



Puna Historic Trail
**STAKEHOLDER ACTION
PLAN**



**FINAL REPORT
AUGUST 2024**



TABLE OF CONTENTS

Introduction	1
Planning Area	2
Purpose of this Action Plan	3
Previous Studies Funded by DOFAW	3
Current Management	5
Planning Process	7
Puna Trail	9
Description	10
History of the Trail	14
Cultural and Archaeological Resources	16
Issues	24
Regulatory Analysis	29
State Land Use District (SLUD)	30
County of Hawai'i Zoning	30
Special Management Area	31
Marine Managed Area	31
Summary of Outreach Activities	33
Trail Survey: October 2023 to Present	34
Revitalize Puna: October 21, 2023	43
KS Class Visit: November 8, 2023	47
Kilo Workshop with Nāwahī: December 8 & 15, 2023	50
Honuaiākea: February 24-25, 2024	54
Action Plan	55
Continued Stakeholder Engagement	71
Hawaiian Paradise Park Community	71
Fishermen	71
Kea'au Students	72
Hula Community	72
References	73

LIST OF FIGURES

Figure 1. Planning Area Map	2
Figure 2. Trailhead Sign	5
Figure 3. Boulders blocking vehicular access onto trail	6
Figure 4. Bollards on trail	6
Figure 5. Signage at Hā'ena	6
Figure 6. Summary of outreach participants	7
Figure 7. Trailhead parking lot	10
Figure 8. Start of the Nā Ala Hele-managed trail	10
Figure 9. Historic rock wall along trail	10
Figure 10. Current at Hā'ena. Photo captured by 11th grade Nāwahī student.	11
Figure 11. Rocky coastline along the Puna Trail	13
Figure 12. Map of "Old Government 10 Foot Road" (Smith, 1933)	15
Figure 13. Tidepools at Hā'ena. Photo captured by 11th grade Nāwahī student.	16
Figure 14. Ocean off of the Puna coast	20
Figure 15. Pākī petroglyphs. Photo courtesy of Kumu Pono Associates LLC.	21
Figure 16. Cultural resources along the Puna Trail and at Hā'ena Beach	22
Figure 17. School of mullet at Hā'ena. Photo captured by 11th grade Nāwahī student.	23
Figure 18. Vehicle driving on trail. Photo courtesy of DLNR DOCARE.	24
Figure 19. Groups of people relaxing on the beach at Hā'ena	24
Figure 20. Hā'ena Bay. Photo captured by 11th grade Nāwahī student.	25
Figure 21. Parking at the trailhead parking lot	25
Figure 22. Abandoned vehicle on trail. Photo courtesy of DLNR DOFAW.	25
Figure 23. Turtle at Hā'ena	25
Figure 24. Large mudhole on trail from vehicle use	26
Figure 25. Two mullet caught out of season at Hā'ena. Photo courtesy of WHSL.	26
Figure 26. Dog food left near the trailhead. Photo courtesy of WHSL.	26
Figure 27. Burned area along trail from small fire in September 2022. Photo courtesy of WHSL.	27
Figure 28. Invasive autograph trees along the start of the trail	27
Figure 29. Graffiti on historic WWII bunker along trail	27
Figure 30. SLUD and County Zoning map	30
Figure 31. SMA and MMA map	31
Figure 32. Resources and Issues Poster	43
Figure 33. Puna stickers	44
Figure 34. Historic rock wall along the Puna Trail, featuring the traditional 'alā stones used in construction of the ala loa.	44
Figure 35. Comment cards used for Revitalize Puna Event	45
Figure 36. Townscape's booth at the Revitalize Puna Event	46
Figure 37. Hā'ena. Photo captured by 11th grade Nāwahī student.	50
Figure 38. Townscape staff demonstrating to 11th grade Nāwahī students how to operate a drone	51
Figure 39. Purple Mai'a staff facilitating one of the kilo activities along the beach	52
Figure 40. Nāwahī students recording their observations on the trail	52
Figure 41. Stakeholder Action Plan graphic	56

LIST OF APPENDICES

APPENDIX A	Public Draft Plan Comment Matrix
APPENDIX B	Kilo Workshop - Quantitative Data Sheet
APPENDIX C	Kilo Workshop - Qualitative Data Sheet
APPENDIX D	Honuaiākea Report





INTRODUCTION

PLANNING AREA

The Puna Trail is situated along the eastern coastline of the island of Hawai'i, within the moku of Puna and ahupua'a of Kea'au. The currently managed trail, which historically encircled the entire island, begins at the end of Beach Road in the Hawaiian Paradise Park (HPP) residential subdivision and terminates at Hā'ena Beach. The trail's Right-of-Way is 10 feet, meaning that the State owns a 10-foot wide corridor encompassing the trail, while the surrounding area on both sides of the trail is private property under the ownership of W.H. Shipman Limited (WHSL). This 2.9-mile stretch of trail is managed under the Department of Land and Natural Resources (DLNR) Division of Forestry and Wildlife (DOFAW) Nā Ala Hele Trail and Access Program (Nā Ala Hele).

At the start of the trail, a small gravel lot situated on WHSL-owned property is utilized by Nā Ala Hele for hiker parking. This access is facilitated through a formal Memorandum of Agreement (MOA) established between Nā Ala Hele and W.H. Shipman Ltd. While Nā Ala Hele's jurisdiction extends solely to the trailhead and the trail itself, this action plan acknowledges the entire coastal stretch makai of the trail, along with the beach and waters of Hā'ena. Recognizing that the trail is what carries people to the coast, issues along the trail inevitably spill into the coastal area. Therefore, an analysis of this larger area beyond the trail, and involvement of a wider range of stakeholders, is essential for the effective management of this region.

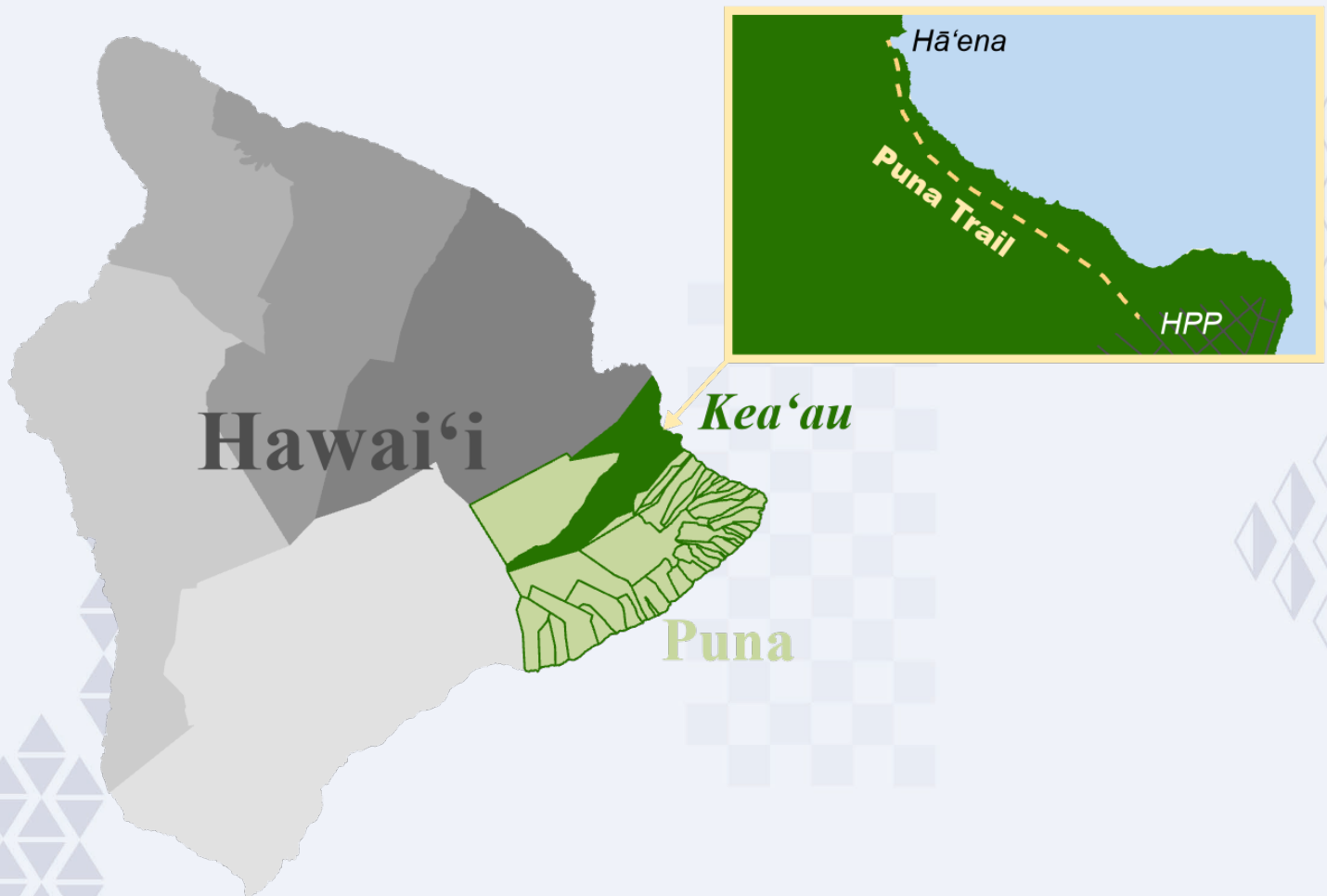


Figure 1. Planning Area Map

PURPOSE OF THIS ACTION PLAN

The purpose of this Stakeholder Action Plan is to guide future management of the Puna Trail so that it is utilized in a way that preserves and honors its historic and cultural significance. Given its wealth of unique stories, cultural sites, and natural resources, the Puna Trail requires a place-based management approach. The plan identifies actionable steps to better protect the coastal stretch of the Puna Trail by educating public trail users and enforcing responsible trail use. Additionally, it recommends next steps for continued stakeholder engagement, aiming to build upon the outreach activities initiated during the course of this project.

As described in the subsequent section, the research and community outreach efforts for the Puna Trail began roughly 25 years ago. These endeavors not only informed Nā Ala Hele's decision to open the trail for public use but also provided recommendations for its management and interpretation. However, in line with trends across the State, the trail experienced a surge in popularity driven by social media, coupled with new recreational behaviors spurred by the COVID Pandemic, leading to an increase in use. This, together with continued illegal motorized use along the trail, prompted Nā Ala Hele to initiate this project. They contracted the services of Townscape, Inc., a planning company, to facilitate community engagement. While this Stakeholder Action Plan documents the outreach conducted over the course of the project, its primary objective is to outline actionable steps to educate trail users.

PREVIOUS STUDIES FUNDED BY DOFAW

In 1997, DOFAW funded the University of Hawai'i-Hilo Anthropology Department, under the direction of Barbara Lass, to conduct an archaeological reconnaissance survey of the Puna Trail. Their goal was to understand the extent of cultural resources in the area to determine if the trail could be a public hiking trail. Lass determined that opening the trail for recreational use would not affect any of the cultural sites identified in the survey. She further went on to describe that the development of a public hiking trail "would be an ideal opportunity for public interpretation of the area" (Lass, 1997).

In 1999, DOFAW funded an Archival-Historical Documentary Research, Oral History and Consultation Study, and Limited Site Preservation Plan. This report was prepared by Kepā Maly of Kumu Pono Associates. The purpose of this report was to identify cultural/historical resources and uses of the Puna Trail and to make recommendations for protection and interpretation of the trail and its resources. This study included a literature review, oral history interviews, and consultation with kama'āina. Below is a list of the primary recommendations made by interviewees and consultation participants.

- Nā Ala Hele should seek out, and make every effort to work with descendants of the native families of Kea'au-Maku'u in the development of formalized site treatment plans, long term management of the historic Puna Trail resources, and identifying traditional-based protocols for trail use.
- Nā Ala Hele should work to facilitate the development of a community-based resources management partnership in which native families, the land owner, individuals knowledgeable about trails,

and stakeholder agencies can coordinate long term management programs for the Puna Trail resources.

- A component of such a management plan might include a resident “trail host” or “stewardship” program (similar to that at the Kekaha Kai or Mālaekahana State Parks). It has been suggested that an individual or family descended from the traditional families of the Kea‘au-Maku‘u vicinity be sought out for such a position.
- The historic resources need to be respected, people should be informed that entering the sites is inappropriate (exceptions being lineal descendants, cultural practitioners, and those performing preservation tasks).
- All trail users should be informed that damaging the historic resources is inappropriate and punishable by State Law (Hawai‘i Revised Statutes 6E-11).
- Do not pave the Puna Trail-Old Government Road with asphalt; any restoration should be done in a manner consistent with the historic and natural qualities of the existing landscape.
- If any work occurs on or near the historic resources, prior approval should be obtained from DLNR-State Historic Preservation Division (SHPD), a plan developed, and work should be monitored. (Stones should not be harvested from one site for use on another site or trail repair.)
- Trail use should be limited to non-motorized transportation.
- Explore options for reestablishing a mauka-makai (pedestrian) trail access in Kea‘au.
- The trail and adjoining sites should be periodically monitored by Nā Ala Hele-DLNR-SHPD to ensure that no activities impact the sites, and weekly maintenance schedules should be established to care for sites, grounds, litter, and interpretive needs.
- Interpretive signs should be set in appropriate, unobtrusive locations, to inform the public about: (a) the history and nature of the Puna Trail and adjoining sites; and (b) to inform trail users about the responsibilities that each traveler has for use of the trail—such as remaining on-trail (not trespassing onto private property)—and staying off of cultural and archaeological sites.
- Develop an educational program agreement (including field visits) with the Kea‘au and larger Puna District schools to help foster awareness and appreciation of the historic trail and natural resources of Puna.
- Sensitive sites (for example—caves and possible burial features) should be avoided, and such sites should not be identified on public documents. (The privacy of confidential information will be protected.)
- If inadvertently discovered, burial remains are to be protected in place (if not immediately threatened with damage from natural or man-made causes). Final disposition of remains should be determined in consultation with DLNR-SHPD, and native Hawaiian descendants of the families of Kea‘au-Maku‘u. If any burial remains should be discovered, they are to be treated on a case-by-case basis in concurrence with Chapter 6E-43 (as amended by Act 306).

CURRENT MANAGEMENT

There are ongoing efforts to protect the trail and coastal resources as well as address unauthorized behavior on the trail through a collaboration with Nā Ala Hele, the State Division of Conservation and Resources Enforcement (DOCARE), the County Police Department, and W.H. Shipman Ltd. In tandem with these organizational efforts, community groups, school groups, and dedicated individuals from the community actively participate in stewardship activities. Their roles encompass monitoring resources, reporting violations, and cleaning up rubbish along the trail and coast.

The Shipman family, with a longstanding heritage as ranchers and conservationists, have held ownership of Hā'ena and the land

surrounding the trail since 1882. Throughout their tenure, they have maintained their commitment to ensuring that any development undertaken on their properties would not compromise the integrity of the coastal ecosystem and its invaluable resources. Currently, they engage in partnerships with schools, hālau hula, and researchers at the University of Hawai'i at Hilo to ensure the protection of cultural, natural, and historic resources along the coast. They also provide support to beachgoers in emergency situations, including allowing access through their driveway for emergency vehicles. Additionally, they actively participate in reporting violations and maintaining the pristine condition of Hā'ena by removing rubbish.

PUNA HISTORIC TRAIL

Trail Specs

Historic forested trail to beach.

Length (one-way)	2.9 mi. (4.7 km)
Elevation Loss	50 ft. (15.2 m)
Elevation Gain	0 ft. (0 m)

- Hiking**
- Dogs on Leash**
(please clean up after them)
- NO Bicycles**
- NO Motorized**
- Grade**
Typical Grade 1.2%
Maximum Grade 17.8%
- Cross Slope**
Typical Cross Slope 4.4%
Maximum Cross Slope 21%
- Trail Width**
Typical Trail Width 52 in. (131 cm)
Minimum Trail Width 36 in. (91 cm)
- Surface**
Surface Type **Bedrock**
100% of trail is **Hard**
0% of trail is **Soft**
- Obstructions**
Rock 3 in. (8 cm)

E holo mai!

Welcome to the Puna Historic Trail. Stroll through lush forest along a storied path once a main transportation corridor connecting the communities of Puna and Hilo. The Shipman family have stewarded these lands since 1882 and continue to live at Hā'ena. Enjoy the natural beauty of the rugged coast while respecting this sacred landscape.

A TRAIL WORTHY OF LEGENDS

The Puna Trail began as an ancient walking path. In fact, Hi'iaka (volcano goddess Pele's sister) traveled on this trail during her famous exploits. The 'ohi'a (*Metrosideros polymorpha*) grove you pass through at the beginning of the trail is the remnants of Hōpoe, Hi'iaka's best friend who was covered in Pele's lava flows.

In the mid-1800s, the trail was straightened and widened to accommodate horses and wheeled carts,

becoming an *alanui aupuni* (government "road"). Kingdom road maintenance records show that in 1875, the road alignment we walk on today was in regular use. However, 20 years later, it was

seldom used as people moved away from this coastal area and a new, inland, more direct road to Hilo was opened. The entire trail is a historic site and passes through former fishing village settlements where kalo (taro), 'uala (sweet potato), and kō (sugar cane) were cultivated. Once abundant in ancient times, remnants of the famous *hala* (pandanus) groves of Puna can still be seen along the trail.

"Hā'ena Hā'ena me Hōpoe...ani i kai o Nānāhuki, la..."

"Hā'ena and Hōpoe dance...gyrating at the sea of Nānāhuki..."
—excerpt of Hi'iaka's chant from "He Mo'olelo Ka'oo no Hi'iaka: i-ka-poli-o-Pele," Ka Hōkū o Hawai'i, 1924-1928.

WHERE HULA BEGAN

Hawai'i Island is famed with stories of Pele, the volcano goddess. It is here at Hā'ena where Hi'iaka-i-ka-poli-o-Pele ("Hi'iaka in the bosom of Pele"), Pele's youngest and favorite sister, would travel down

from Kilauea to spend her day surfing and learning hula from her friend Hōpoe. This is where the first hula of Hi'iaka takes place as she embarked on her journey throughout the archipelago to retrieve Pele's ipo (lower) Lohi'au from Kaua'i. In fact, many hula dancers today end their *mele* (song) in honor of Hi'iaka.

Top: The blossom of 'ohi'a, the embodiment of Hōpoe; Middle: Honu (green sea turtles) are common at Hā'ena Beach; Bottom: The white sands of Hā'ena at the trail's end.

- E Maka'ala: Use Caution**
 - Extremely dangerous currents in ocean.
 - Slippery and muddy conditions.
 - No camping without permits.
 - Secure vehicles and remove valuables.
- A Wildland Area: Be Prepared**
 - No restroom facilities in the area.
 - Bring plenty of water.
 - Sturdy shoes are recommended.
- A Cherished Place**
 - Take only pictures!
 - The rocks are fine as they are—please leave them be.
 - Please stay on the trail—surrounding area is private property and culturally sensitive.
 - Stay 50 feet away from resting monk seals, sea turtles, and other wildlife.

Above: The Shipman family enjoys the shores of Hā'ena in 1918. Left: An aerial view of Hā'ena in the early 1900s. [Photos © Shipman family]

No Hunting

No Commercial Tours

No Camping

No Fires

Stay on Trail

This sign was made possible through the generous support of HAWAIIAN TOURISM AUTHORITY

Trail Info: 808-974-4228
hawaiitrails.hawaii.gov
Enforcement: 808-443-3567
Emergency: 9-1-1

Figure 2. Trailhead Sign

5

The Puna Trail has been managed under Nā Ala Hele since the late 1990s; their actions have so far been guided by the recommendations outlined in Maly's (1999) report. Recent management initiatives have included active management of the trailhead parking lot through an MOA with W.H. Shipman Ltd., which has lined the lot with boulders to deter vehicular access onto the pedestrian trail. Despite these measures, instances of vehicles accessing the trail persisted, with drivers going around the boulders via private property. In 2019, Nā Ala Hele installed bollards approximately 0.25 miles into the trail to restrict vehicular traffic more effectively. Additionally, signage was posted at the trailhead and at the beach in 2022, providing pertinent information regarding the trail's characteristics and historical background as well as ocean safety information. Most recently, in February 2024, two trail stewards were positioned at the Puna trail. Trail stewards are paid positions with responsibilities primarily focused on providing education and interpretation of the trail and its historic features. They are also tasked with alerting hikers to potential dangers and ensuring compliance with trail regulations.

For the past 25 years, students from Ke Kula 'O Nāwahīokalani'ōpu'u Iki Public Charter School have been stewarding the waters of Hā'ena. Although originally engaged in growing limu in the bay and documenting the change in tide and currents, their current focus is on the care and preservation of Waiko'olihilihi, the fishpond at Hā'ena. The students regularly assess the pond through fish counts, water quality assessments, salinity level tests, measurements of water volume leaving the fishpond, and measurements of zooplankton. The students' curriculum is based around the marine life there and how to take care of it.

Other frequent users of the trail, such as lineal descendants, fishermen, and nearby residents, actively engage in management activities on a regular basis. Their efforts primarily consist



Figure 3. Boulders blocking vehicular access onto trail



Figure 4. Bollards on trail



Figure 5. Signage at Hā'ena

of reporting violations, hauling out rubbish, and providing educational guidance regarding both the historical significance of the trail and appropriate behavior while using it. Additionally, a community non-profit organization, Wai Welawela, helps to steward areas along the coast. Its members are made up of lineal descendants from the Puna region.

PLANNING PROCESS

This project began in May 2023 with comprehensive background research, involving an in-depth review of publicly available maps, reports, and documents to gather an understanding of the historic and cultural significance of the area. Throughout the third quarter of 2023, the planning team engaged in individual and small group talk story sessions with various stakeholders, including lineal descendants, neighboring landowners, cultural practitioners, fishers, gatherers, state and county agencies, and elected officials. Approximately 35 individuals were consulted through one-on-one or in small group interactions, facilitated via in-person meetings, phone calls, or video conferences. These talk story sessions provided valuable insights into pertinent issues, preliminary solution concepts, and recommendations for outreach activities.

Based on stakeholder input, five initial outreach activities were selected and implemented from October 2023 to February 2024, including a trail survey, participation in the Revitalize Puna event, a classroom visit to two Kamehameha Schools 4th grade classes, a Kilo Workshop with the 11th grade class of Ke Kula ‘O Nāwahīokalani‘ōpu‘u Iki Public Charter School, and participation in the Honuiaiākea process. The purpose of these outreach activities was to educate the community on the history of the trail and gather input from stakeholders to guide future management. The activities also aimed to address some of the issues on the trail, including unauthorized vehicle use and overuse. Detailed descriptions and results of these activities are provided in the Summary of Outreach Activities section beginning on page 33.

The Draft Stakeholder Action Plan for the Puna Trail was developed based on mana‘o provided by the community through the initial talk stories as well as the five stakeholder outreach activities. This Draft Plan was made accessible for public review via the project webpage on June 12, 2024. Notification emails were sent to trail users, outreach participants, nearby landowners, relevant government agencies, and elected officials to inform the community about the availability of the Draft Plan. The community was given a 30-day window to offer feedback on the Draft Plan, which could be submitted through an online form, by phone, or via email. Comments received on the Draft Plan are included as Appendix A. Following the comment period, the plan underwent necessary revisions before being finalized.

As part of this action plan, the planning team budgeted some funds for the initial implementation of select action items detailed within this plan. Once the plan is finalized, the planning team will identify priority actions that align with the allocated budget and begin implementation.

