or distribution lines, a flushing and filtering mechanism, a controller to automate the dosing cycles, a distribution pump, and several alternating drainfields. DOH approves these systems on a case-by-case basis, and systems exist in the State of Hawaii. Record keeping of lysimeter (soil pore water sampler) data is required to ensure that this alternative system is operating effectively.

### Considerations and restrictions

These systems are considered non-standard/alternative systems by DOH. Evapotranspiration is best suited for environments where the rate of evaporation significantly exceeds the rate of precipitation. Zero discharge systems, like evapotranspiration, that prevent wastewater from leaving the site (and/or reaching groundwater) can be used above the UIC line, pending approval from DOH on a case-by-case basis. Other considerations include:

- Stormwater runoff should drain away from the system. Gutters and drainpipes shall be directed away from the system.
- Use high transpiration plants suitable for the wetness at ground level.
- Consider additional ET/ETI beds as required to enable owner to deal with operating difficulties or system failures and alternate loads.

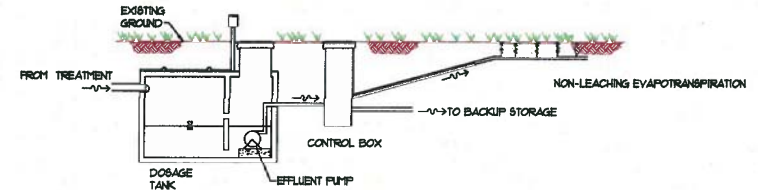


Figure 4-6 Subsurface Evapotranspiration Profile of Typical ET System

### Effluent Quality

Few studies have adequately quantified the quality of the effluent from this disposal system. Trial and error has been the norm for these types of systems, so success rates are very hard to determine, as well as quality of effluent.

### Typical Installed Costs (2007)

Because of the large surface area used, ET/ETI systems can be expensive. Values can range between \$15,000 and \$25,000 per 1,000 gpd of treated wastewater.

### Operation and Maintenance Costs

Operational costs are on the order of \$20 a year for simple inspection of observation wells, plus electrical costs for pumping when needed. Other maintenance requirements include minor landscape work, such as trimming the vegetation. Upstream treatment operations and processes should be properly maintained and pumped as needed to avoid overflow of solids into the ET bed.

### Evapotranspiration Summary

|                                                             |                               |
|-------------------------------------------------------------|-------------------------------|
| Use in Steep Terrain                                        | No                            |
| Use in High Ground Water Areas                              | Yes                           |
| Percolation Rate                                            |                               |
| Relative Footprint When Compared To Conventional Drainfield | Large                         |
| Maintenance Level:                                          | High                          |
| Power Required:                                             | Yes                           |
| Typical Installed Cost:                                     | up to \$25,000 /1,000 gallons |

The reuse of wastewater for non-potable needs can offset potable water use thereby reducing overall demand on the potable water supply. Therefore, water reuse or reclamation has become increasingly popular. If an effluent meets certain Department of Health water quality requirements, then the recycled water can be utilized in landscaping, agricultural irrigation, and even toilet flushing.

The highest level quality of recycled water defined by DOH is R-1, and is the only level of recycled water that may be used above the UIC line, on a case-by-case basis. The requirements for R-1 recycled water are quite strict and fairly expensive to achieve with a small flow onsite treatment system. However, the requirements for R-2 and R-3 water are less stringent making recycling of effluent less difficult.

**Considerations and Restrictions**

Care should be taken to ensure that there is no crossing of recycled water lines and potable water lines. Distinguishing markings (standard purple pipe) should be used to identify recycled water lines. Strict monitoring and record keeping are required. The frequencies and types of parameters to be monitored are determined by the level of effluent quality and the method of application of the recycled water. Daily, weekly, and annual records of the treatment and water reuse project may be required. The State of Hawaii Department of Health has published *Guidelines for the Treatment and Reuse of Recycled Water*, available at the DOH website <http://www.hawaii.gov/health/environmental/water/wastewater/forms.html>. These guidelines will help in the planning and design of any wastewater recycling system. The frequency of monitoring and reporting may be reduced for on-site systems by DOH on a case-by-case basis.

**Effluent Quality**

Recycling of water does not improve the quality of the effluent, but it does have minimum standards that must be met to be safe for human health and the environment.

**Typical Installed Costs (2007)**

The costs associated with the specific concept of recycling water are too specific to give a general price range

**Operation and Maintenance Costs**

Without a definitive concept of a proposed system, operation and maintenance costs cannot be generalized.

**Wastewater Reuse Summary**

|                                                             |                 |
|-------------------------------------------------------------|-----------------|
| Use in Steep Terrain                                        | Approval needed |
| Use in High Ground Water Areas                              | Possible        |
| Percolation Rate                                            | All             |
| Relative Footprint When Compared To Conventional Drainfield | Unknown         |
| Maintenance Level:                                          | Unknown         |
| Power Required:                                             | Unknown         |
| Typical Installed Cost:                                     | Unknown         |