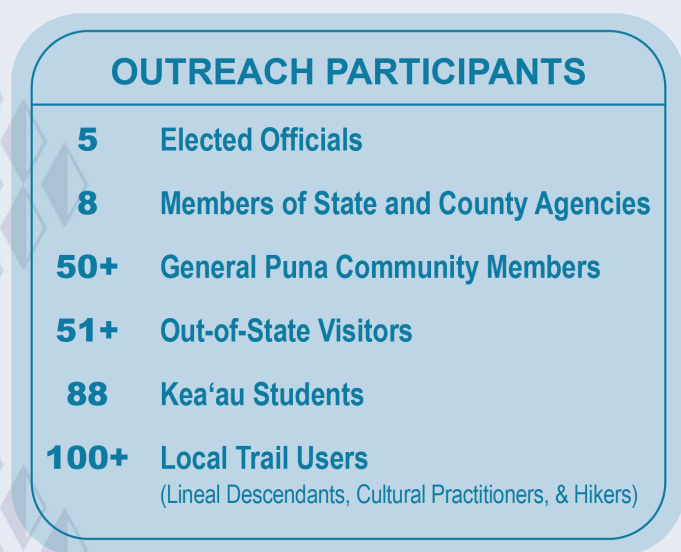


Figure 6. Summary of outreach participants





PUNA TRAIL

DESCRIPTION

The Puna Trail begins at the end of Beach Road in the HPP subdivision. The road leads into a gravel parking lot that can accommodate approximately eight cars. The entrance to the parking lot has a gate, though the gate currently remains open continuously throughout the day and night. On the makai side of the parking area, large boulders separate the lot from the beginning of the Puna Trail. There is a sign at the trailhead that displays trail specifications and interpretive information about the trail.



Figure 7. Trailhead parking lot

The trail begins on exposed pāhoehoe lava, the same lava flow that destroyed Hōpoe (see page 17). A relatively open canopy characterizes the initial section of the trail, with few tall trees that block the sunlight. Approximately 0.25 miles into the hike, the trail transforms into a dirt path beneath a canopy of invasive trees. The trail averages 10 feet wide. Illegal vehicle use has significantly eroded sections of the trail, prompting hikers to forge new paths around muddy areas, widening the trail and encroaching on private property.



Figure 8. Start of the Nā Ala Hele-managed trail

Archaeological sites, such as rock walls from the late 1800s that served as animal enclosures, remain along the Puna Trail. Observers can see areas where ‘alā, or waterworn stones traditionally used for paving, were repurposed to construct segments of these rock walls. Some ‘alā still lie within the original trail alignment and remnants of historic paving and curbing along portions of the trail are also visible. Additionally, pockets of native and “canoe” plants, including hala, ‘ōhi‘a lehua, hau, niu, laua‘e, ‘uluhe, and kauna‘oa, adorn the trail.



Figure 9. Historic rock wall along trail

There are no beaches along the shoreline, only a long stretch of cliff until Hā‘ena. The cliffs feature pole holders cemented into the rocks, marking popular fishing spots for local subsistence fishermen. An abundance of hā‘uke‘uke is found along the cliffs, and while ‘opihi populations used to thrive, overharvesting has impeded the recovery of the species, according to local residents.

Hā‘ena Bay is relatively small with limited space for relaxing on the sand. Additionally, there are many turtles and an occasional monk seal that compete with visitors for a spot on the beach. Water from the spring-fed fishpond empties out into the bay, which is mostly protected by rocks, but has one small outlet at the northern end. This small channel produces a strong current that has swept some swimmers, who are unfamiliar with the bay, out into the open ocean.



Figure 10. Current at Hā'ena. Photo captured by 11th grade Nāwahī student.



Figure 11. Rocky coastline along the Puna Trail



HISTORY OF THE TRAIL

Ala hele and ala loa were the traditional trails and major thoroughfares throughout Hawai'i. They connected various landscapes both along the coast as well as from mauka to makai. These trails ran across all sorts of terrain, from 'a'ā lava flows to sandy beaches and along streams to cliff edges. The Puna Trail was part of the traditional ala loa, or coastal trail system, that ran parallel to the ocean around most of the island. It served an important role in linking all of the ahupua'a together. This trail allowed Hawaiians to move freely upon the land from one place to another; it promoted the gathering and trading of resources between different communities. Traditional foot trails were generally narrow and often twisted and turned with the natural contours of the earth. In certain areas, 'alā were carried in and placed on the trail as a form of paving (Lass, 1997). Evidence of this stone paving exists along the Puna Trail. This type of work required a large number of people to hali-hali rocks from the shore. Most likely at one point in time, the area ali'i (chief) or konohiki (land manager) facilitated such an event.

It wasn't until Western influence that Hawaiian trails were straightened out for horses, carts and wagons, and eventually cars. The Puna Trail was first modified in the 1840s to accommodate horses (Lass, 1997) as more people began to rely on them for transportation. Horses had been around since the early 1800s, however, they were reserved primarily for chiefs and eventually, missionaries. The existing foot trails were not suitable for large animals since they could easily slip on the smooth 'alā. Horses also had difficulty following trails that were not clearly marked as paths. These initial modifications to the Puna Trail included straightening out the road, removing the paving stones, and adding curbstones along the sides of the trail. It was at this time that the Puna Trail became the main Government Road in Puna.

Additional modifications were made to the Government Road from 1869 to 1875. The road was moved closer to the beach at Hōpoe on Kaloli Point. It was also widened to fit two horses side by side. For the next 20 years, no modifications were made to the Government Road, and it was just maintained by clearing brush and picking up fallen stones.

Beginning in the 1890s, Hawaiian families living along the coast in Kea'au left the shoreline for homestead agricultural and residential lots further inland. Other families moved into housing provided by W.H. Shipman, the main landowner of Kea'au and owner of Kea'au Ranch. With the influx of people inland, there was a need for an improved road away from the coast. In 1895, construction began on Kea'au-Pāhoa Road (Highway 130). The Government Road fell back into its use as a pedestrian foot trail as government money was focused on the new mauka highway. For the next 46 years, repairs and maintenance of the Puna Trail became the kuleana of the native residents of Kea'au and the workers of Kea'au Ranch. A map from 1924 lists the trail as the "Puna Trail," indicating its demotion from a horse "road" back to a foot trail. Another map from 1933 labels the trail as the "Old Government 10 Foot Road," suggesting the road hadn't been used in a long time.

In 1942, at the start of World War II, the Kea'au Ranch lands temporarily housed the U.S. military's coastal defense soldiers (Lass, 1997). To access these lands, the military opened up the Puna Trail and smoothed it out for four-wheel drive military vehicles. The trail was in military use for a total of four years, throughout the duration of the war.

Despite the Puna Trail being referred to as a road, it was never intended for vehicular use. This Government Road was maintained as a 10-foot-wide horse trail for roughly 50

years before it fell back into its original use as a footpath. The term “road” existed before motorized vehicles were invented and referred to wide paths ridden on by horse back or even horse-pulled carts.

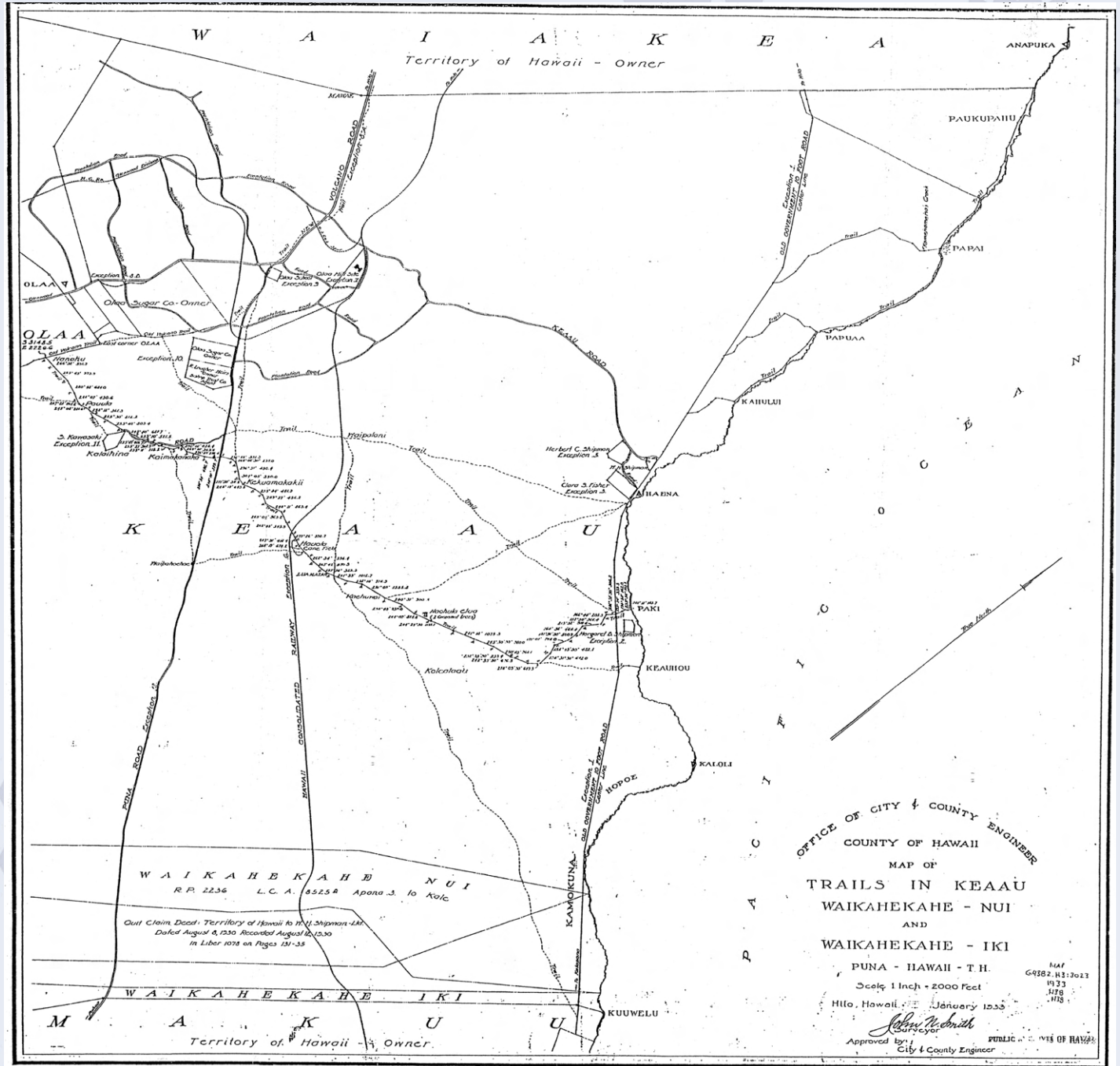


Figure 12. Map of “Old Government 10 Foot Road” (Smith, 1933)

CULTURAL AND ARCHAEOLOGICAL RESOURCES

MO'OLELO

The term mo'olelo is a contraction of two other Hawaiian words: mo'o and 'ōlelo. Mo'o meaning succession and 'ōlelo referring to language or speech. Hence, mo'olelo signifies the continuation of speech, or the art of storytelling. Prior to Western contact, Hawaiians lacked a written language, relying on stories to preserve history, transmit knowledge, and reinforce cultural values. These mo'olelo permeated Hawaiian life, appearing in place names, chants, songs, and traditions.

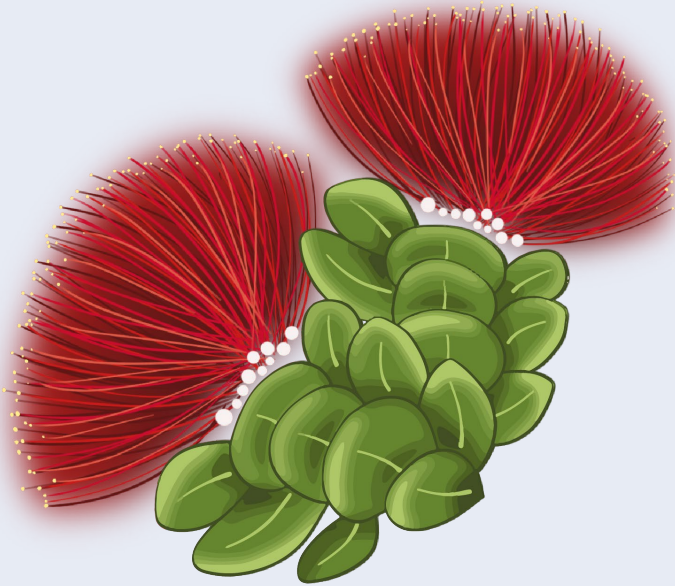
Mo'olelo encompass more than just myths and legends; they serve as historical accounts of the world that surrounded the Hawaiians. Often mo'olelo would explain geological events, like in the epic of Hi'iaka. The rain, the ocean, and all elements of nature were given names. Some of these names are still familiar to us today, such as Pele. While Pele is commonly referred to as a Hawaiian deity, or akua, the term akua is more accurately translated as "elements" rather than "god" or "goddess." In this context, Pele is not

merely a goddess of lava; she is lava itself. Therefore, stories of Pele are stories of actual historic lava flows that occurred.

There are countless stories of the Kea'au area, encompassing the Puna Trail and Hā'ena Beach. To include them all in this report would be impractical. Thus, we have selected three stories to share below. These particular narratives were chosen due to their significance beyond Kea'au, connecting the trail and Hā'ena to not only the entirety of Hawai'i but also the world. As described in the story of Pele, Hi'iaka, and Hōpoe, hula pele originates at Hā'ena. Today, hula has spread worldwide, with every hālau practicing at least one hula pele. In the story of the Māmalahoe Kānāwai, Kamehameha is prompted to enact a law across all of Hawai'i that makes reference specifically to trails. This law is carried into the State Constitution to this day. Lastly, the story of the revitalization of the nēnē, which had its beginnings in Hā'ena, now manifests its impacts across the pae 'āina.

Figure 13. Tidepools at Hā'ena. Photo captured by 11th grade Nāwahī student.





PELE, HI'IAKA, AND HŌPOE

Summarized from Westervelt (1916).

Pele and her younger sister, Hi'iaka, resided in Puna, on the island of Hawai'i. While Pele rarely left her crater, Hi'iaka often spent her days at the shores of Hā'ena, with her closest friend Hōpoe. Hōpoe taught Hi'iaka the language of the trees, rocks, and ocean around her. She taught her how to tell the stories of the surrounding environment through the movements of their hands and bodies. Hōpoe and Hi'iaka loved to dance hula together. Together they are credited with teaching hula pele, a specific type of hula that originated at the shores of Hā'ena in Puna, to the Hawaiian people.

One day, while Hi'iaka was playing along the shore with Hōpoe, Pele summoned Hi'iaka to her crater. Pele decided to enter a deep sleep, instructing Hi'iaka to awaken her in nine days and eight nights, as she hoped to encounter a lover in her dreams. As she drifted off to sleep, the scent of hala filled the air. Pele's spirit departed from her body, drawn by the captivating sounds of drums and chanting. In search of the source of these sounds, Pele journeyed from island to island until she reached Hā'ena, Kaua'i, the home of Lohi'au, the high-born chief of Kaua'i. The people of Hā'ena were captivated by Pele's beauty, especially Lohi'au. He asked her to

be his wife, and she agreed. They married and dwelt together for several days, until Pele heard Hi'iaka calling out to her. Pele, in tears, informed Lohi'au that she must go. Before departing, she promised that when she awoke, she would send someone to bring him to her home in Puna.

Pele's spirit returned to her body in Puna. As promised, she immediately asked her sisters to journey to Kaua'i to retrieve Lohi'au, but they all declined. Finally, she turned to Hi'iaka, who agreed on the condition that Pele care for Hōpoe, her lehua grove. Pele accepted the condition, and Hi'iaka embarked on her journey. Along the way, Hi'iaka encountered numerous obstacles as she traveled from island to island; Pele grew impatient with her. When Hi'iaka looked back towards Hawai'i, she saw smoke shrouding Puna. The smoke continued to grow darker and darker until it erupted into flames. Many days passed before she finally reached Lohi'au. Hi'iaka had a vision of Puna and witnessed the devastation as Pele's fiery wrath consumed the forest she had promised to protect. Hōpoe was transformed into a rock, balancing at the shore, dancing as the wind blew and the earth shook. Hōpoe stood there for centuries until a tsunami in 1946 washed the stone away.



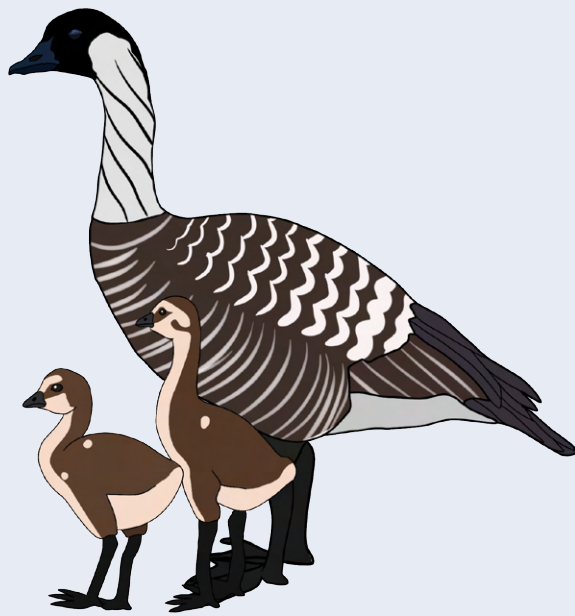
MĀMALAHOE KĀNĀWAI

Story translated from Kamakau (1867).

During Kamehameha's rise to power, two of his enemies, Keawema'uhili of Hilo and Keōua of Ka'ū, had joined forces in Hilo. Kamehameha, spying on events around Hilo, secretly paddled from Laupāhoehoe with his companion Kahaku'i to Kea'au. When Kamehameha arrived in Kea'au, at Pāpa'i (north of Hā'ena, near the boundary between Kea'au and Pana'ewa), he spotted a group of men and women fishing near the shore; one man was carrying a child on his shoulders. Kamehameha leaped from his canoe to attack them. The group fled, except for two men who stayed to fight, including the man bearing the child. As Kamehameha was running towards them, his foot slipped into a crevice in the rocks, and he found himself stuck. The fishermen ran up to him and struck his head with a paddle. This fight was named Kaleleiki, describing the way in which Kamehameha

rushed out of his canoe to attack. Kamehameha knew that the reasons he survived that day were because one of the men was burdened with the child, and because the men attacking did not know that it was Kamehameha they were fighting with. It was because of this event that the Māmalahoe Kānāwai was enacted by Kamehameha. This law states: "e hele ka 'elemakule a me ka luahine a me ke keiki a moe i ke alanui;" let old men and women and children sleep safely along the trails.

This law remains in the State Constitution to this day. Article 9 Section 10 reads "the law of the splintered paddle, mamala-hoe kanawai, decreed by Kamehameha I--Let every elderly person, woman and child lie by the roadside in safety--shall be a unique and living symbol of the State's concern for public safety."

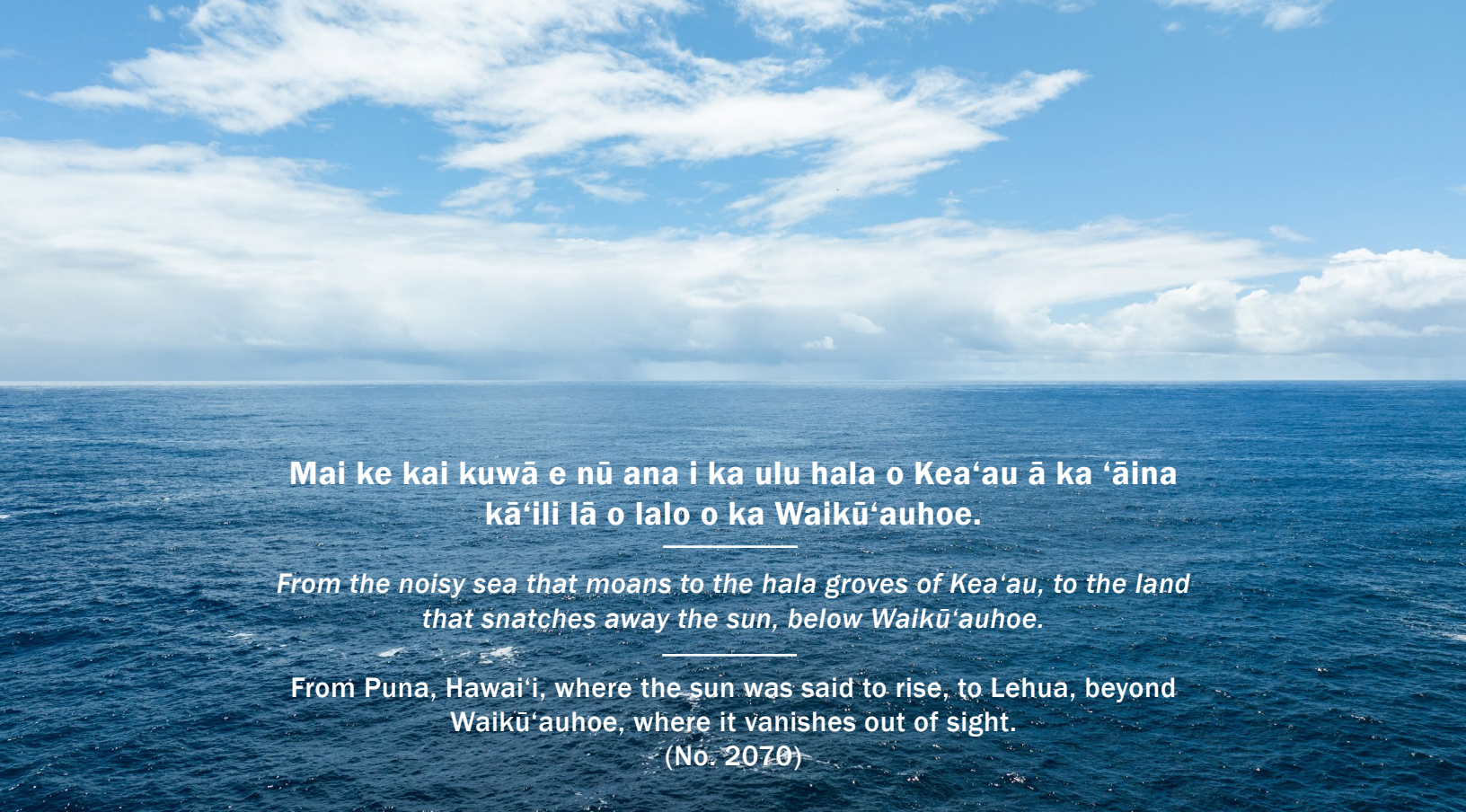


NĒNĒ RECOVERY

The nēnē, or Hawaiian goose, is the largest surviving native land bird in Hawai'i. It's characterized by its dark brown and white plumage, its long white neck, and black head. Nēnē evolved with no natural predators, which made them especially vulnerable to any sort of threat. By the early 1900s, nēnē were faced with extinction from loss of habitat and predation from introduced rats, dogs, and mongoose (Wilson, 2020). In 1918, Herbert C. Shipman, a rancher from Puna, desired to save the near-extinct population of geese. He started the world's very first nēnē breeding program at his property at Hā'ena (W.H. Shipman Ltd, 2022). The flock was later moved to Ainahou Ranch following the 1946 tsunami. In 1950, the Territory of Hawai'i initiated a breeding project at Pōhakuloa. Shipman supplied the Territory with birds from his captive population. However, the State was unsuccessful in its first round of breeding. They reached out to the Wildfowl Trust, an English conservation organization, in an effort to increase their success rate. In response, the Trust sent their curator, John Yealland to Hawai'i. Yealland offered guidance

to the State on implementing the Trust's standard rearing protocol. Before returning back home, Shipman gave Yealland a pair of nēnē to breed back to England. But to their surprise (and amusement), upon arriving both nēnē had laid eggs. The Wildfowl Trust reached back out to Shipman to send a third bird, a male, which he did. The coordinated efforts of Shipman, the Territory (and subsequent State), and the Wildfowl Trust demonstrated remarkable success. It was Herbert Shipman's foresight in recognizing the imperative need for a nēnē breeding program that ensured the continued existence of these birds today. Shipman's contributions played a pivotal role in preserving a species that might otherwise have faced extinction.

The nēnē was later proposed as the state bird of Hawai'i to garner more public support and funding for continued conservation. The nēnē remains the official state bird to this day. In 2022, the annual nēnē population survey estimated a total of 3,862 birds statewide (Smith, 2022).



**Mai ke kai kuwā e nū ana i ka ulu hala o Kea‘au ā ka ‘āina
kā‘ili lā o lalo o ka Waikū‘auhoe.**

*From the noisy sea that moans to the hala groves of Kea‘au, to the land
that snatches away the sun, below Waikū‘auhoe.*

**From Puna, Hawai‘i, where the sun was said to rise, to Lehua, beyond
Waikū‘auhoe, where it vanishes out of sight.**

(No. 2070)

Figure 14. Ocean off of the Puna coast

SACREDNESS

Sunrise is a particularly sacred time for Hawaiians. It signified the transition from pō to ao, darkness to light, marking the birth of a new day. Hawaiians offer specific protocols and oli to encourage the sun’s efforts. Oli such as “E Ala e” or “E Kānehoalani e” are recited during these sacred moments. The sun is perceived as the ultimate source of life and energy, providing sustenance and illumination upon the earth. In the ‘ōlelo no‘eau provided by Pukui (1983), Kea‘au is recognized as the place where the sun rises, highlighting the significance attributed to this place at this sacred time of day.

E Kānehoalani e is chanted at sunrise to greet the sun as it peeks over the horizon. E Kānehoalani e, aloha kāua. Kānehoalani is the name given to the sun by the Hawaiians; they are greeting the sun as it arrives. Kau ka hōkū ho‘okahi hele i ke ala loa. They are asking the one and only sun to rise up and make its

journey on the ala loa across the sky. Aloha kama kūkū kapa a ka wahine, he wahine lohiau nānā i ka makani, he makani lohiau hā‘upu mai o loko ē. Greetings to the child of the kapa beating woman, a woman who is held back by the wind, an obstinate wind, recollection from within.

ARCHAEOLOGICAL RESOURCES

Several archaeological studies have been conducted along the Puna Trail and the area encompassing Hā‘ena Beach. These studies have identified a number of archaeological resources, as described below:

- Hudson (1932) described the entire Puna Trail as well as several sites at Hā‘ena, including the fishpond and a kū‘ula (upright stone) for the fish god Keakuaualo. He also noted two rocks at the shores of Hā‘ena, one being the petrified remains of Hōpoe.

- Ewart and Luscomb (1974) surveyed three sites just south of Pākī Bay. He discovered an archaeological complex consisting of walls, enclosures, and stone mounds along both sides of the trail. He recorded another large enclosure with scattered walls, platforms, and terraces. Several lava tube burials and a burial vault were also found.
- McEldowney (1979) provided limited information about the fishpond at Hā'ena and the Hā'ena complex which included both historic and prehistoric features.
- Lass (1997) identified fourteen sites along the trail including rock walls, a possible heiau, possible burial mounds, and a couple remnants of World War II.

PETROGLYPHS

Located south of Pākī are thirty-five names intricately carved into the pāhoehoe shelf, right at the water's edge. During high tide, these petroglyphs are completely submerged. Despite its use of the English alphabet, these carving are classified as petroglyphs due to their resemblance to traditional Hawaiian petroglyphs in terms of size, overall layout, and carving style. These thirty-five names serve as a continuation of this longstanding practice into the modern age. Additionally, another set of petroglyphs is located at the high-water line approximately 0.5 miles before reaching Hā'ena, featuring a fish and a turtle.



Figure 15. Pākī petroglyphs. Photo courtesy of Kumu Pono Associates LLC.

CULTURAL RESOURCES

The Puna Trail and nearby coastline are adorned with a rich variety of resources that once supported entire villages of kānaka living along the coast. There was sufficient food, a supply of fresh drinking water, and enough materials to build hale and other essential tools and religious structures. Despite moving out of these villages and away from the coast, Hawaiian families still rely on these resources to support their lifestyle. In consultation with lineal descendants of the area, they identified resources along the trail and nearby coastline that are important to them today. These resources were then grouped by the planning team into three different categories: consumption, conservation, and ceremony. These categories are described in more detail below.

CONSUMPTION

Consumption resources are resources that people eat. This supply of subsistence food is essential for the survival and well-being of individuals and communities, particularly in remote areas, such as Puna, where access to grocery stores and markets may be limited. These resources also help to make up one's cultural identity and the ability to gather these resources is constitutionally protected. Traditional fishing and gathering methods are still practiced today by descendants of Hawaiian families who have passed down this knowledge through generations. Preserving access to fishing and gathering spots is critical to ensure the continued transfer of 'ike kūpuna (ancestral knowledge) to the succeeding generations.

Resources along the Puna Trail's coastline that are important for consumption include ulua, menpachi, moi, āholehole, mullet, kole, nenuē, 'opihi, hā'uke'uke, and various species of limu.

CONSERVATION

Conservation resources are significantly important to the ecosystem and therefore merit conservation efforts. Some of these resources

may have traditionally been a part of the Hawaiian diet in the past but now face threats to their population and require protection (e.g., honu). Conservation resources are made up of the plants, animals, and other natural features of Kea'au; the Puna Trail itself is classified as a conservation resource. Important animal species that frequent the Puna Trail and Hā'ena Beach include honu (turtles), koholā (humpback whales), nai'a (dolphins), nēnē (the Hawaiian goose), 'auku'u (night heron), ae'o (the Hawaiian stilt), kōlea (pacific golden plover), koloa (the Hawaiian duck), 'ūlili (wandering tattler), and 'Īlioholoikauaua (monk seals). Other important plant species and natural features include hala, 'ōhi'a lehua, hau, niu, laua'e, uluhe, kauna'oa and the spring-fed fishpond known as Waiko'olihilihi.

Conservation resources also include archaeological sites that hold significant historical and cultural value. These include features such as the stone walls along the trail, the remains of the old school grounds in Pākī, and the village site between Pākī and Hā'ena, which provide valuable insights into the area's history. These resources serve as a window

to the past, offering glimpses into the lives of the Hawaiians who came before us. Preserving these sites is essential to preserving the history and heritage of this region and the people who inhabited it.

CEREMONY

Ceremonial resources are important for religious and ceremonial practices and refer to an object, place, or element that holds cultural, religious, or symbolic significance. They can take many forms, including oli (chants), wahi (spaces), and akua/hi'ona (elements and natural features). The area of Hā'ena is significant as a place that is used by hula practitioners for 'ūniki (graduation) ceremonies. The area is also used for the hālau's own enrichment, by allowing hula dancers to perform a dance about a place while physically being in that place. Other features that are tied to religious and/or ceremonial practices include the burial mounds found along the trail, the heiau at Pākī, and the two kū'ula at Hā'ena.

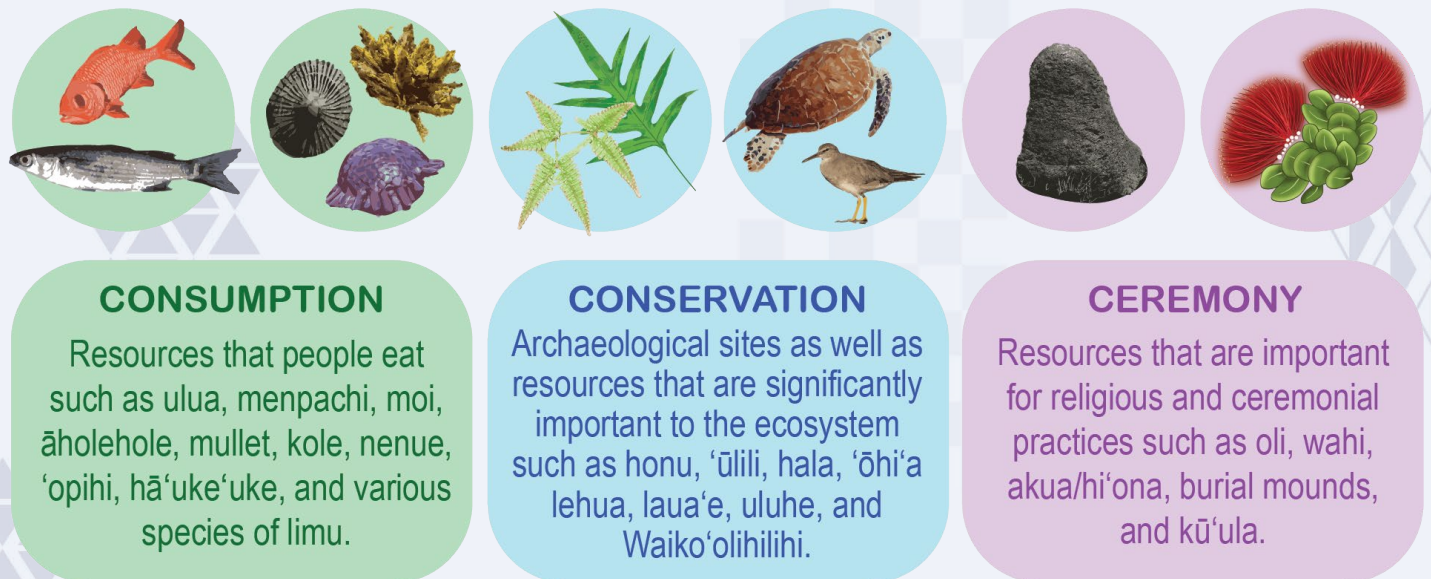


Figure 16. Cultural resources along the Puna Trail and at Hā'ena Beach



Figure 17. School of mullet at Hā'ena. Photo captured by 11th grade Nāwahī student.

ISSUES

The following issues were identified by community members in the initial talk story sessions and the five outreach activities. The issues primarily relate to threat to personal safety and threat to quality and quantity of resources and are in no particular order.



MOTORIZED VEHICLE USE ON THE TRAIL

Motorized vehicle use is strictly prohibited on the Puna Trail; nevertheless, instances persist where trucks, ATVs/UTVs, and motorcycles continue to traverse the trail to access Hā'ena Beach and/or fishing spots along the coast. This unauthorized motorized vehicular activity has resulted in significant degradation of the trail, including some of its historic features. Additionally, reports from nearby residents indicate that drivers are taking rocks from the historic rock features to use to free their trucks from the mud.

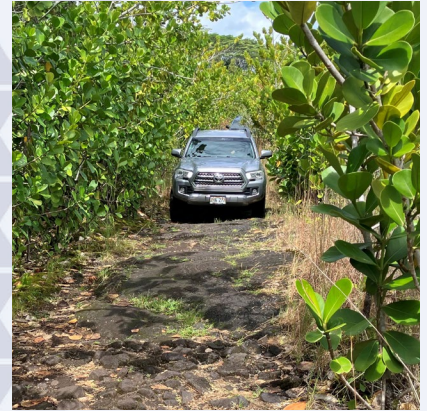


Figure 18. Vehicle driving on trail. Photo courtesy of DLNR DOCARE.



OVERCROWDED CONDITIONS

Like many beaches and trails throughout Hawai'i, the Puna Trail has experienced a surge in popularity over the past 10 to 15 years, largely attributed to its exposure on social media platforms. Notably, Hā'ena Beach has witnessed crowds of up to 75 individuals at one time, negatively affecting the quality of user experience. This heavy foot traffic has resulted in significant erosion, particularly in culturally sensitive areas along the trail. Excess human activity contributes to shoreline erosion at the beach, threatening the stability of the inshore loko i'a. The high volume of people at the beach also inhibits turtles from finding suitable resting spots on the sand. Despite commercial activity being restricted for the Puna Trail, tour guides and Airbnb hosts are promoting the trail to visitors. Additionally, the existing parking lot at the trailhead can only accommodate about eight cars, leading to overflow into the nearby residential neighborhood on busy days when the lot reaches full capacity. The crowded conditions have also impacted certain cultural ceremonies that take place at Hā'ena, which require a level of privacy. This situation has hindered the ability for hālau hula to perform these specific ceremonies as intended.



Figure 19. Groups of people relaxing on the beach at Hā'ena



OCEAN SAFETY

There is a single channel through the reef at Hā'ena which creates a strong undertow in the bay. Unfortunately, there have been fatal drownings and a number of rescues, predominantly involving visitors or recent residents to Hawai'i.



Figure 20. Hā'ena Bay. Photo captured by 11th grade Nāwahi student.



PERSONAL SAFETY

Vehicle break-ins occur frequently at the trailhead parking lot, which has discouraged many residents from using the trail. The parking lot also experiences increased activity at night from individuals engaging in illicit substance use. Additionally, hikers have reported instances of harassment by houseless people along the trail.



Figure 21. Parking at the trailhead parking lot



SANITATION

There are no public restroom facilities along the trail so many hikers will relieve themselves on the adjacent private property. Furthermore, the area has been treated as a dumping spot, evidenced by the abandoned vehicles along the trail and accumulation of rubbish left behind.



Figure 22. Abandoned vehicle on trail. Photo courtesy of DLNR DOFAW.



IMPROPER BEHAVIOR

Fishermen are sometimes observed engaging in cross-netting within the bay, causing harm to turtles as indicated by the presence of injured turtles on the shore. Additionally, visitors are also known to harass turtles. The lack of education contributes to the issue, with some individuals not approaching the area with the necessary respect for the place and its resources.



Figure 23. Turtle at Hā'ena



TRESPASSING

Portions of the Puna Trail are in poor condition due to unauthorized vehicle use, which has prompted hikers to divert from the trail to avoid large mudholes, establishing alternative paths on the adjacent private property. Additionally, individuals are camping and constructing makeshift shelters on private property along the coast.

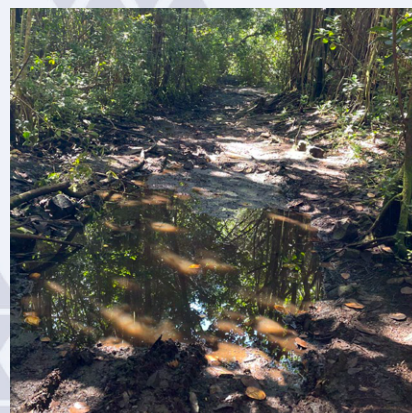


Figure 24. Large mudhole on trail from vehicle use



OVERFISHING/OVERHARVESTING

Local fishermen have reported fewer catches along the coast at spots that were previously productive for fishing. The availability of ‘opihi has also become more challenging. Members of the community attribute this decline to individuals exploiting the resources for commercial purposes rather than adhering to traditional subsistence practices of “taking only what you need.”



Figure 25. Two mullet caught out of season at Hā’ena. Photo courtesy of WHSL.



LOOSE DOGS

Hikers often find the remote trail conducive to unleashing their dogs while they go for walks. However, loose dogs pose a potential hazard to the nēnē population at Hā’ena, particularly during breeding season. Dogs will chase after and hunt goslings, who are flightless during their first 2-3 months of life. Breeding adults also face harm as they are hesitant to abandon their nests. Additionally, adult nēnē undergo a flightless period each year for several weeks during molting, making it difficult to escape encounters with dogs. Loose dogs also threaten sea turtles that frequently bask at Hā’ena Beach, as well as monk seals and native shorebirds. Occasionally, these loose dogs do not reunite with their families and join feral packs, which have reportedly killed both resident nēnē and visiting snow geese.



Figure 26. Dog food left near the trailhead. Photo courtesy of WHSL.



WILDFIRES

The Hawai'i Fire Department has frequently responded to reports of smoke in the area, and on one occasion, battled two simultaneous wildfires directly adjacent to the trail. Wildfires and wildfire response may cause the trail to become impassable without warning, leaving hikers stranded on the trail or at Hā'ena.



Figure 27. Burned area along trail from small fire in September 2022. Photo courtesy of WHSL.



INVASIVE PLANTS

Historic maps and mo'olelo of the area indicate that hala once dominated the trail surroundings while the region near the trailhead was famed for Hōpoe, a grove of 'ōhi'a lehua. Additionally, 'uala, kalo, and kō were cultivated in spots along the coast. Unfortunately, the present landscape no longer reflects this history. Invasives species, including autograph, octopus, and strawberry guava trees, now occupy the landscape, posing a threat to native plants such as the laua'e fern, which is now rarely found in the wild. These fast-growing and shade-producing species deposit a large amount of leaf litter and also affect the water flow of ponds and nearby surface water, as well as inhibit the ability of muddy areas of the trail to dry out.



Figure 28. Invasive autograph trees along the start of the trail



LACK OF CONNECTION TO THE PLACE

There has been a lot of displacement in the Puna region, resulting in a general lack of awareness of the resources, history, and cultural significance of the Trail, Hā'ena, and surrounding area. This disconnect results in a poor understanding of the hazards and conditions, indifference to issues, and a lack of kuleana to collectively protect and care for these resources.



Figure 29. Graffiti on historic WWII bunker along trail





REGULATORY ANALYSIS

STATE LAND USE DISTRICT (SLUD)

The State Land Use Commission classifies all of Hawai'i's lands into agricultural, conservation, urban, or rural districts in accordance with Hawai'i Revised Statutes (HRS) §205-2. The purpose of the Land Use Commission is to determine whether to preserve or develop lands to best suit the uses and welfare of the public. The Puna Trail lies almost entirely within the State's Agricultural District. This district includes lands for the cultivation of crops, aquaculture, raising livestock, wind energy facility, timber cultivation, agriculture-support activities, and land with significant potential for agricultural uses. The entire coastline along the Puna Trail and the fishpond at Hā'ena are classified as Conservation. Conservation lands are comprised of lands in forest and water reserve zones, lands necessary for protecting

watersheds and water resources, scenic and historic areas, parks, wilderness, open space, and terrestrial and marine habitats.

COUNTY OF HAWAI'I ZONING

The Hawai'i County Code Chapter 25 defines permitted land uses and provides regulations and standards for land development. Lands encompassing the trail and on either side of the trail are within the County's Agricultural District. The purpose of this district is to provide for agricultural and very low density agriculturally based residential use, encompassing rural areas of good to marginal agricultural and grazing land, forest land, game habitats, and areas where urbanization is not found to be appropriate. Areas mauka of the trail are zoned A-20a, meaning the area has a minimum building site of 20 acres. Areas makai of the trail and at Hā'ena are zoned A-1a, with a minimum building site of 1 acre.

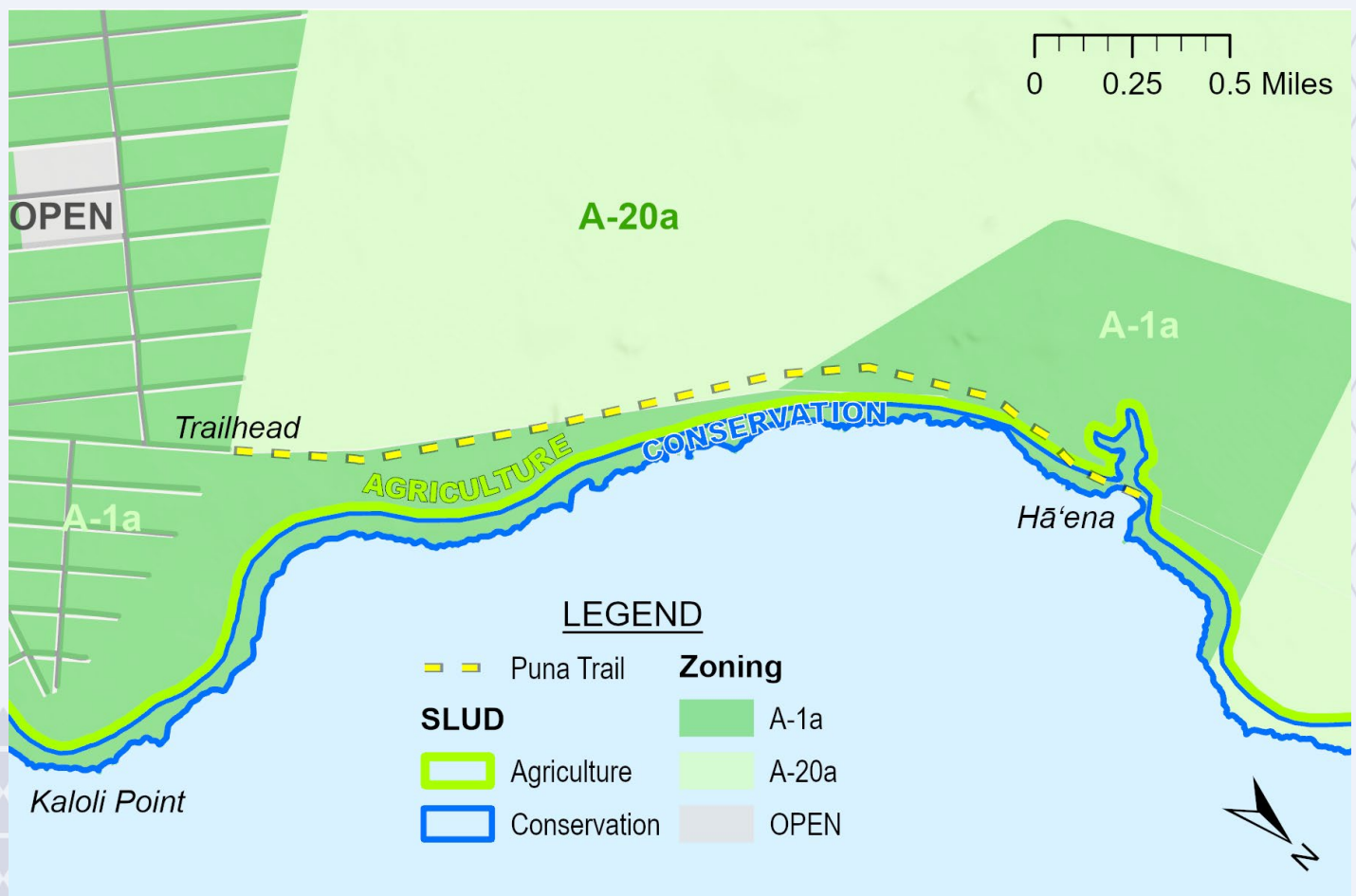


Figure 30. SLUD and County Zoning map

SPECIAL MANAGEMENT AREA

The Special Management Area (SMA) regulates areas of Hawai'i that are near the shoreline in an effort to "preserve, protect, and where possible, to restore the natural resources of the coastal zone of Hawai'i." Any action defined as "development," pursuant to HRS §205A-22, will require an approved SMA (Minor or Major) Use Permit. It is unlikely that the action items outlined in this plan will trigger the requirement for an SMA Use Permit.

MARINE MANAGED AREA

Marine Managed Areas (MMAs) are designated regions established by statute or administrative rule to effectively manage various marine, estuarine, or anchialine resources and their use. Off the coast of Kea'au is the Lele'iwi Point Bottomfish Restricted Fishing Area. This area, closed in 2007, prohibits fishing for any of the "Deep 7" species, including 'ula'ula koa'e (onaga), 'ula'ula (ehu), kalekale, 'ōpakapaka, 'ūkīkiki (gindai), hāpu'u, and lehi during the specified closed season. As of July 2019, the area has reopened, with regulations in place during the open season, encompassing size limits, gear restrictions, and bag limits to ensure sustainable fishing practices.

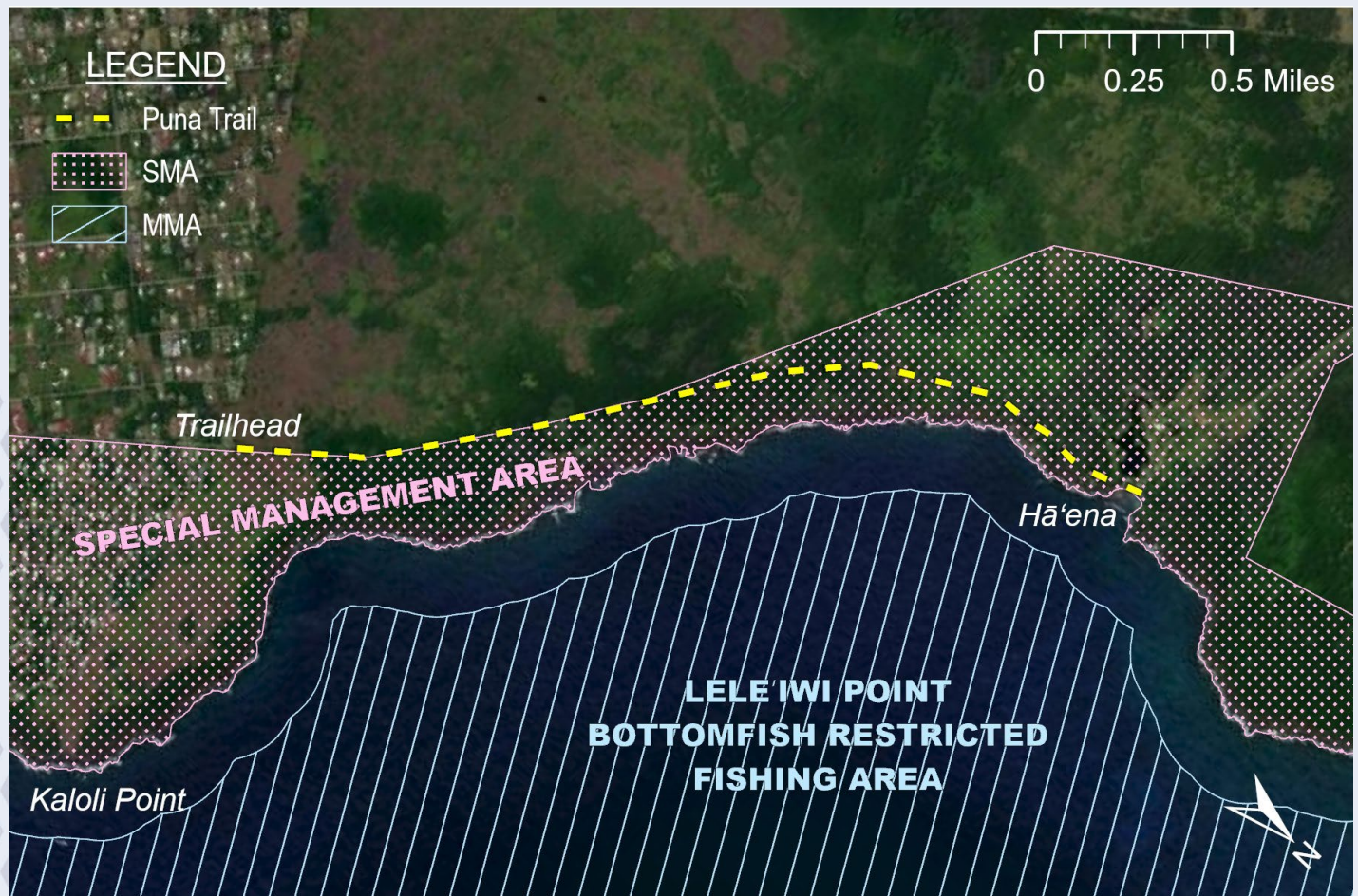


Figure 31. SMA and MMA map





SUMMARY OF OUTREACH ACTIVITIES

During the initial talk story sessions with lineal descendants, neighboring landowners, cultural practitioners, fishers, gatherers, state and county agencies, and elected officials, recommendations were provided to Townscape on potential community outreach activities. The planning team selected five activities based on priority, feasibility, budget, and timing within the project. The outreach activities were conducted from October 2023 to February 2024. A summary of each activity is included below.

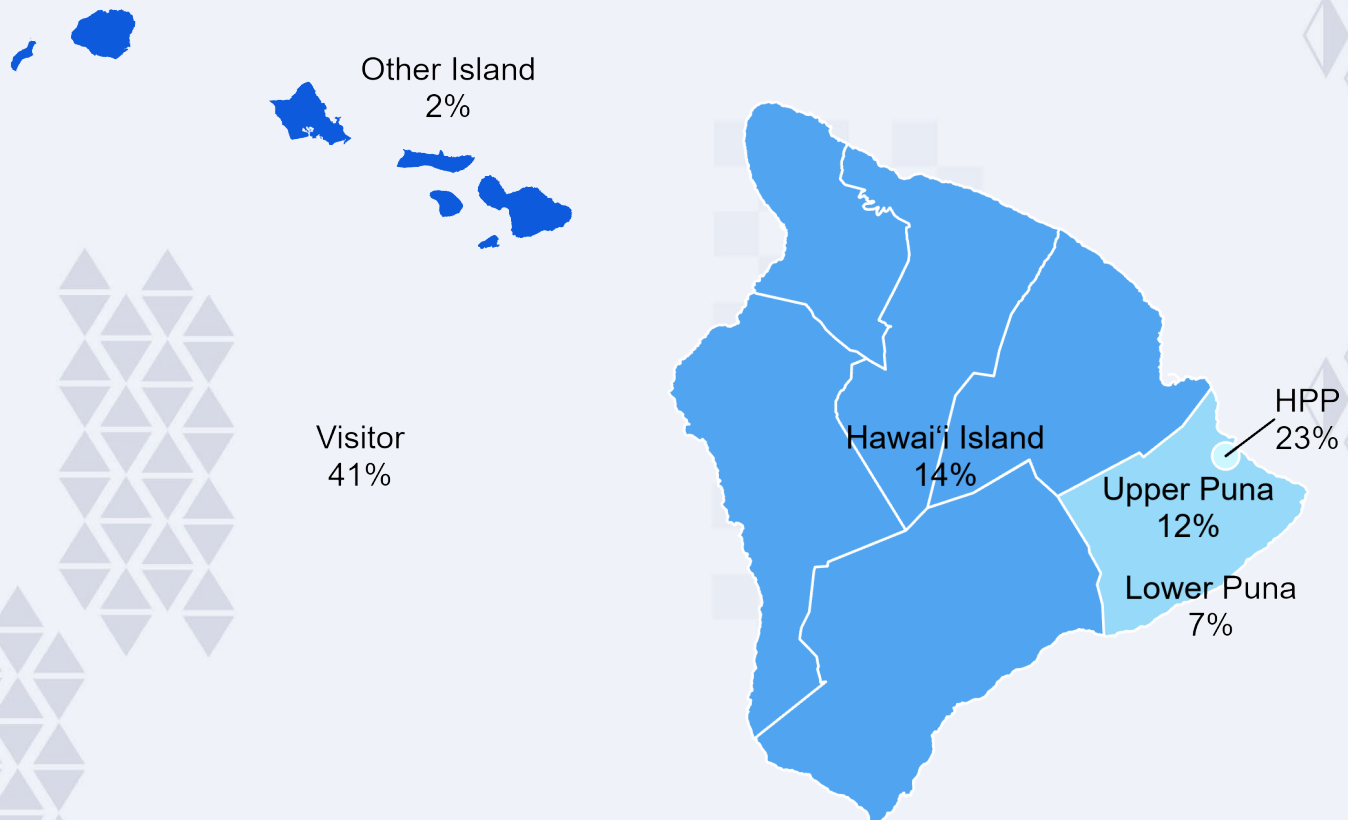
TRAIL SURVEY: OCTOBER 2023 TO PRESENT

The planning team developed a survey to gather input from hikers on the Puna Trail. A QR code to the survey was posted along the trail at the start of October 2023. Questions were modeled off of the 2022 Polihale State Park Initial Community Survey. The survey remains open and responses are still being received. A summary of responses gathered from October 2023 to February 2024 is provided below.

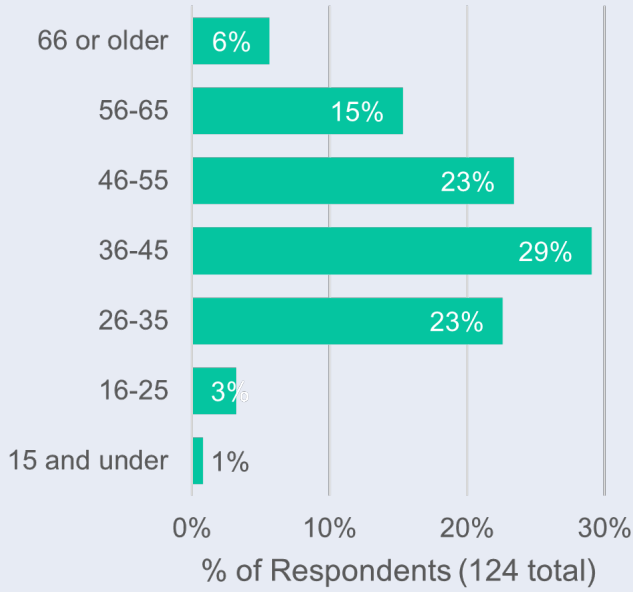
During this five month period, a total of 124 responses were collected, comprising of 73 from Hawai'i residents and 51 from out-of-state visitors. Respondents were provided different questions based on residency. In the graphs below, the color blue indicates Hawai'i resident responses and green indicates responses from out-of-state visitors.

DEMOGRAPHICS

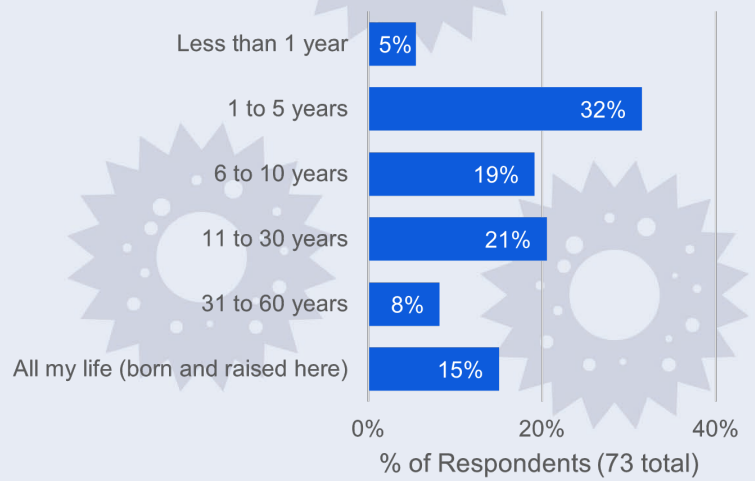
WHERE ARE YOU FROM? (ALL)



WHAT IS YOUR AGE? (ALL)

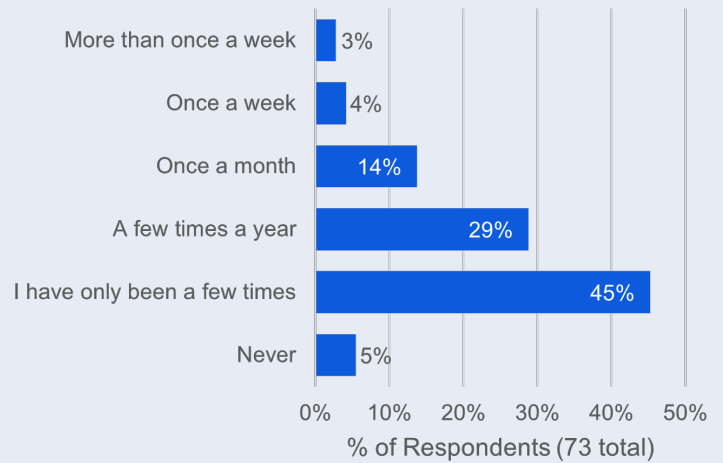


HOW LONG HAVE YOU LIVED IN HAWAI'I? (RESIDENTS ONLY)

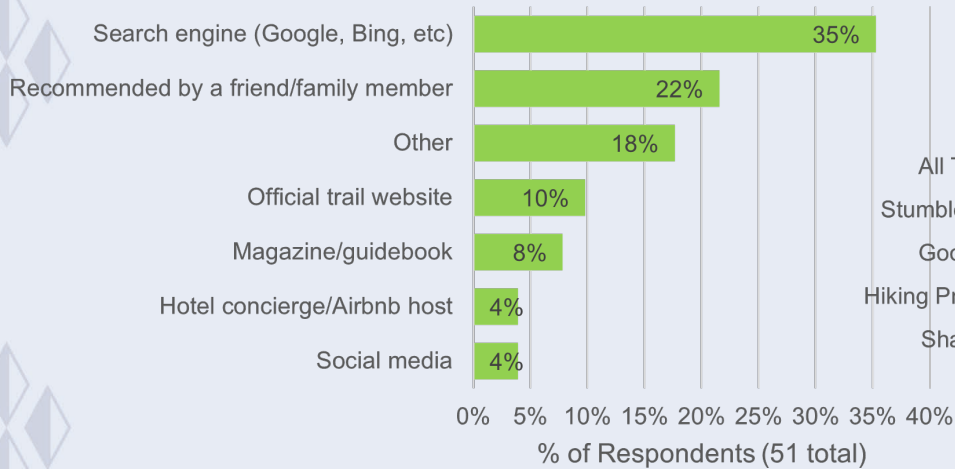


VISITATION

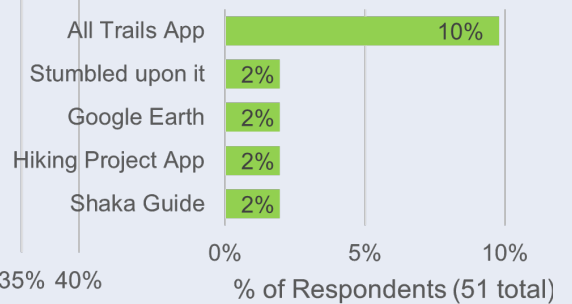
HOW OFTEN DO YOU USE THIS TRAIL? (RESIDENTS ONLY)



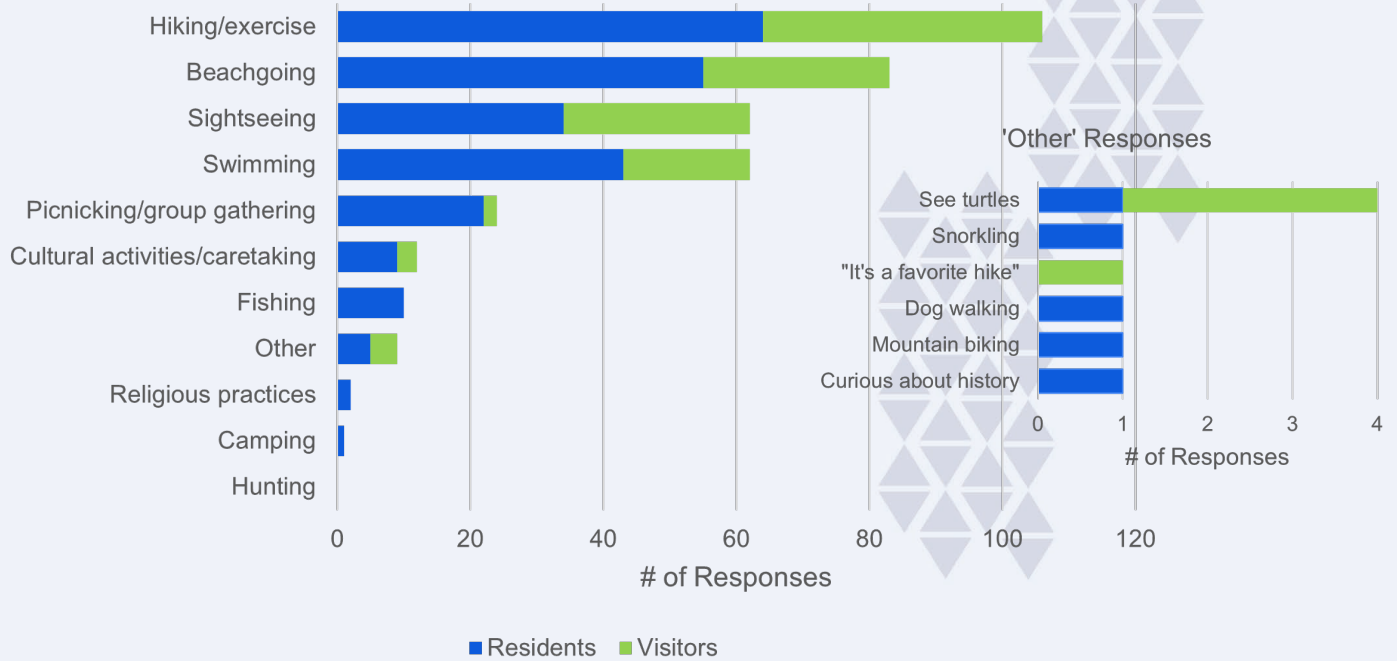
HOW DID YOU HEAR ABOUT THIS HIKE? (VISITORS ONLY)



'Other' Responses

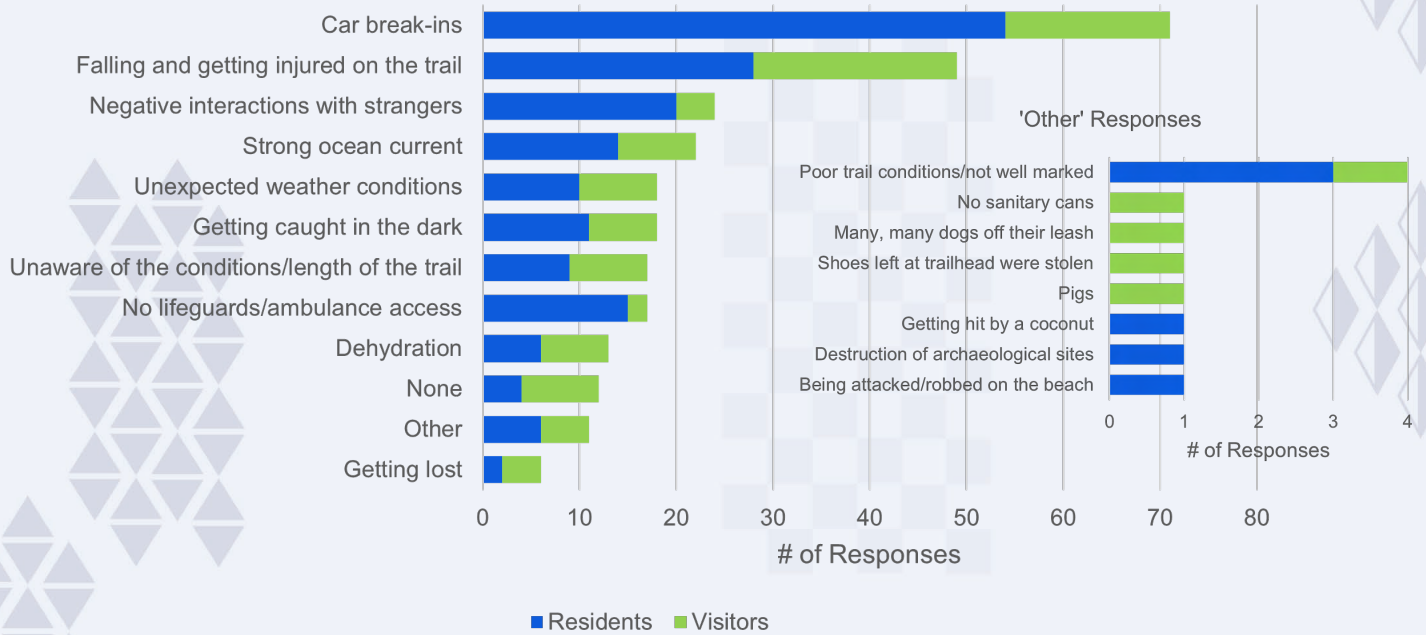


**WHAT IS YOUR PURPOSE FOR HIKING THE TRAIL? SELECT ALL THAT APPLY.
(ALL)**

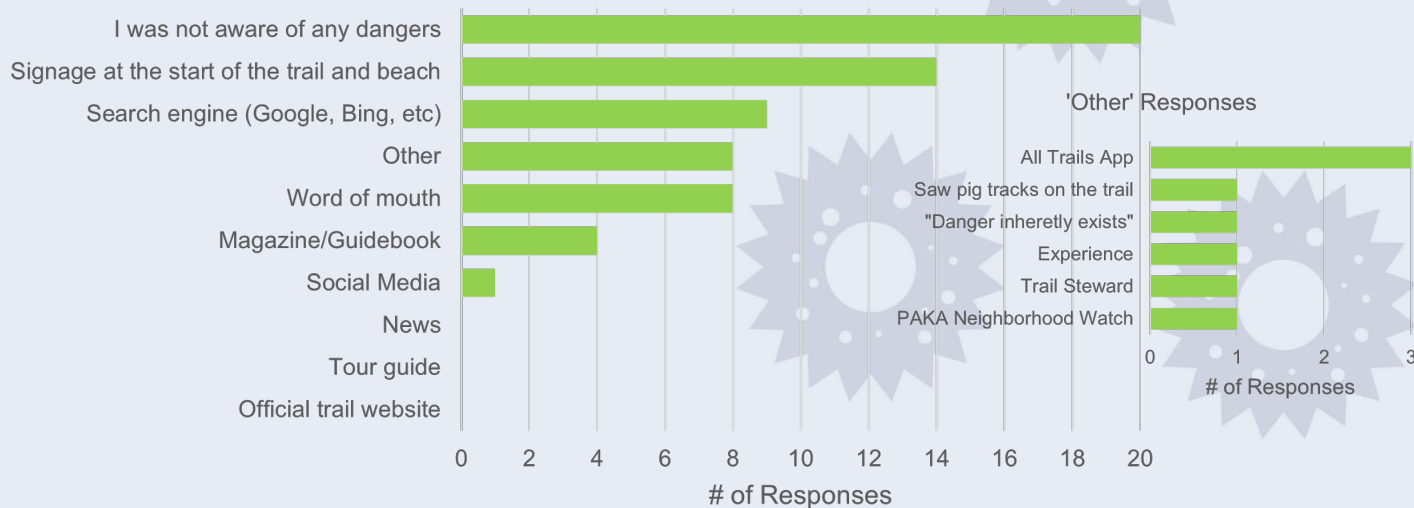


SAFETY

**WHAT (IF ANY) WERE YOUR CONCERNS REGARDING SAFETY WHILE HIKING OR AT THE BEACH? SELECT ALL THAT APPLY.
(ALL)**



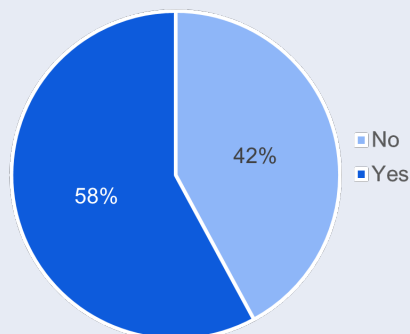
WERE YOU AWARE OF ANY DANGERS OF THE TRAIL/BEACH? WHERE DID YOU HEAR ABOUT THESE DANGERS? SELECT ALL THAT APPLY. (VISITORS ONLY)



RESOURCES

DO YOU KNOW OF ANY CULTURAL/HISTORIC RESOURCES ALONG THE TRAIL OR AT THE BEACH? OPEN RESPONSE. (RESIDENTS ONLY)

- Rock walls/structures (7)
- WWII bunker (5)
- Stories of Hi'iaka and the birthplace of hula (3)
- Ala loa (3)
- Animals (turtles, monk seals, nēnē) (2)
- Iwi kūpuna (1)
- Puna legends and stories (1)
- Ki'i pōhaku (1)
- Bait and salt wells (1)
- Ko'a (1)



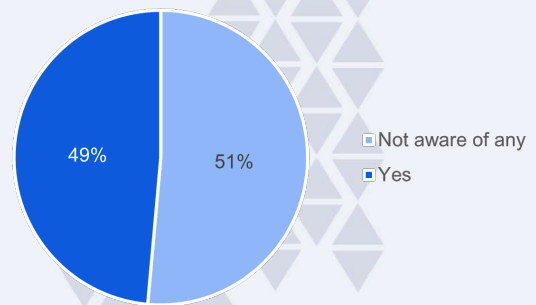
ARE THERE ANY SPECIFIC CONCERNS ABOUT THE RESOURCES OR THE CULTURAL SIGNIFICANCE OF THE PLACE THAT YOU'D LIKE TO SHARE? OPEN RESPONSE. (RESIDENTS ONLY)

- ATVs destroying the trail and various sites (3)
- Vegetation overtaking structures (3)
- Increase in visitors (2)
- Unattended cooking fires starting a forest fire (1)
- Exposure of sites on social media (1)
- Concern for iwi kūpuna (1)

DO YOU KNOW OF ANY NATURAL RESOURCES ALONG THE TRAIL OR AT THE BEACH? OPEN RESPONSE.

(RESIDENTS ONLY)

- Animals (turtles, monk seals, nēnē) (8)
- Native plants (hala, 'ōhi'a, laua'e) (5)
- Marine subsistence resources (4)
- Fresh water springs (3)
- Relic (poi pounders) (1)



ARE THERE ANY SPECIFIC CONCERNS ABOUT THE NATURAL RESOURCES THAT YOU'D LIKE TO SHARE? OPEN RESPONSE.

(RESIDENTS ONLY)

- People harassing turtles (3)
- ATVs destroying trail (2)
- Invasive plants choking out native species (2)
- Visitors wandering off the trail (2)
- Unattended cooking fires starting a forest fire (1)
- Overrun by visitors (1)
- Dogs harassing wildlife (1)

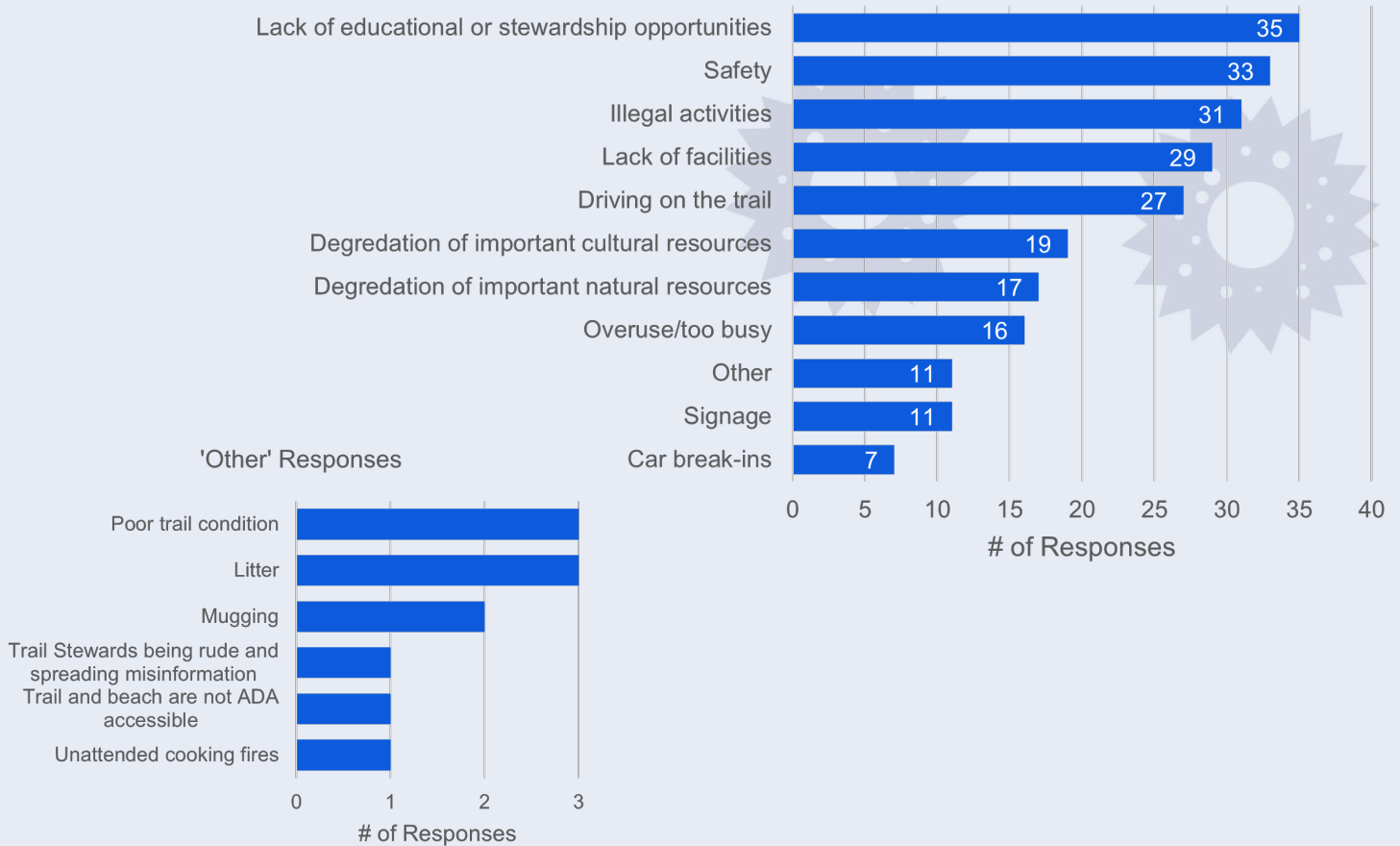
ARE THERE ANY MEMORIES, HISTORY, OR OTHER INFORMATION YOU ARE COMFORTABLE SHARING ABOUT THE TRAIL/COASTAL AREA? OPEN RESPONSE.

(RESIDENTS ONLY)

- “We used to be able to drive and camp. Spent many days there and fed my ohana many times fishing/diving there. Now so many more tourists because of social media and residents as puna has grown.”
- “Going there with my internship cohort and jumping into the cool waters after a hot and humid hike. Hā'ena was an oasis after a long hike in the lowland forest. We learned of Hōpoe teaching hula and lei-making to Hi'iaka there while watching gentle ocean waves go in and out, the wai ripple into the kai, and the trees sway above. It made a lot of sense why they would learn in this special space.”
- “Use to be a great place to go now to busy.”
- “I recently broke my foot and then passed out on the trail. All the hikers were friendly and offered help to get me out. It was scary knowing that I had to hike more than two miles back to our truck. My husband helped me slowly walk out. There should be an emergency phone at the beach. I hope that the Shipman ohana gives access for ambulances to come in through their private road when needed.”
- “The trail is beautiful and is slowly being torn up by off road vehicles. Creating vast mud pits, slippery rocks, and forcing people to go off the trail and forge new ones to avoid the sloppy and sometimes deep mud.”
- “This is one of my top 5 beaches in the world due to privacy & picturesque.”

MANAGEMENT

WHAT CONCERNS DO YOU HAVE, IF ANY, REGARDING THE MANAGEMENT OF THE TRAIL? SELECT ALL THAT APPLY. (RESIDENTS ONLY)



ARE THERE ANY CHANGES YOU WOULD LIKE TO SEE IN TERMS OF MANAGEMENT OF THE PUNA HISTORIC TRAIL AND HĀ'ENA BEACH? OPEN RESPONSE. (RESIDENTS ONLY)

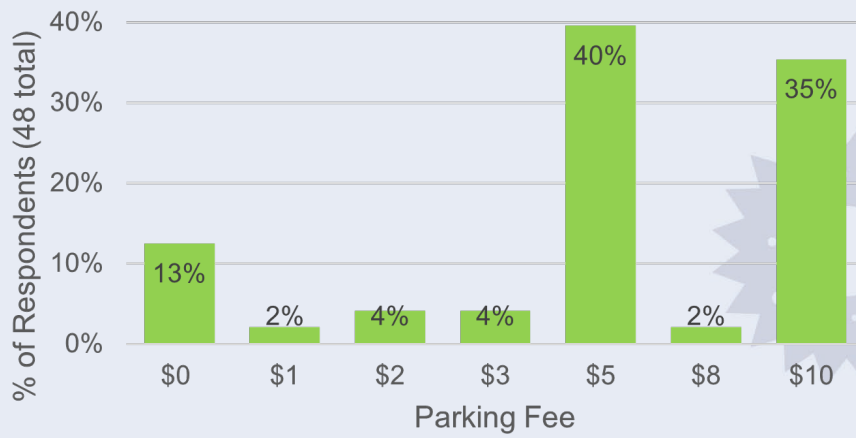
- Security at trailhead parking (22)
- Restrict vehicle use on the trail (7)
- Conduct trail maintenance/remove invasives (7)
- Community-led stewardship (6)
- Better signage about history and trail characteristics (5)
- Signage to warn about ocean current (2)
- Make it a State Park (2)
- Leave it alone (2)
- Car access to Hā'ena in case of emergency (2)
- Close the gate at the parking lot after hours (1)
- Better access for fishers and cultural practitioners (1)
- Install bathrooms (1)
- "Return to mountain bike trail status." (1)
- Reservation system for visitors (1)
- Shorter trail (1)

IS THERE ANYTHING ELSE YOU'D LIKE TO SHARE? OPEN RESPONSE.

(ALL)

- “There was an injured sea turtle at the beach.”
- “One of the sea turtles on beach looked injured and/or dead.”
- “I had read a website with a plan of the hike and we saw that the hike went near of the ocean too, with another way. We took this way to go to the beach but we were almost lost, I think there was no official way there.”
- “This trail would benefit greatly from some trail improvements and maintenance.”
- “We noticed the trail was very muddy and uneven, to the point of needing some very sturdy waterproof shoes. Also saw a guy riding his motorcycle on the trail, not cool. If that is allowed then the condition of the trail will become worse than it is now.”
- “The beach cannot support many people and no services means possible dedication on the side of the trail. Also, just this past Sunday I counted 30 honu on the rocks. Most I've ever counted down there. Due to being remote there seems to be no recourse for anyone doing things they shouldn't be doing. As well as persons being injured and other possible medical emergencies... it seems to be very risky for those who need to perform rescues to those people. Lastly, I really feel there should be a line with signs going across the left side of the bay. Warning people of the current and risk when entering the water on that end, going out too far and subsequently being sucked out to the ocean.”
- “Carried out two bags of trash that I collected, a bit to much in my opinion. I would restrict the sand part of if the beach while turtles try to lay their eggs. Camera at trail head is necessary my car was broken in and there are several reports on the web of breaks ins and assault at the trail head. Plus Police and rental company said happens all the time. Probably good to include average time spent on trail as well, the distance is misleading due to the ruff conditions. We spent 5 hours in total. Regardless we loved the trail.”
- “Large swaths of this area need protection, both ecological and archeological, before they are lost forever.”
- “This is one of the few shoreline access sites in Puna, and I would like it to remain accessible to residents of Hawai'i.”
- “Please don't block access!!!”
- “We need more recreation along the ocean in Puna.”
- “I'm unlikely to hike it again just cuz I'm from so far away. But I'd pay a few bucks for a nice hike like this.”
- “This trail is incredibly beautiful. One of the most beautiful places I've ever been, a little piece of paradise.”
- “Beautiful trail! Nice beach and lots of Honus! :)”

**HOW MUCH WOULD YOU PAY FOR A PARKING RESERVATION, KNOWING THAT THE FEES WOULD BE USED TO MANAGE/STEWARD THE TRAIL AND ITS RESOURCES? OPEN RESPONSE.
(VISITORS ONLY)**



SUMMARY

Most survey respondents were residents of Hawai'i, with the largest group (23%) residing in Hawaiian Paradise Park. The most prevalent age bracket was 36-45 years old, closely followed by respondents aged 46-55 years. This predominance of older individuals should be considered when sharing information such as the difficulty level of the hike.

Among Hawai'i residents, only 15% were born and raised in Hawai'i, whereas a significant proportion (32%) were newcomers to the state, having arrived within the past 1 to 5 years. This demographic group are less familiar with Hawaiian waters and may not be acquainted with ocean safety practices, thus increasing their vulnerability to ocean-related incidents. Educational resources should be available to all trail users, enabling them to assess the suitability of swimming activities and identify potentially hazardous areas both in and out of the water.

In terms of hiking frequency, most Hawai'i residents (45%) reported having traversed the trail only a few times, while 21% hiked the trail regularly, with 14% hiking once a month, 4% once a week, and 3% hiking more than once a week.

The majority of visitors learned about this hike through search engines, followed by recommendations from a friend/family member and visiting the official trail website. For all respondents, the primary motivation for accessing the trail was for hiking/exercise, closely followed by beachgoing, sightseeing, and swimming. Hawai'i residents were more inclined to utilize the trail for picnicking/group

gatherings, cultural activities/caretaking, fishing, religious practices, and camping compared to visitors.

The most significant safety concern for all respondents was car break-ins, followed by falling and sustaining injuries on the trail. A majority of visitors reported being unaware of potential dangers, with those who were informed primarily relying on signage at the trailhead and beach.

In terms of resource awareness, 58% of Hawai'i residents were aware of cultural resources along the trail or at the beach, while 42% were not. Similarly, 49% of respondents were aware of natural resources, with the remaining 51% being unaware. The primary concern regarding natural resources was the harassment of turtles, while vehicle use and vegetation overgrowth were prominent concerns for cultural resources.

Residents expressed various management concerns, with the most prevalent being the lack of educational or stewardship opportunities, followed by safety issues, illegal activities, lack of facilities, and vehicle use on the trail. The most desired change among residents was increased security at the trailhead parking area.

Finally, out-of-state visitors were asked an open response question about their willingness to pay for a parking reservation. 40% of respondents indicated they would be willing to pay \$5, 35% suggested a willingness to pay \$10, and 13% reported that they would not be willing to pay for a parking reservation.

REVITALIZE PUNA: OCTOBER 21, 2023

The Revitalize Puna Event is hosted by the Kīlauea Recovery Team and County Council District 4. It occurs four times throughout the year at the Billy Kenoi Pāhoa District Park Gym from 10:00am to 2:00pm and is free to the public. The purpose of the Revitalize Puna Event is to promote ongoing dialog between the community and the County concerning recovery efforts after the 2018 Kīlauea Eruption that devastated Puna. Townscape hosted a booth at this event to educate the community about

the significant resources and prominent issues along the Puna Trail, to get ideas for continued community outreach, to hear solutions and ideas for management of the trail, and to share about the Puna Historic Trail Stakeholder Action Plan project. To accomplish these objectives, the following tools were developed and utilized by Townscape.

RESOURCES AND ISSUES POSTER

A transparent overlay allowed Townscape to flip between the significant resources and major issues along the Puna Trail. The background image provides a view of the actual trail amongst the coastal landscape.

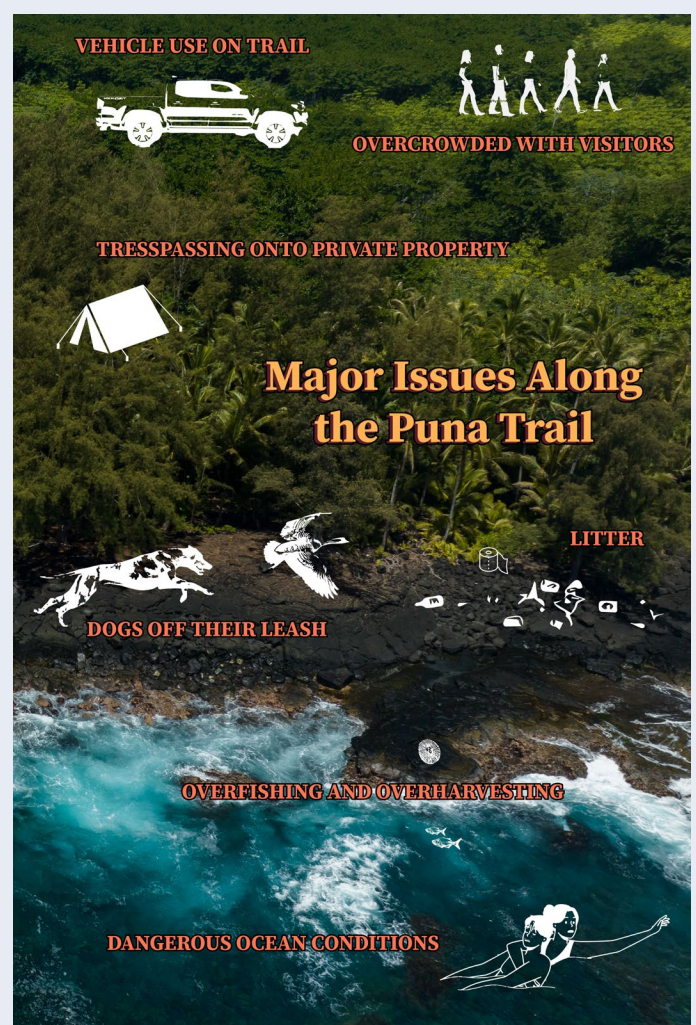
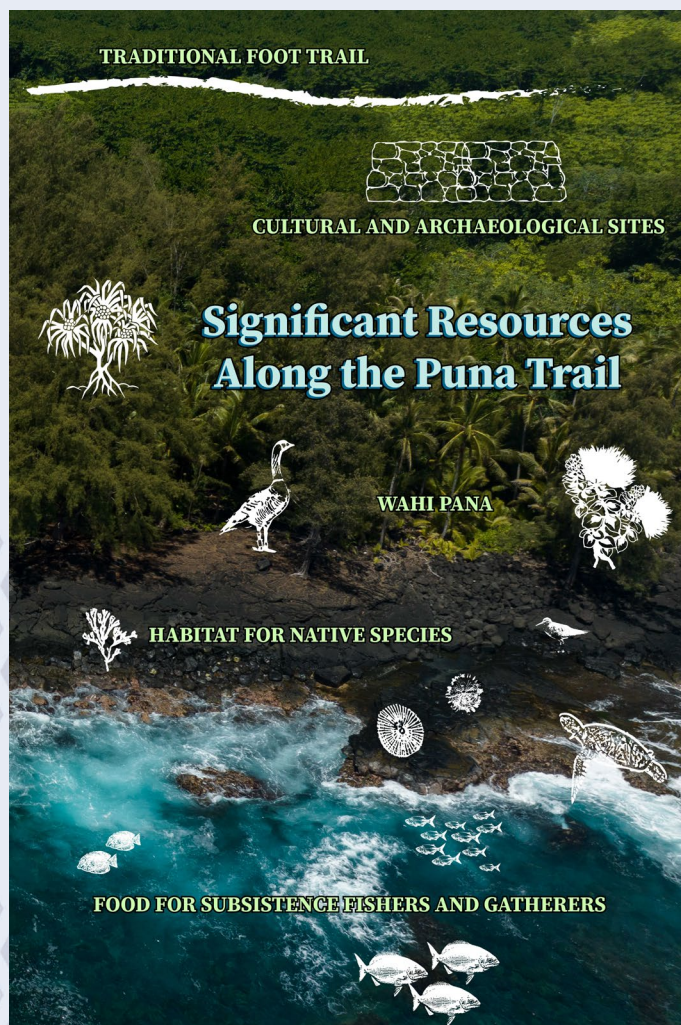


Figure 32. Resources and Issues Poster

STICKERS

A series of stickers were developed to highlight significant mo'olelo that are associated with the trail and Hā'ena. The first sticker features a lehua flower, symbolizing Hōpoe – Hi'iaka's close friend and lehua grove that was destroyed by Pele in a fit of rage against Hi'iaka. The Puna Trail originates where this lava flow occurred; the smooth pāhoehoe on the trail is a remnant of this historic event. The second sticker showcases the nēnē goose, whose population faced near-extinction until Herbert C. Shipman recognized the need to save them and established the first ever captive breeding program for nēnē at his residence in Kea'au. The third sticker depicts the historic trail, featuring the traditional 'alā stones and curbing added in the 1840s to accommodate horses. The fourth sticker highlights the story of Māmalahoe Kānāwai, the Law of the Splintered Paddle. In this event, Kamehameha was struck on the head with a paddle after initiating an attack on a group of fishermen. Subsequently, he decreed the safety of old men, women, and children along the trails, without fear of harm. This incident occurred just north of Hā'ena.

These stickers were distributed to event attendees who visited Townscape's booth. Each sticker included a QR code on the back, linking to the project website (<https://dlnr.hawaii.gov/recreation/nah/hawaii/puna-trail-planning-project/>), where the stories behind each design were made accessible.



Figure 33. Puna stickers

PUZZLE

A 30-piece puzzle was created utilizing the photo below of a historic rock wall situated along the trail's border. This wall was once an animal enclosure for Kea'au Ranch. The middle section of stones was the traditional 'alā that marked the foot path of the ala loa. In the 1840s, during the trail's conversion for horse use, these stones were relocated from the trail and repurposed within the rock walls.

The puzzle aimed to highlight some of the trail's historic features in hopes of increasing awareness for future hikers of the trail. Additionally, the puzzle served as an engagement tool for youth, fostering interest and curiosity about the trail and its history. While youth were focused on the puzzle, Townscape initiated conversations with parents, providing an opportunity to share valuable information about the trail during these interactions.



Figure 34. Historic rock wall along the Puna Trail, featuring the traditional 'alā stones used in construction of the ala loa.

COMMENT CARDS

Comment cards were available at the booth to collect ideas for management of the trail as well as to collect contact information from those who were interested in future volunteer opportunities to mālama the trail. A total of (6) comment cards were completed. The majority of participants opted to verbally communicate their ideas rather than completing a comment card.

**PUNA HISTORIC TRAIL
STAKEHOLDER ACTION PLAN**

Do you have any ideas for management of the trail and its resources?

Would you like to participate in future volunteer opportunities to mālama the trail?
If so, please leave your contact information below.

Name: _____

E-mail: _____

OR

Phone number: _____

Check if interested in receiving a notification when the Draft Plan is available for public review.

COMPLETED COMMENT CARDS:

- Invest resources to establish a marked and designated route that keeps use on a single track. Thus mitigating the weaving of trail and damage to surrounding environment and cultural sights. Fill in muddy spots and chainsaw the trail clear.
- Please do not make the Puna Trail too easy to cross. This may bring too many individuals who will not have mālama for the ‘āina.
- Limit access to the trail by way of a reservation system. Charge a small fee to non-resident visitors. Offer community members to do a volunteer clean and maintenance day and provide a free meal and drink.
- I didn't know this trail existed but I am glad to know about a good place in nature. Suggestions: throw work party days, get a working meeting group going to care for the space, and throw a public event at the location to increase awareness.
- Big Island Invasive Species Committee (BIISC) will be hosting a Hala Festival in Spring/Summer 2024 in Puna. This would be a great addition to our event – get in touch with Franny or Kawehi at BIISC!
- Create signage that educates the public on the cultural uses and stories involving native plants in culturally appropriate way. Integrate science and Hawaiian culture in the educational pieces. Have interactive activities along trail that are educational for various age groups. Have more trail options in the area so that it spreads out the demand and everyone is not all on this one trail.

Figure 35. Comment cards used for Revitalize Puna Event

ADDITIONAL VERBAL COMMENTS:

- Improve the muddy sections of the trail by filling them in with gravel.
- The trail, although not managed by the State, continues past Hā'ena all the way to Hilo. This portion should be opened up for public use.
- The State should take land from the Shipmans at Hā'ena to allow more space for the public.
- Increase security at the trailhead since there are a lot of vehicle break-ins. When Trail Stewards are hired, have them monitor the trailhead area.
- Install solar-powered cameras along the trail to catch people who are illegally driving on the trail.
- Empty the trash bin at the trailhead more regularly.
- Some ways to outreach with Hawaiian Paradise Park are through attending the board meetings, member meetings, as well as posting on their unofficial Facebook page.
- Other schools to include in outreach should be Paradise Home Schools and Hawai'i Academy of Arts and Science (HAAS). They have satellite schools in the Puna area.
- Put the traditional 'alā back on the trail.
- Install an ocean/current warning sign at Hā'ena. The sign should list the number of drownings and when those drownings occurred. Put a flashing red light on the sign that is charged by a solar panel.
- Is there a record of when vehicle break-ins occurred? It would be interesting to know what time they usually are.
- Install a security camera for the parking lot at the trailhead.
- Have a presence on the trail.
- Limit the number of visitors (look into the Oregon Rogue River permit system, although this might be overkill for this small trail).



Figure 36. Townscape's booth at the Revitalize Puna Event

KS CLASS VISIT: NOVEMBER 8, 2023

Townscape and Nā Ala Hele visited two combined 4th grade classes at Kamehameha Schools (KS) during a single class period. The objective of this visit was to engage the students in this planning project through hands-on activities, sharing about the trail and its significant resources while also gathering the students' input on management ideas and solutions to address issues along the trail. The 4th grade classes were chosen due to the students' prior exposure to Hā'ena, as most had visited the area in 3rd grade. Additionally, the 4th grade curriculum focuses on issue-based projects, providing the students with a chance to address real community challenges. In total, 48 students participated, with most having visited Hā'ena, though not necessarily the trail itself.

Townscape and Nā Ala Hele began by introducing the Puna Trail, noting that the trail and the school are situated in the same ahupua'a. The planning team also emphasized the historic use of the trail as an ala loa. Students were prompted with the question, "Why do you think it was important for Hawaiians to travel throughout different ahupua'a?" Responses included acquiring food resources, engaging in trade, and gathering materials for canoe construction. To visually aid the discussion, a Resources and Issues Poster (refer to Figure 32) was used to illustrate various resources and issues along the trail.

The class was divided into three groups, with Townscape and Nā Ala Hele facilitating three different activities. Each group rotated through these activities, each lasting approximately 10 minutes. The following sections provide detailed descriptions of each activity.

ACTIVITY 1: MO'OLELO

In this activity, students were read two stories relating to the trail and Hā'ena. The first story unfolded the tale of Pele, Hi'iaka, and Hōpoe (see page 17), while the second recounted the story of the Māmalahoe Kānāwai (see page 18). A collection of relevant photos, carefully curated to align with each story, was flipped through as a member of the planning team read each mo'olelo. At the end of the activity, students were given stickers (see Figure 33) to remember the stories by.

ACTIVITY 2: TRAIL-TYPE MATCHING

Nā Ala Hele developed a set of 16 cards to showcase five different trail types. For each trail type, three cards were created: one featuring the name, another with a description, and the third displaying a photo. The students were randomly assigned one card each and instructed to discuss with their peers to identify and assemble sets of three cards. The 16th card featured the words "Puna Trail." The student who received this card was tasked with determining the trail type they believed best represented the Puna Trail.

When all groups were matched up, a member of each group presented the name and description of their assigned trail type to the larger group. Nā Ala Hele helped the group to identify the trail type for the Puna Trail and provided additional information about the trail and its modification over the years.

ACTIVITY 3: SOLUTION BRAINSTORMING

For this activity, students were paired up, with each pair receiving a card that either posed a question or outlined an issue along the trail or at Hā'ena. The students were tasked with providing their responses, ideas, or solutions on the back of the card. Once all pairs completed their writing, they shared their thoughts with the larger group. Below is a compilation of the questions/issues and the corresponding responses from the students:

- How can we educate the community about the important historic/cultural features along the Puna Trail?
 - » You can make signs that say, “Please no cars or vehicles on the trail,” “Don’t litter,” and “Don’t camp on the trail.”
 - » Give a public speech.
 - » Do a project about Puna Trail’s mo’okū’auhau.
 - » Have a guide teach you.
 - » Tell the mo’olelo about how we got this trail and how long ago it was.
- How could you inspire your family to mālama the trail?
 - » We can solve this problem or tell our family and friends.
 - » We can use a leash for when we walk our pets and pay attention to our animals. Don’t use cars or trucks on the Puna Trail. Please don’t overfish or take everything for yourself.
 - » Make a digital poster. Tell your friends, ‘ohana, and other people not to bring their dogs.
 - » I would make a poster for them and educate them. I would put the poster up in my neighborhood so my neighbors could be educated if they ever go.
 - » I would make a slideshow for my ‘ohana talking about issues, what can be improved, and about dangerous areas.
- Who should we include in discussions about the Puna Trail?
 - » We should discuss with cultural experts and trail managers and people who walk on the path a lot and fish.
 - » Let people know about the private property. No pets allowed!
 - » Documentors, photographers, and kids.
 - » I think we should include trail managers to make sure it’s safe and cultural experts so that they can tell us if it’s legal.
 - » I think hikers because they know a lot about trails because they always go on them.
- Issue: Illegal driving on the trail is damaging the historic trail.
 - » Put signs up that say, “no cars they are damaging the trail.”
 - » Put up a gate where you can only pass without a car (no loopholes).
 - » Ban cars and vehicles.
 - » Make people pay \$5,000 to fix damage.
 - » Make it illegal to drive on the trail and only be able to walk on the trail.
 - » Make people pay money every time they go in their car and go to Hā'ena to drive on the trail.
 - » They go to jail after the third strike of driving on the trail after reminders.

- Issue: There are too many people hiking the trail to get to Hā'ena Beach and the beach is overcrowded.
 - » Make a sign that says certain number of people on the trail and if there's too much people wait until the people get off the trail.
 - » Close the trail or have someone like security to count the people going in and out so it doesn't get too crowded.
 - » Limit amount of people.
 - » A time limit per group.
 - » Put guards.
 - » The solution they should make is a policy of people. And they can make a sign that says "Kapu" or "no trespassing." "Danger strong current."

- Issue: Dogs that are off their leash are chasing after and disturbing the nēnē.
 - » Put a sign that says no dogs allowed. Have a dog police with an atv on a separate road (not on the trail).
 - » Mini dog parks.
 - » Put a no dogs allowed sign or leave dogs on leash.
 - » A safety sign.
 - » Put the leash back on.
 - » When they come tell them stop.

- Issue: Overfishing and overharvesting has resulted in no more 'opihi and less and less fish.
 - » We can make signs and make it say, "please do not fish." "Fish are endangered."
 - » Limited fishing.
 - » Throw back what you don't need.
 - » Don't fish baby fish and pregnant fish.
 - » Make laws:
 - » Take what you need, not what you want.
 - » Stop fishing and harvesting until they come back.
 - » No trespassing on the Shipman's property.
 - » No fishing in June or \$1,000 fine.

- Issue: The ocean current is strong at Hā'ena Bay which has caused some people to drown there.
 - » Set up signs, cameras, and buoys.
 - » Hire lifeguards to help people.
 - » Protective net/buoy.
 - » Warning signs for only strong swimmers.
 - » Maybe put a safety hazard sign (by the entry).
 - » Make a rock wall so the kids can swim.

KILO WORKSHOP WITH NĀWAHĪ: DECEMBER 8 & 15, 2023

The planning team (Townscape and Nā Ala Hele) collaborated with Purple Mai'a to facilitate a Kilo Workshop with the 11th grade class from Ke Kula 'O Nāwahīkalani'ōpu'u Iki Public Charter School. This workshop took place on two Fridays in December, with half of the class participating in the first visit and the remaining half in the second visit. The primary objective of these sessions was to teach about the traditional methods of kilo (observation) and how they relate to modern data collection. The 11th grade students helped to capture relevant data for the Puna Trail and Hā'ena Beach, which were used to inform this plan.

Townscape began by introducing the Puna Historic Trail Stakeholder Action Plan project. They outlined the scope of work, timeline, and purpose for facilitating the Kilo Workshop. The Resources and Issues Poster (Figure 32) was used to illustrate some of the significant resources and issues along the Puna Trail,

which were gathered from previous talk stories with community members deeply connected to the trail.

A representative of Purple Mai'a provided insights into their organization, highlighting relevant projects they are actively involved in. They also explained how modern technologies can enhance kilo practices, offering the example of installing a tide sensor in a fishpond for continuous tide level measurements. Additionally, the presentation explained that by incorporating aspects of traditional kilo with modern data collection, we are able to better observe patterns in nature. For instance, aligning observations with specific moon phases, as opposed to fixed dates, ensures more consistent data collection over multiple months and years, accounting for variations in environmental patterns.

The class was then divided into three groups. Townscape, Nā Ala Hele, and Purple Mai'a facilitated three activities, which each group rotated through. Each activity lasted approximately 25 minutes. These activities are described in more detail below.

Figure 37. Hā'ena. Photo captured by 11th grade Nāwahī student.



ACTIVITY 1: DRONE

As part of the Kilo Workshop, students were introduced to the modern data collection method of using drones. Drones offer the unique ability to observe a space from a different perspective. It is also a valuable tool for monitoring areas that are sensitive or inaccessible, such as areas with rare plants on the face of a cliff. In this session, students were instructed on how to safely operate a drone, with a partner designated as a spotter. The students took turns flying and spotting the drone as they captured aerial photos of the area. Photos captured by the 11th graders are displayed on pages 28/29, 32/33, and 55, and as Figures 10, 13, 17, 20, and 37 of this report.



Figure 38. Townscape staff demonstrating to 11th grade Nāwahī students how to operate a drone

ACTIVITY 2: HĀ'ENA – QUANTITATIVE DATA COLLECTION

Students were provided a worksheet and instructed to stay along the shoreline of the bay, marking their observations on the provided sheet, which is attached to this report as Appendix B. Questions on the worksheet

pertained to wind direction, weather, current, tide, and water quality. Additionally, students were tasked with recording any plant or animal species along the shore. Below are some select observations from each day.

	December 8, 2023	December 15, 2023
Mahina <i>Month</i>	Makali'i/Welehu	Makali'i
Anahulu <i>10-day period</i>	Hō'emi <i>Waning</i>	Ho'onui <i>Waxing</i>
Pō mahina <i>Moon phase</i>	Kāloapau	Kūlua/kūkolu
Lā'au a me holoholona <i>Plants and animals</i>	Honu Pipipi 'A'ama Kōlea Niu Noio Hala	Honu Pipipi 'A'ama/Papa'i Kōlea Niu Manu
Nā mea 'ē a'e <i>Other things seen on the beach</i>	Shoes Underwear Dog poop A dead turtle	Shoes 'Opala (rubbish) Saimin packet



Figure 39. Purple Mai'a staff facilitating one of the kīlo activities along the beach

ACTIVITY 3: PUNA TRAIL – QUALITATIVE DATA COLLECTION

Starting from the beach, the students hiked a portion of the trail, guided by a member of Nā Ala Hele. During the hike, Nā Ala Hele shared the history of the trail and pointed out the historic features that still remain. The students were then asked to spread out and quietly observe their surroundings. Each student received a worksheet (Appendix C), featuring qualitative-based questions designed to prompt thoughtful reflections on the students' experiences and emotions within the space. Selected responses are highlighted below.

- How does this space make you feel?
 - » Peaceful and calm.
 - » Connected to the earth.
 - » “This place doesn’t change; every time I come it has the same sacred kind of feeling.”
 - » “This is a very calming place; it’s almost like you can hear your thoughts. The sound of the ocean is very calming. Seeing how green it is and full of life makes me happy and grateful in a way to have healthy land.”
 - » “I am happy to see native plants still growing in the wild. As a native Hawaiian, it is important to make sure that our plants, like laua’e, can still grow in the wild and not just at your house or a farm.”

- » It is calm, peaceful, and beautiful because you cannot hear people.
- » “It is very calm. There are no voices and not a lot of sounds. I can only hear the ‘āina.”

- What else should we kīlo?
 - » We should kīlo the patterns of which animals come and go, eat, sleep, and reproduce.
 - » Plant native plants.
 - » Count how many people come per day.
 - » Host community clean-ups for all the rubbish.
 - » I don’t think we should use new technology to kīlo; we should use the methods of our kūpuna.



Figure 40. Nāwahī students recording their observations on the trail

DISCUSSION

Following the activities, the class circled up to debrief through a discussion. Each participant took turns sharing a single observation they made during the activities. Then Townscape and Nā Ala Hele facilitated a discussion by posing questions to the group. Students’ responses are provided below:

- What makes Hā’ena special?
 - » Its mana.
 - » Its abundance of freshwater, fish, and limu. Its diversity of species.
 - » Hā’ena has a rich history with everyone, not just Hawaiians.

- » The landscape is not overgrown; it's well maintained.
 - » You can learn from what you see.
 - » There are so many stories here of our ancestors. Hi'iaka walked on this trail.
 - » Since the trail is difficult, it is more rewarding when you complete the hike.
 - » The place is very quiet; it encourages you to find yourself. It helps us connect with our ancestors.
 - » We can all come here together as a class.
 - » Everything here affects each other: the fishpond, the water, the various lā'au.
 - » The two types of water here and how they connect make it special.
- How can this space be better managed?
 - » Keep the trail difficult so that it's harder to get here.
 - » Ignorance is a big issue with visitors. They aren't researching the cultural significance of the place ahead of time.
 - » The water can be rough sometimes and it's hard to get help. There should be a lifeguard at Hā'ena.
 - » This place should stay secret; don't advertise it and DON'T say that it's a fishing spot.
 - » Share the stories of the place with visitors, maybe through a tour?
 - » Put up homemade signage sharing about the dos and don'ts of the place. People don't follow County signs.
 - » Have people on site to educate.
 - » Completely enclose the trail from driving.
 - » Educate the hula community, maybe facilitate another outreach event during Merrie Monarch.
- How should we outreach to fishermen?
 - » A lot of fishermen at Pakī come from Pohoiki and are not familiar with the significance of the area. Hold a meeting for fishermen only.
 - » Fine people for driving on the trail.
 - Thoughts on camping permits for fishermen?
 - » This is a good idea. There should be a way to filter people.
 - » Start at the fishing stores, like S. Tokunaga, and see how they feel about getting a permit.
 - Should the cultural/archaeological sites along the trail be cleared and marked? Or kept hidden?
 - » Keep our wahi kapu hidden.
 - » It's okay to install informational signage for archaeological sites such as the rock walls used as animal enclosures. DO NOT mark cultural sites (burials, heiau, etc.)
 - » Be careful, signage may also invite people, marking something as an attraction. Be prepared to adjust and remove signage if necessary.
 - » Signage may also disturb the area.
 - » Clean up these historic sites.

HONUAIĀKEA: FEBRUARY 24-25, 2024

The Honuuiākea process is a two-day workshop facilitated by the Edith Kanaka'ole Foundation (EKF). It's a methodology of Papakū Makawalu that helps participants understand the valuable environmental data that can be found in our ancestral text, oli (chants), and ka'ao (stories). Recognizing that our Hawaiian ancestors were proper stewards of 'āina, understanding the patterns and relationships of the natural world, the Honuuiākea process aims to look at the world through this ancestral lens to guide future stewardship of the resources along the Puna Trail and at Hā'ena Bay.

Papakū Makawalu is a way of looking at the universe through three different papa, or spheres of knowledge: astronomical, atmospheric, and heavenly phenomenon.

In preparation for the two-day workshop, EKF researched and chose specific oli and ka'ao related to the Puna Trail. The planning team invited a diverse range of stakeholders, totaling nearly 40 individuals, comprised of lineal descendants, hula practitioners, fishers, historians, neighboring landowners, government agencies, and community groups. Understandably, committing to a two-day weekend event proved challenging for many. Excluding the planning team, a total of 12 participants engaged in the Honuuiākea process.

On the first day of the workshop, the goal for the day was to review the oli and ka'ao provided by EKF. Participants were divided into groups to collectively read, translate, and interpret each narrative. Given the diverse backgrounds and perspectives of the attendees, interpretations naturally varied. After discussing in small groups, participants shared their mana'o with the larger group. These discussions revolved around identifying recurring themes, underlying cultural resources and processes, specific place names, and any words that stood out. The purpose of this exercise was to view the trail and Hā'ena through the eyes of our Hawaiian ancestors as they were crafting these oli.

On the second day, EKF introduced some preliminary kapu (natural laws to hold sacred/follow) and kāmāwai (prohibitions/guidelines to preserve the kapu set forth) developed based on the discussions from the previous day. A large group discussion followed as the group reviewed each kapu and kāmāwai, suggesting additional kāmāwai for inclusion. Consensus on each kapu and kāmāwai was required before progressing to the next. The planning team referred to these kāmāwai while developing the action items to ensure alignment with the established guidelines. More details about the process are included in EKF's report, attached as Appendix D.



ACTION PLAN

ACTION PLAN ITEMS

- 1 Continue the Trail Steward program.
- 2 Increase security measures at the trailhead parking lot.
- 3 Increase enforcement of rules.
- 4 Install a buoy in Hā'ena Bay marking the area with strong current.
- 5 Establish a parking reservation system for the trailhead parking lot.
- 6 Restrict parking along Beach Road.
- 7 Improve ocean signage at Hā'ena.
- 8 Install interpretive signage for historic sites along the trail.
- 9 Restore areas of the trail in need of repair.
- 10 Install a portable toilet at Hā'ena.
- 11 Conduct community workdays.
- 12 Engage trail users in data collection.

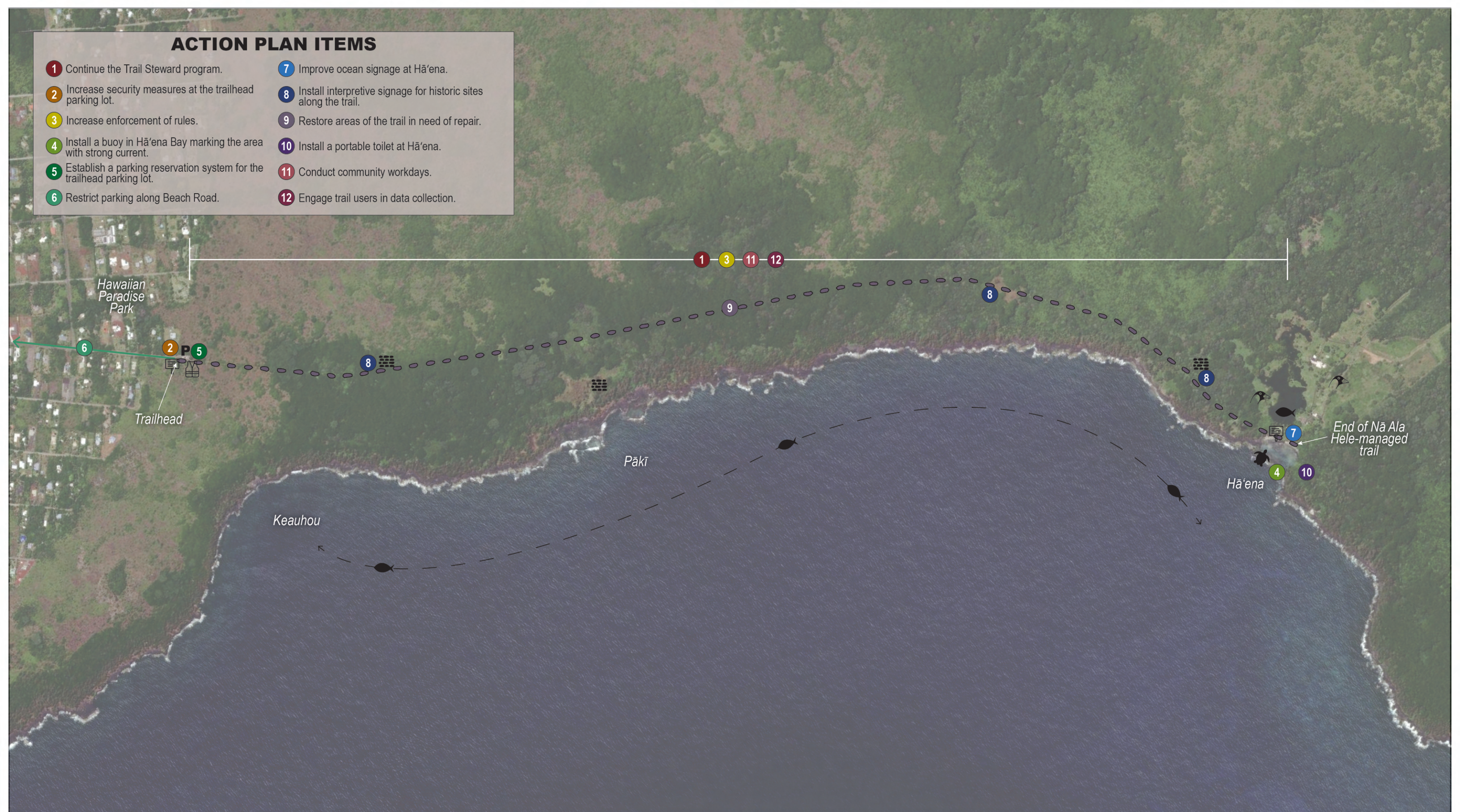


Figure 41.
PUNA HISTORIC TRAIL
Stakeholder Action Plan
Kea'au, Hawai'i



Legend

- P** Parking lot
- Trail steward
- Trail signage
- Historic sites
- Important turtle habitat
- Important native bird habitat
- Subsistence marine resources

LEGEND - ISSUES ICONS



**VEHICLE USE ON
THE TRAIL**



TRESPASSING



**OVERCROWDED
CONDITIONS**



**OVERFISHING/
OVERHARVESTING**



OCEAN SAFETY



LOOSE DOGS



PERSONAL SAFETY



WILDFIRES



SANITATION



INVASIVE PLANTS



**IMPROPER
BEHAVIOR**



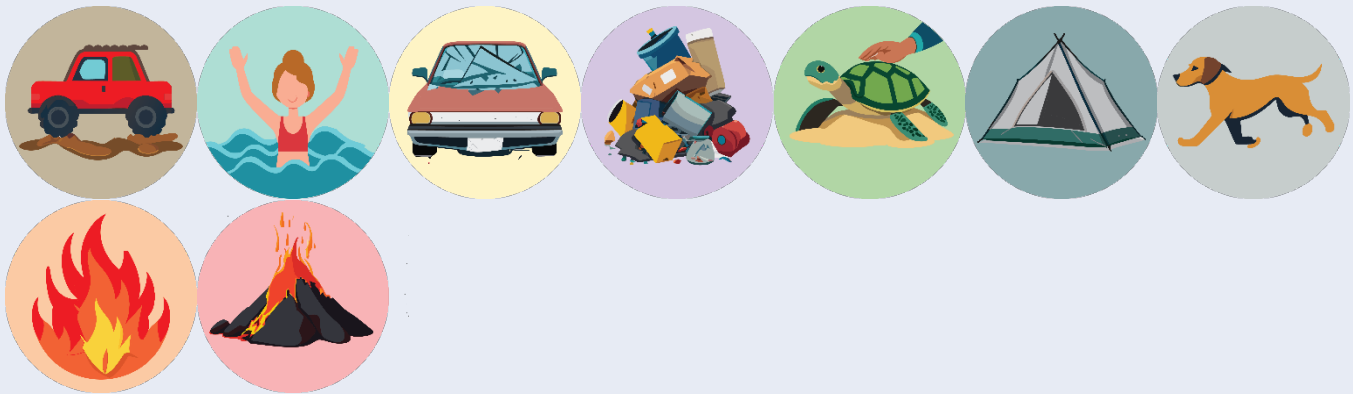
**LACK OF
CONNECTION TO THE
PLACE**

1. CONTINUE THE TRAIL STEWARD PROGRAM

The Trail Steward program was first implemented by Nā Ala Hele at the Pololū Trail in North Kohala, Hawai'i. Since its establishment in 2021, the program's educational efforts have notably decreased the number of rescues of hikers and swimmers utilizing the trail to access the valley floor. The stewards not only alert visitors to potential dangers but also educate them about the cultural significance of the trail and its surroundings, promoting respectful behavior. Their positive impact at Pololū led to the expansion of the program to other trails across the island.

In February 2024, two trail stewards were assigned to the Puna Trail. While their hours vary, at least one trail steward is present on the trail every day for an eight-hour period. It is recommended to maintain the daily presence of these trail stewards on the trail to educate hikers on potential hazards, enforce rules, and report violations as well as contribute to the interpretation of the trail and its historic resources. Partnering with the University of Hawai'i (UH) at Hilo could provide additional support, allowing students to participate as trail stewards and earn course credits.

ISSUES ADDRESSED:



CHALLENGES TO IMPLEMENTING ACTION:

- » No stable funding source.
- » Limited trail steward applicant pool.

CURRENT STATUS:

Two trail stewards were hired in February 2024 and are present on the trail daily.

IMPLEMENTATION STEPS		PARTY RESPONSIBLE
1.1	Secure sustainable funding source.	Nā Ala Hele
1.2	Identify and recruit potential candidates for the trail steward position.	Nā Ala Hele
1.3	Coordinate with UH Hilo to establish a program for students to serve as trail stewards.	Nā Ala Hele
1.4	Continuously monitor and evaluate effectiveness of trail steward program and adapt as needed.	Nā Ala Hele

2. INCREASE SECURITY MEASURES AT THE TRAILHEAD PARKING LOT

Install a security camera and streetlight at the trailhead parking lot to deter and capture individuals breaking into vehicles. Secure the security camera/streetlight to prevent tampering and vandalism. Additionally, close the existing gate overnight.

ISSUE ADDRESSED:



CHALLENGES TO IMPLEMENTING ACTION:

- » Lack of funding for installation and maintenance.
- » Limited staff capacity to lock and unlock the gate.

Note: Previous attempts to install lights or cameras in the area have resulted in theft and/or destruction by gunfire.

CURRENT STATUS:

On hold due to funding and staffing constraints.

IMPLEMENTATION STEPS		PARTY RESPONSIBLE
2.1	Secure funding for installation and maintenance.	Nā Ala Hele & WHSL
2.2	Evaluate security camera and streetlight placement.	Nā Ala Hele & WHSL
2.3	Install security camera and streetlight.	Nā Ala Hele & WHSL
2.4	Address staffing needs for gate closure.	Nā Ala Hele & WHSL

3. INCREASE ENFORCEMENT OF RULES

Existing signage along the trail outlines rules such as prohibitions on driving, biking, fires, and camping, but these guidelines are often disregarded and there are currently not enough resources to be able to position HPD and/or DOCARE enforcement officers at or on the trail at all times. Other options should be explored to enlist alternative enforcement personnel from different agencies or entities to provide supplemental coverage.

ISSUES ADDRESSED:



CHALLENGES TO IMPLEMENTING ACTION:

- » Lack of staff capacity for HPD and DOCARE to be present at the trail daily.
- » Lack of funding for additional HPD and DOCARE staff.

CURRENT STATUS:

Monthly coordination meetings between Nā Ala Hele, WHSL, HPD, and DOCARE are in place. Current efforts include ensuring that there is daily presence on the trail.

IMPLEMENTATION STEPS		PARTY RESPONSIBLE
3.1	Engage with law enforcement agencies to discuss the need for increased enforcement.	Nā Ala Hele
3.2	Advocate for additional funding and resources for law enforcement staffing to policy makers and relevant government agencies.	Nā Ala Hele
3.3	Deputize trail stewards to cite for parking violations by revising rules to allow trail stewards to cite for parking violations or by employing trail stewards directly by the County.	Nā Ala Hele & County Councilmembers

Hawai'i Revised Statutes Section 291C-165
 "There shall be provided for use by authorized police officers, or county employees designated by the county chiefs of police, a form of summons or citation for use in citing violators of those traffic laws that do not mandate the physical arrest of violators."

4. INSTALL A BUOY IN HĀ‘ENA BAY MARKING THE AREA WITH STRONG CURRENT

A ball buoy, like the one at Richardson Ocean Park in Hilo, should be installed in the bay’s channel, marking the area with a strong current for swimmers. One thing to consider, however, is that highly variable currents at Hā‘ena mean that an area that is safe one day may be dangerous the next, and vice versa. Marking only a single area as dangerous may lead people to be less cautious in other areas.

ISSUE ADDRESSED:



CHALLENGES TO IMPLEMENTING ACTION:

- » Lack of funding for installation and maintenance.
- » Lack of staff capacity to complete necessary permits to install buoy.
- » Liability.
- » Effectiveness of buoy at deterring drownings.

CURRENT STATUS:

Not started.

IMPLEMENTATION STEPS		PARTY RESPONSIBLE
4.1	Secure funding for installation and maintenance.	Nā Ala Hele
4.2	Begin early consultations with the Hawai‘i District Land Office, Division of Aquatic Resources (DAR), and Division of Boating and Ocean Recreation (DOBOR).	Nā Ala Hele
4.3	Prepare and submit a Site Plan Approval application to the Office of Conservation and Coastal Lands (OCCL), including details on: <ul style="list-style-type: none"> » Type of buoy system that will be deployed (diameter, displacement, battery vs solar powered, etc); » How the buoy will warn swimmers; » The depth and distance from the shoreline the buoy will be deployed at; and » How long the buoy will be deployed for. 	Nā Ala Hele, DOBOR, DAR & Consultant
4.4	Contract for installation of buoy.	Nā Ala Hele

5. ESTABLISH A PARKING RESERVATION SYSTEM FOR THE TRAILHEAD PARKING LOT

A growing number of sites across the state now require out-of-state visitors to make a reservation prior to visiting popular locations such as Diamond Head (O‘ahu), Hā‘ena State Park (Kaua‘i), and Hanauma Bay (O‘ahu). Limiting the number of visitors provides more access for Hawai‘i residents, prevents overuse and degradation of natural and cultural resources, and enhances the quality of the experience for both residents and visitors. These locations charge fees for visitors, with free or discounted rates for residents, to fund the management and stewardship of these areas.

A reservation system should be implemented for parking at the trailhead parking lot. Consider requiring advance reservations for both out-of-state visitors and Hawai‘i residents without limiting access for cultural practitioners, including lawai‘a. The reservation system should distribute information about the hike (e.g. trail conditions, safety guidelines, historical and cultural information, emergency contacts), possibly through a required orientation video. Emphasize that this location is primarily a hiking destination rather than a beach spot, and inform visitors that Hawai‘i has a very short twilight, leading to rapid darkness after sunset. Revenue generated from fees should be allocated directly to stewardship of the trail, including covering the cost of hiring a parking attendant to check reservations.

ISSUES ADDRESSED:



CHALLENGES TO IMPLEMENTING ACTION:

- » Lack of funding for parking enforcement.
- » Requires cooperation with Hawaiian Paradise Park Owners Association (HPPOA) and HPD to sign and enforce no-parking on Beach Road, which currently serves as overflow parking when the parking lot reaches capacity.
- » Potential pushback from Hawai‘i residents for requiring reservations.

CURRENT STATUS:

Nā Ala Hele is in the process of revising their rules to allow for parking reservations and fee collection. Once the fee schedule is drafted, it will be available for public comments and then presented to the Board of Land and Natural Resources for final approval.

IMPLEMENTATION STEPS		PARTY RESPONSIBLE
5.1	Continue community consultations regarding parking reservations for Hawai‘i residents.	Nā Ala Hele
5.2	Revise Nā Ala Hele rules to allow for parking reservations + fees.	Nā Ala Hele
5.3	Establish and implement an online parking reservation system for the trailhead parking lot. Hire a parking attendant to check reservations.	Nā Ala Hele & WHSL
5.4	Restrict parking along Beach Road (refer to action item no. 6). Enforce no-parking.	HPPOA & HPD

6. RESTRICT PARKING ALONG BEACH ROAD

Access to the Puna Trail should be limited to pedestrian traffic and vehicles parking in the gravel parking lot at the trailhead to prevent overcrowded conditions on the trail and at the beach. Currently, people are parking on Beach Road in the HPP subdivision when the trailhead parking lot is full. However, to successfully implement a reservation system for the parking lot, it is necessary to restrict parking beyond the lot. Additionally, those parking on Beach Road are parking on private property, occasionally blocking residents' driveways.

ISSUE ADDRESSED:



CHALLENGES TO IMPLEMENTING ACTION:

- » Dependent on cooperation with HPPOA.
- » Lack of funding for installation of signs.
- » Lack of staff capacity for HPD and HPPOA to enforce “No Parking.”

CURRENT STATUS:

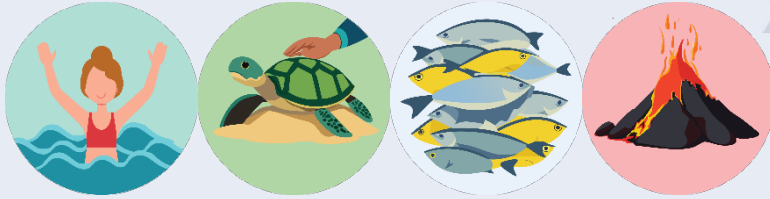
Not started.

IMPLEMENTATION STEPS		PARTY RESPONSIBLE
6.1	Coordinate with HPPOA.	Nā Ala Hele
6.2	Install “No Parking” signs along Beach Rd.	HPPOA
6.3	Enforce “No Parking.”	HPPOA & HPD

7. IMPROVE OCEAN SIGNAGE AT HĀ‘ENA

Provide a map depicting the current conditions in the bay along with data on past drownings to caution swimmers. Additionally, display a sign outlining the spawning cycles of fish to educate fishermen on periods when certain species should not be harvested. Highlight other marine species that are protected by law, such as honu and monk seals. Key information, including warnings, should be written in multiple languages. Trail stewards can interact with hikers to identify the common languages spoken by visitors on the trail. Engage the community to develop handmade signs rather than County signs.

ISSUES ADDRESSED:



CHALLENGES TO IMPLEMENTING ACTION:

- » Lack of funding for installation and maintenance.
- » Lack of staff capacity to develop signage.

CURRENT STATUS:

Educational signage regarding ocean safety (including predominant currents in the bay) and proper behavior has already been designed by a group of Kamehameha students and members of the Shipman family. Awaiting funding for installation.

IMPLEMENTATION STEPS		PARTY RESPONSIBLE
7.1	Consult DAR and local fishermen to determine spawning cycles for fish.	Nā Ala Hele & DAR
7.2	Work with Kea‘au schools to design signage for the trail/beach.	Nā Ala Hele
7.3	Order and install signage.	Nā Ala Hele

8. INSTALL INTERPRETIVE SIGNAGE FOR HISTORIC SITES ALONG THE TRAIL

Tell the history of Kea‘au through signage. Highlight features along the trail such as the hala and ‘ōhi‘a lehua trees, rock walls used for animal enclosures, traditional features of the trail, and the bunker from World War II. Do not identify culturally significant sites such as heiau, house sites, and burial mounds.

ISSUES ADDRESSED:



CHALLENGES TO IMPLEMENTING ACTION:

- » Lack of funding and staff capacity to design/install signage and to engage a consultant to ensure cultural/historic appropriateness and accuracy.

CURRENT STATUS:

Not started.

IMPLEMENTATION STEPS		PARTY RESPONSIBLE
8.1	Secure funding.	Nā Ala Hele
8.2	Conduct research on specific features along the trail and design signage.	Nā Ala Hele
8.3	Consult with cultural experts to ensure appropriate information is displayed on signs.	Nā Ala Hele
8.4	Identify locations for signage.	Nā Ala Hele & WHSL
8.5	Chapter 6E SHPD compliance, as needed.	Nā Ala Hele
8.6	Order and install signage.	Nā Ala Hele

9. RESTORE AREAS OF THE TRAIL IN NEED OF REPAIR

Construct a pedestrian bridge or stone causeway over the southernmost fishpond outlet into Hā'ena Bay to ensure that hikers remain on the designated trail and avoid trespassing on private property. Repair portions of the trail that are severely eroded from vehicles.

ISSUES ADDRESSED:



CHALLENGES TO IMPLEMENTING ACTION:

- » Lack of funding for repair work/source material.
- » Difficult to identify local/descendent families to assist in the repair work.
- » Limited number of individuals remain who are skilled in traditional Hawaiian stone masonry.

CURRENT STATUS:

Not started.

IMPLEMENTATION STEPS		PARTY RESPONSIBLE
9.1	Secure funding.	Nā Ala Hele
9.2	Consult with a traditional Hawaiian stone mason to determine how to repair the trail.	Nā Ala Hele
9.3	Develop project description.	Stone Mason & Nā Ala Hele
9.4	Find source material.	Stone Mason & Nā Ala Hele
9.5	Submit 6E form to SHPD for project approval.	Nā Ala Hele
9.6	Outreach to lineal descendants to participate in trail restoration activities.	Nā Ala Hele

10. INSTALL A PORTABLE TOILET AT HĀ'ENA

One portable toilet is recommended near the beach at Hā'ena to accommodate sanitary needs.

ISSUE ADDRESSED:



CHALLENGES TO IMPLEMENTING ACTION:

- » Suitable location that is:
 - Accessible for vehicle servicing;
 - Does not encourage public's egress onto private property; and
 - Is not within the shoreline setback.

CURRENT STATUS:

Not started.

IMPLEMENTATION STEPS		PARTY RESPONSIBLE
10.1	Secure ongoing funding to pay for installation and maintenance of portable toilet.	Nā Ala Hele
10.2	Determine location for portable toilet. <i>*Note: must be located greater than 40 feet from the certified shoreline to avoid triggering a shoreline setback variance application and environmental assessment.</i>	WHSL
10.3	Contract for installation and maintenance of portable toilet.	Nā Ala Hele

11. CONDUCT COMMUNITY WORKDAYS

Engage community in restoration and maintenance activities while providing information about the trail and surrounding area. Concentrate outreach efforts on individuals or groups already familiar with the area (e.g., hālau hula, Kea‘au schools, HPP community) to avoid attracting additional new users. Notices of upcoming community workdays can be posted on existing signage at the trailhead and beach.

ISSUES ADDRESSED:



CHALLENGES TO IMPLEMENTING ACTION:

- » Difficult to identify cultural practitioners and lineal descendants who can ensure that restoration work is conducted in a culturally appropriate manner.

CURRENT STATUS:

Not started.

IMPLEMENTATION STEPS		PARTY RESPONSIBLE
11.1	Identify and establish partnerships with relevant community groups, cultural practitioners, and lineal descendants.	Nā Ala Hele
11.2	Plan workday activities: <ul style="list-style-type: none"> » Identify appropriate restoration and maintenance priorities. » Determine a date, time, and specific tasks to be undertaken. 	Nā Ala Hele & Community Partner(s)
11.3	Promote the community workday: <ul style="list-style-type: none"> » Develop outreach materials. » Share through select channels. 	Nā Ala Hele & Community Partner(s)
11.4	Facilitate workday activities.	Nā Ala Hele & Community Partner(s)

12. ENGAGE TRAIL USERS IN DATA COLLECTION

Create an online form with standard fields to input data points, such as day/time, weather conditions, number of turtles, number of other users observed, condition of the trail, tide, trash, etc. Advertise the online form to hikers via the reservation system and through signage posted along the trail.

ISSUE ADDRESSED:



CHALLENGES TO IMPLEMENTING ACTION:

- » Lack of staff capacity for Nā Ala Hele to develop data collection form and analyze data.

CURRENT STATUS:

Started. Data is currently being captured by Trail Stewards.

IMPLEMENTATION STEPS		PARTY RESPONSIBLE
12.1	Develop online data collection form.	Nā Ala Hele
12.2	Post signage at the trailhead and beach with a QR code linking to the online form.	Nā Ala Hele
12.3	Regularly monitor data quality and consistency.	Nā Ala Hele
12.4	Analyze and interpret the data to identify trends, patterns and insights related to trail usage, environmental conditions, and wildlife observations.	Nā Ala Hele

CONTINUED STAKEHOLDER ENGAGEMENT

Despite engaging with over 300 individuals throughout this project, it is recommended to continue engaging the community throughout implementation of this action plan. The trail survey highlighted that users' primary concern regarding management was the lack of educational and stewardship opportunities. The local community is eager to participate and contribute, so offering opportunities for involvement is crucial. Whenever possible, involve the community in activities such as trail restoration with school groups or through a community workday.

The recommendations below outline groups to target for engagement based on community feedback, emphasizing the importance of not widely publicizing the trail. Engagement efforts should focus on groups already familiar with the trail rather than reaching out to new audiences. For visitors hiking the trail, outreach should primarily be conducted through the official Nā Ala Hele website. While information can be posted on social media, it should be limited to avoid further advertising the trail. For the groups mentioned below, coordinate community workdays and continued talk stories. Additionally, create informational brochures to distribute to them.

HAWAIIAN PARADISE PARK COMMUNITY

The trail survey found that most local trail users reside in the Hawaiian Paradise Park subdivision. The trail offers them a space for exercise, dog-walking, and ocean access. For Hawaiian families, the trail also provides a means to gather subsistence marine resources. A handful of regular users actively mālama the area, such as by picking up trash along the trail and beach. Engaging these individuals is essential, as they can provide intimate knowledge of the area and vital support for

stewardship efforts. Their presence as local residents also allows them to act as the eyes and ears of the trail, aiding in monitoring and managing the trail.

Engagement with this community can be facilitated through hands-on volunteer workdays on the trail as well as through informational booths at community events. Regular community events include the monthly swap meet (every 2nd Saturday) and food pantry (every 4th Tuesday) at the HPP Community Center.

FISHERMEN

This project engaged with only a small number of fishermen, highlighting a key group for future engagement. Further discussions with fishermen are essential, as they are often the primary users driving on the trail. The goal of these discussions is to find ways for them to continue accessing fishing spots and providing food for their families without causing harm to the historic trail and culturally significant sites. Of the fishermen consulted for this project, all practiced pono fishing methods, such as "taking only what you need" and respecting spawning seasons. However, there are reports of other fishermen who do not fish sustainably, leading to resource depletion. Community caretakers who have frequented Hā'ena for decades have reported negative interactions when attempting to address unsustainable fishing practices with these individuals.

Potential avenues for engaging fishermen include partnering with established fishing stores such as S. Tokunaga and J. Hara. Discussions with store owners can help identify effective methods to share information with fishermen, such as distributing information when they register for fishing tournaments. Additionally, involving youth in education on

pono fishing practices can provide a more lasting impact. Collaborating with Kea‘au schools to organize fishing workshops for students can teach them sustainable fishing techniques. Ideally, these students will then share their knowledge with their families and influence their community toward more sustainable practices.

KEA‘AU STUDENTS

Students represent the next generation and should be educated about the trail’s history, resources, and stewardship. Prioritize engagement with schools situated in the Kea‘au ahupua‘a, including but not limited to Kamehameha Schools (K-12), Kea‘au Elementary School, Kea‘au Middle School, Kea‘au High School, and Ke Kula ‘o Nāwahīokalani‘ōpu‘u.

Whenever possible, students should be brought to the site; it is important to get them out of the physical classroom and into the environment they are learning about. Engagement with students should consist of organizing multiple visits throughout the year to foster a deeper connection with the place. Involving them in stewardship activities can instill a sense of responsibility for caring for the ‘āina. This ongoing exposure can help students develop into future stewards of the trail.

HULA COMMUNITY

Hā‘ena, recognized as the birthplace of hula pele, holds a significant role in Hawaiian history. Hālau hula visit Hā‘ena to pay tribute to hula’s lineage and connect with their ancestors. The site continues to be actively utilized by hula practitioners for ceremonial purposes. It is important to engage with hula practitioners to better understand how to accommodate hālau hula in this space. Since some of their ceremonies require privacy, it may be necessary to restrict access for part of the day to allow them to perform their protocols. Engaging with this group also presents an opportunity to learn more about Hā‘ena from a hula perspective.

Hula practitioners can provide valuable insights through their oli and mele that are associated with the area and that convey its history. These insights should be incorporated into management of the trail and beach. Begin by identifying the hula community across Hawai‘i, not just within Puna. Initiate conversations with kumu hula to understand their needs and requirements for using the space, including proper protocols. Hālau can also be involved in volunteer workdays to maintain the beach and trail. These activities could be focused around Merrie Monarch time, when many hālau are present on Hawai‘i Island.

The continued engagement of stakeholders is vital to the success of the Puna Trail’s management and preservation. By fostering collaborative relationships with local communities, such as the Hawaiian Paradise Park subdivision, local fishermen, Kea‘au students, and the hula community, the trail can continue to thrive as a cherished natural and cultural resource. Ongoing, respectful engagement will ensure that the trail continues to serve its traditional function for generations to come.

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APPENDIX A

PUBLIC DRAFT PLAN COMMENT MATRIX



COMMENT MATRIX

Community Comments	Response from Planning Team	Revisions to Stakeholder Action Plan
<p>Nice job on this document! I would simply suggest that the exclusion of vehicular access is #1 priority, and a large part of the plan should be "HOW we can exclude vehicles" e.g., a lot more and larger bollards across larger swaths, or whatever the other better solutions might be. There is so much that could be done. Overall though it is great to see some consideration of how to improve the Puna Trail. Mahalo</p>	<p>Mahalo for your comment. While the Action Items were not listed in a specific order, restricting vehicle use on the trail remains a top priority for Nā Ala Hele (NAH). Action Items No. 1, 3, and 11 aim to address this issue. Since the trail steward program was implemented in February 2024, their daily presence has significantly reduced the number of vehicles on the trail.</p>	<p>No change.</p>
<p>I like that the draft plan includes feedback from the community and stakeholders. I also feel that it strikes a good balance between promoting trail access for residents while protecting cultural and natural resources. I'm interested to see how things will go moving forward, and if there is anyway to help or facilitate the management of the trail.</p>	<p>Mahalo for your comment. Action Item No. 11 involves conducting community workdays, providing future opportunities for you to help manage the trail.</p>	<p>No change.</p>
<p>1. Add QR codes along the trail to links with additional information. Cell coverage? 2. Charging a fee for the limited parking is a great idea! 3. Have a link to an 'orientation' video, required when reserving a parking space online, much like Hanauma Bay used to require visitors to watch/attend an orientation before getting to the beach. 4. Have students from UHH's College of Hawaiian Studies get credit for being good trail stewards. 5. Why would the porta potty need to be so far inland, across private property, when hikers are already peeing in the bay and just off the trail? 6. Consider having warnings about the undertow in Japanese and French or German, too. 7. Have a reminder at the parking area saying WE HAVE NO TWILIGHT, so when the sun sets, it gets dark right away. Most visitors don't realize this. Tell them BEFORE they start out.</p>	<p>Mahalo for your comment. Action Item No. 8 recommends installing signage along the trail with additional information.</p> <p>Regarding the portable toilet, it must be located greater than 40 feet from the shoreline to avoid triggering a shoreline setback variance application. According to the County of Hawai'i Planning Department, it is extremely unlikely that such an application would be approved for our project.</p>	<p>(Action Item No. 1, page 59) Revised to include text recommending establishing a partnership with UH Hilo for students to be potential trail stewards.</p> <p>(Action Item No. 5, page 63) Revised to include text recommending the use of a required orientation video when reserving a parking space. Also include text stating that we have no twilight and what that means for trail users.</p> <p>(Action Item No. 7, page 65) Revised to include recommendation of writing warnings in other languages.</p>

COMMENT MATRIX

Community Comments	Response from Planning Team	Revisions to Stakeholder Action Plan
<p>Don't put a ball buoy in the bay. It will draw extra attention to the area instead of preventing it and be a waste of time and money. Put a bathroom at the trail head as well. Repair the mud pits in the trail sooner than later. Don't charge for parking or require reservations. Put information for community workdays on signs at beach and trailhead.</p>	<p>Mahalo for your comment. The purpose of the buoy will be to draw attention to the area as an area that is unsafe for swimming.</p> <p>While we understand the need for a portable toilet at the trailhead, there is a significant concern about potential vandalism. The online reservation system will inform visitors that the only bathroom is at the end of the hike and to plan accordingly.</p> <p>Repairing the mudpits are a priority, however, since the trail is a registered historic site, the State will need to consult local trail experts to ensure that restoration work is done appropriately. They will also need to seek approvals from the State Historic Preservation Division prior to initiating any work.</p> <p>We understand your concerns about not requiring reservations. However, this practice has been adopted in many other locations across Hawai'i to effectively manage visitor numbers, preventing overcrowding and ensuring sustainable resource use.</p>	<p>(Action Item No. 11, page 69) Revised to include text saying to post information about community workdays on existing signage at the trailhead and beach.</p>
<p>Out of the 12 objectives. Number 11 should be considered the most immediate priority. Na Ala Hele and the community stakeholders should continue to engage users to build a network of stewards with funding to back them. This stewardship group can then assist the implementation of any of the other objectives, which we know current staffing of Na Ala Hele cannot. Lawai'a should have a much stronger voice and reservations for locals to access a traditional shoreline area should not be required unless absolutely necessary. Should be first come first serve.</p>	<p>Mahalo for your comment. We appreciate the need for community engagement and agree that this can help to implement other action items.</p> <p>Action Item No. 5 recognizes the need to not limit access for cultural practitioners, including lawai'a. The Plan also emphasizes that ongoing stakeholder engagement is needed with fishermen to understand how to continue access while protecting the trail, as articulated on page 71.</p>	<p>No change.</p>

COMMENT MATRIX

Community Comments	Response from Planning Team	Revisions to Stakeholder Action Plan
<p>I live right next to the trail entrance and parking lot. What is being done to eliminate illegal use of the parking lot and trail for drug trafficking and drug use? People have been smoking ice right in front of our property and we have very small children being subjected to those fumes. Will the host family be in charge of locking up the parking lot at night? Shipman properties initially had set house for the parking lot and were locking it at night. Then they said they didn't have the manpower to keep doing it anymore. The neighborhood has become increasingly subject to all manner of illegal activity. Can the DLNR patrol the parking lot and trail at night ?</p>	<p>Mahalo for your comment. The plan suggests installing a security camera and streetlight at the trailhead parking lot and locking the parking lot at night. HPD, DOCARE, W.H. Shipman Ltd., and NAH are collaborating to address staffing constraints to ensure the gate can be closed each night.</p>	<p>No change.</p>
<p>The lineal descendants within Waiwelawela 501c3 will continue to kōkua in the preservation and mālama of and within the Puna Historical Trail within Paki and Hā'ena and areas of village that surround as well as our coastline and resources.</p>	<p>Mahalo for your continued support.</p>	<p>No change.</p>

COMMENT MATRIX

Community Comments	Response from Planning Team	Revisions to Stakeholder Action Plan
<p>The plan is well done.</p> <p>This beach appears to be much safer than it is when the rip tide is running. Improvements in the trail and safety of the parking lot etc are likely to attract people. It's really important that the bouy or other safety devices are put in place simultaneously. The large number of out of state immigration to this area, or at least out of area new residents evident in the survey reinforces this importance.</p> <p>The stewards may be helpful in keeping ATVs out, but it's important to understand who are the ATV users as the stewards without enforcement could be in a difficult position.</p> <p>Lifeguards on rotation may be expensive but critical and could report ATVs.</p> <p>Educational signage on native plants, birds and any cultural sites that can be protected and historic activity of the area are welcome.</p> <p>Positioning this as a hike and not a beach destination may be important in setting expectations for equipment required such as shoes, water, limited equipment. Lack of emergency personnel access.</p> <p>mahalo for the work on this.</p>	<p>Mahalo for your comment.</p> <p>We have already begun work on obtaining the necessary permits for the buoy, ensuring it will be in place when the rest of the plan is implemented.</p> <p>Action 3.3 recommends deputizing trail stewards to help with enforcement.</p> <p>Lifeguards, though beneficial, are only provided by the county at county beach parks. Hā'ena falls under State jurisdiction. As a remote wilderness area, beachgoers must understand the risks and determine if it is safe enough for them to visit.</p> <p>Educational signage is recommended in Action Item No. 8.</p> <p>Mahalo for your suggestion to emphasize the trail as a hike and not a beach destination. This will be included as part of the action items.</p>	<p>(Action Item No. 5, page 63) Revised to include text saying to develop the online parking reservation system with informative language so that visitors are informed and better prepared for the hiking experience.</p>

COMMENT MATRIX

Community Comments	Response from Planning Team	Revisions to Stakeholder Action Plan
<p>Mahalo for the opportunity to review the draft plan, which I have. I appreciate the inclusion of observations from haumāna, the Edith Kanaka'ole Foundation and others. I have walked this trail many times and have spent a lot of time at Hā'ena, Pākī and Keauhou at Kaloli, including with 'ohana, friends, my hālau hula and with my own HawCC/UHH haumāna, who have contributed to the well-being of the trail and area, as well as having them learn about ceremony, protocols and mo'olelo/ka'ao of the area, especially Hā'ena.</p> <p>I share many of the concerns about the integrity of the place, as well as about safety, and have had my own haumāna have their cars broken into at the parking spot in HPP when on geography huaka'i to Hā'ena. I have seen loose dogs at Hā'ena who threaten the nēnē, I have come across a massive honu carcass that was clearly killed by people, and the rubbish and junked cars along or near the trail - all of which is heartbreaking, much of what can be attributed to our own community.</p> <p>I fully support educating both those people of this island and those who are visiting as what needs to be a requirement for access somehow about the immeasurable cultural and ecological significance of this area, and appreciate that there are kia'i in the form of trail monitors, a program that needs to continue and be even stronger. I support the conversion of the non-native forest cover back to an extensive hala and 'ōhi'a forest, as it once was, and would love to see the community - Puna residents, haumāna from schools and our college and university, have a large role in doing that and take pride in that restorative work. In general, I feel that we need to have our Puna community more aware of this special coastline and ensure that they are educated about it so that they are honored to take on the kuleana of that area to care for it. Mahalo.</p>	<p>Mahalo for your comment. We appreciate your connection to the Puna Trail and Hā'ena and your and others' efforts to mālama this place. NAH hopes to grow its partnership network and looks forward to implementing the action items described in the plan with the assistance of the community.</p>	<p>No change.</p>

COMMENT MATRIX

Community Comments	Response from Planning Team	Revisions to Stakeholder Action Plan
<p>Thank you for the opportunity to participate in the development of the Trail Stakehold Action Plan. The Draft is very comprehensive and captures the spirit and intent of the process.</p> <p>There is a concern that the public is becoming more aware of the trail and the access it affords to the Ha'ena and Kaloli Point area. This awareness inevitably leads to more use of the trail. Some of this use is respectfull while some use can be more destructive. Education of the public about the cultural and historic significance of the Puna Historic Trail may help to minimize the negative effects of the improper or disrespectful use of the trail. Emphasis on outreach to the community, tourists and other users should be considered as a part of the Action Plan. It is recommended that this outreach include avenues such as Social Media, the Internet and traditional paper handouts.</p>	<p>Mahalo for your comment. NAH agrees that outreach is an important part of respectful use and management. As such, it is incorporated into Action Items No. 1, 5, 8, and 11. Although not listed as an Action Item, continued outreach is also recommended to the HPP community, fishermen, Kea'au sudents, and the hula community.</p>	<p>(Continued Stakeholder Engagement, page 71) Revised to include text recommending outreach to visitors through the NAH website, as well as utilizing social media and distributing paper handouts to engage with local trail users.</p>

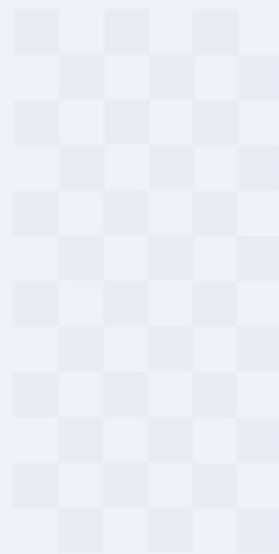
COMMENT MATRIX

Community Comments	Response from Planning Team	Revisions to Stakeholder Action Plan
<p>1)Q Figure 11 : Is there access to this coastline? Q)Will this be a private coastline/ coastline access? If public, I suggest Public Safety Preservation Rules & Regulations For Land and Sea and Ocean and Land Life. Suggestion: Safety factors for know kids swimmers & non-swimmers (this non swimmers could be all ages as in don't know how to swim). Q Ocean fish culture area Preservation protect: a) possibly a section off of the area: 1) Area Preservation 2) For student/study. 3) public viewing etc.</p> <p>Figure 19: Groups of People 1) daily/night hours area people & therapeutic animals capacity. For land and water.</p> <p>2) what will be allowed on land & in ocean. food/drink(which can attract birds, bugs, rats critters etc.) 3) lotion/sunscreen etc. 4). Noise pollution. Phones ringing, phone conversations, music etc. environment impact kinda stuff.</p> <p>Figure 23: Q I would ask if in place Turtle people distance/or would be in place. Figure 24: Q) if a mud hole is created by vehicles, why vehicles? The rest of the # Figures about the same. To sum up my take and or Feedback on the area that I have never been that I can recall. A very Strict & Monitored Public Access. Monies for all Security Bag check Airport plane type security. With that said. Tour guided public access. And I'm and land owner teacher student type scheduled access. Time date stamped. I say that because if any kind of environmental impact you would know the culprit as in people, sound, food capacity time of day...etc.</p>	<p>Mahalo for your comments. In response: - (Figure 11) The areas surrounding the trail are private property. This report is focused on managing the public Puna Trail to Hā'ena Beach. - There is existing signage at Hā'ena Beach alerting swimmers of the conditions and rip current at the bay. A swim buoy is being considered to provide additional notice. - (Figure 19) The trail and beach are accessible to the public at all times. Parking hours will be the only restriction in place. - All current rules on littering, feeding wildlife, ocean pollution, sunscreen and noise pollution will still be in effect and enforced. - (Figure 23) Turtles are federally protected and must be viewed from a minimum distance of 20 feet. It is suggested that these requirements be included on signage and in educational materials as part of the parking reservation system. Trail stewards also provide this information to trail users. - (Figure 24) Vehicle use is not permitted on the trail. The Stakeholder Action Plan recommends measures enforce this rule. - The trail is public and therefore cannot be restricted. Records of all users is not feasible but the parking reservation system will provide some record of those users.</p>	<p>No change.</p>



APPENDIX B

KILO WORKSHOP - QUANTITATIVE DATA SHEET



KILO ACTIVITY – HĀ'ENA

For the Puna Historic Trail Stakeholder Action Plan
On December 15, 2023

Begin by spending roughly 5-10 minutes alone, quietly immersing yourself in the environment and engaging all your senses. You can choose one spot to sit in or spend the time walking along the shore. Once you've familiarized yourself with your surroundings, proceed to answer the questions below.

Malama/mahina: _____

Wind direction
(draw an arrow):



Anahulu: _____

Pō mahina: _____

Weather
(circle one):



Below is an image of Hā'ena, taken from the Hilo side of the bay looking towards Kumukahi. Please record any plant or animal species that you observe and mark on the photo where they are located. Please also answer the prompts provided.

There are ____ people on the beach not including my classmates and teachers.	Which direction is the water moving in the bay? Draw arrows below.
The tide is (circle one)... Rising or Falling	The water in the bay is... Clear or Murky

*For example:
kumu niu*





APPENDIX C

KILO WORKSHOP - QUALITATIVE DATA SHEET



KILO ACTIVITY – PUNA TRAIL

For the Puna Historic Trail Stakeholder Action Plan
On December 15, 2023

Begin by spending 5-10 minutes quietly observing what is around you. Once you've familiarized yourself with your surroundings, proceed to answer the questions below. These questions are meant to guide your kilo. However, feel free to write down anything else you may see, hear, feel, or smell. You are also welcome to turn the page over and draw a picture of what you observe.

Describe what the trail looks like (feel free to draw an image on the back of this paper). What is the condition of the trail? What is surrounding the trail on either side?

What else do you observe? If you've been here before, does it look different than what you remember? How?

How does this space make you feel? How do your observations make you feel?

What else should we kilo that we are unable to do with just our senses? What sort of technologies do we need?



APPENDIX D

HONUAIĀKEA REPORT





Edith Kanaka'ole Foundation

Honuiākea no ke ala o Puna

The purpose of this document is to report the findings of the Honuiākea Session held with community members and stakeholders on February 24 & 25, 2024 at Hā'ena (Shipman). This process was initiated by Nā Ala Hele Trail & Access Program and Townscape, Inc. as part of the Puna Historic Trail Stakeholder Action Plan.

Honuiākea is a process designed to develop a foundation of kapu (things/elements to hold sacred) and kānāwai (protocols in which to hold the kapu) that will become the guide for the establishment and management of the Puna Historic Trail, which passes through Hā'ena. The intention of the workshop is to create sets of guidelines, protocols and laws that utilize the perspectives and knowledge recorded by our Hawai'i ancestors on how to live in accordance with their ecological conditions.

Process

As proprietary intellectual cultural property under the auspices of the Edith Kanaka'ole Foundation, this Maoli-based process is a communal tool that utilizes ancestral ecological knowledge (AEK) and various expert perspectives to analyze indigenous knowledge collections that will be identified in the cultural and natural resource studies. The purpose of conducting this process will be to draw out specific *kapu* (natural laws to hold sacred/follow) and *kānāwai* (prohibitions/guidelines to preserve the *Kapu* set forth) that identify the natural elements and resources that are important in this ecosystem and how best to apply an indigenous place-based approach to the effective management of Hā'ena by establishing a substantive foundation of '*Ike Kupuna* (ancestral knowledge) based educational format in utilizing the area. This session included two (2) meetings (*Honuiākea* Meetings #1 and #2) conducted over a weekend on-island by the Edith Kanaka'ole Foundation. The following is a summary report of the session as well as recommendations for the application of these findings.

The Honuiākea process involves working with participants to dissect and analyze mele and ka'ao that have been researched and specifically chosen for the process. Analyzing and then interpreting the information develops the kapu and kānāwai with all stakeholders agreeing that the knowledge gathered is the knowledge of the kupuna, which makes the kapu and kānāwai structure cohesive and coherent to follow.

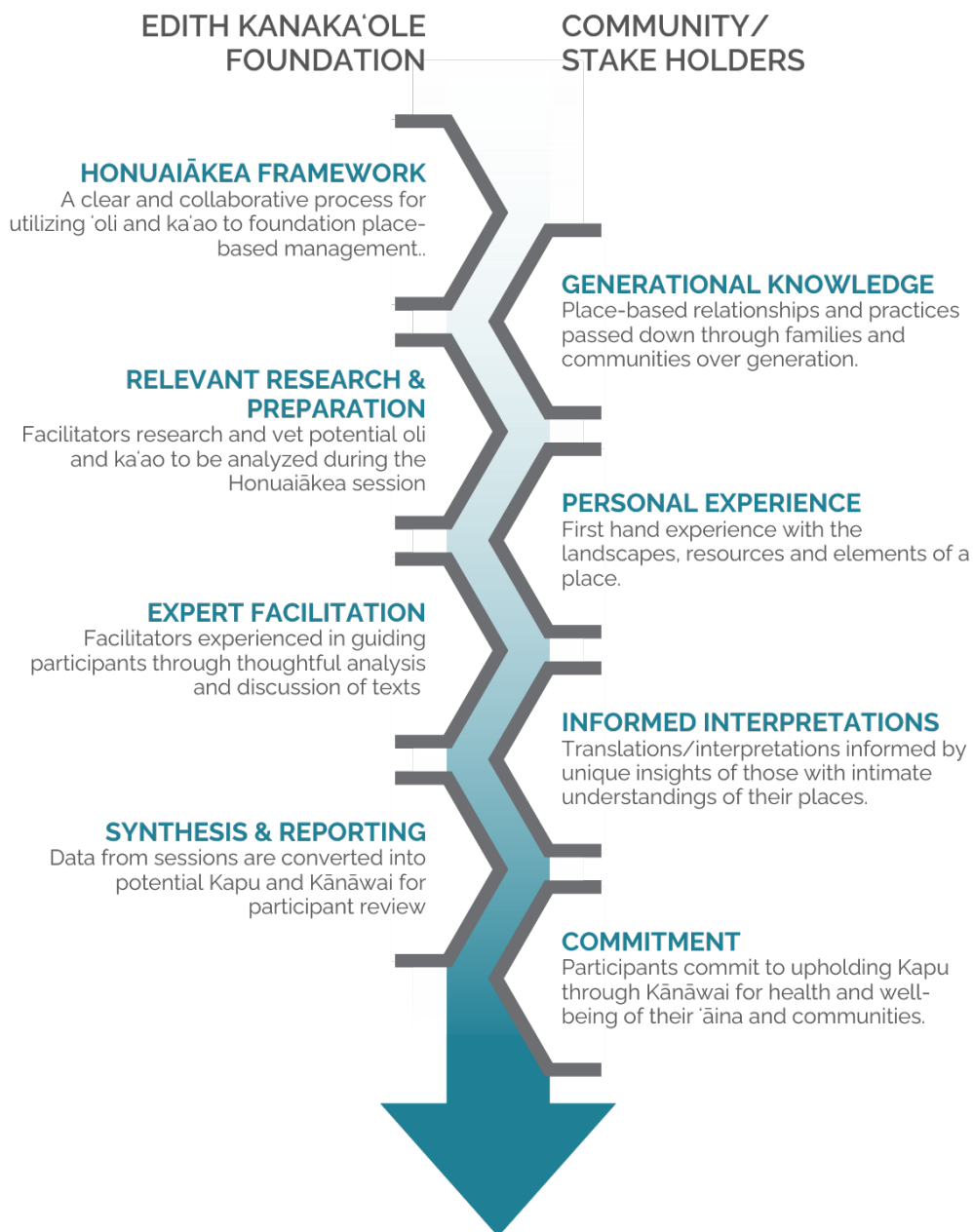


Figure 1. An overview of the process and contributions of the Edith Kanakaole Foundation and community members and/or stakeholders within the co-development of Kapu and Kānāwai through Honuaiākea.

In this process was carried out in collaboration with community members including stakeholders and generational residents, and descendants of Puna. The total number of participants was 12 on day 1 and 12 on day 2. The mele and ka'ao that were chosen for this session focused on Puna, Hā'ena and the volcano. The mele and ka'ao selected for this process were based on natural resources and environmental processes of dynamic earth processes.

The following are the mele and ka‘ao utilized in this process and the reason each was chosen:

- **“A ka lae ohia i Papalauahi e” (mele)**
 Poepoe, Joseph M. “Ka Moolelo Kaa o Hiiaka-i-ka-Poli-o-Pele.” Kuokoa Home Rula, 24 July 1908, pg.1.
A ka lae ohia i Papalauahi is an observation made of an eruption of unknown time frame. This eruption occurred in areas such as Kuaokalā and ended at the lae or point of Hā‘ena.
- **“Hulihia Kilauea popoi ia lua ke kai” (mele)**
 From a collection of mele “Pualani Book from Hilo” compiled in 1907, author unknown.
Hulihia Kilauea was chosen because 1- it fulfills the requirement of the process of a Hulihia. , 2- The mele is again, a recordation of a volcanic event, and 3- this mele follows a Kilauea lava flow that meets with the Maunaloa flow at Keaau, and therefore can provide some insight into the contents of the substrate, and vegetation, and perhaps the immediate ocean formations.
- **“Ke haa la Puna i ka makani” (mele)**
 Kapihenui, M.J. “He Moolelo no Hiiakaikapoliopole,” Ka Hoku o ka Pakipika, 26 December 1861, pg. 1.
 Bush and Paaluhi, “Ka Moolelo o Hiiakaikapoliopole,” Ka Leo o ka Lahui, 30 January 1893, pg.4.
Ke Ha‘a la Puna was chosen for the mere fact that it is a foundational text about Hā‘ena.
- **“Kaa no Iwa” (ka‘ao)**
 Excerpt from “Fornander Collection of Hawaiian Antiquities and folk-lore” (Vol. 5) by Abraham Fornander with translations edited and illustrated with notes by Thomas G. Thrum. Bishop Museum Press, 1919.
There are many ka‘ao that were written that either are about Hā‘ena, and Keaau as the bigger land area, or speak of the volcanic element that formed this space, especially in the saga of Hi‘iaka and Pele. However, the Ka‘ao no ‘Iwa was chosen because it provides a different perspective of elements that is responsible for the elements that are observed in this area, particularly the ‘Iwa that passes over Hā‘ena when storms are inevitable.

Product

The Kapu established by the participants are listed below. These will serve as a foundation for ‘āina and community planning moving forward. The Kapu developed through the analysis of the AEK (Ancestral Ecological Knowledge) from the mele and ka‘ao must NOT be compromised, and the corresponding kāmāwai are protocols to uphold the principle and sacredness that is the kapu. Essentially, the kapu and kāmāwai are rules and protocols dictated by this community of stakeholders, founded by the AEK. Please see the following as your guide:

Kapu

Kapu denote processes and/or elements to be held sacred

[Puna Trails Feb 24-25 Notes](#)

Kapu o Pau Haena i ke ahi

This kapu holds sacred Hā‘ena as a convergence point of the ‘Ai Lā‘au and Panaewa lava flows. As a wahi pana characterized by lava flows from both Kilauea and Maunaloa, the unimpeded movement of future flows to this area is to be held sacred.

Kapu o Nanahuki

This kapu pertains to the strong rotating currents of this coastline (ami i kai o Nanahuki), the moving tides, coastal wave action, swells, and movements of Nanahuki. This kapu acknowledges the need to understand the strength and dangers of the ocean near the Haena trail.

Kapu o Ahu a Kahoalii, Ahu o Lono

This kapu comes from Hulihia Kilauea popoi ia lua ke kai which references the abundance of the ocean and abundance of the land. The abundance is attributed to the freshwater pathways created from the Pele events of this area. These pathways that attribute to this abundance are to be held sacred.

Kāmāwai

Kāmāwai are protocols for holding kapu

Kāmāwai o nana i kai o Hopoe

The continuous currents of the coastline are both beautiful and dangerous, the ocean cliffs demand caution and reverence. Management that is responsive to the ocean currents and cycles of Hā‘ena and to acknowledge the dangers of the ocean, and to act and educate accordingly.

Kānāwai o kini o Hā'ena

This kānāwai references the masses of people that are responsible for utilizing and managing the trail. The trail shall be protected and managed for continued abundance of such sacred spaces. Hā'ena being one for the few remaining safe spaces when it come to rich, well-managed resources, the trail is to be protected for accessing such sacred spaces.

Kānāwai o haili moe

Rest times for spaces / resources - relates to active management

(goal for this to be a kānāwai at some future time)

Ahu o Kahoalii, Ahu o Lono - potential to be Kānāwai, ahu as a place for reciprocity.

Adaptive to the dynamic nature of Hā'ena (pa'ē/pae ka leo)

Kānāwai o ouholowai / eleuli

E Ho'olono, e ho'okuli

Pae / Pā'e , Ka'ikua / Kaikuā

Kuakua lailai - burden of kuleana to know different customs of reciprocity. When entering this space, enter with the intention of reciprocity

Utilization

These Kapu and Kānāwai only exist through their active practice and enforcement. Through the Honuaiākea process, we (EKF) have provided the framework, research, facilitation and synthesis of these elements (Fig. 1). Commitment to the Kapu and Kānāwai (Fig. 1) consists of the practical adoption of these Kapu and Kānāwai into the planning and management of the Historic Puna Trail. Again, the function of Kānāwai are to uphold the Kapu. One Kānāwai may contribute to the keeping of one or more Kapu (Table 1). However, a Kapu cannot exist without Kānāwai in place to uphold it.

When utilizing these Kapu and Kānāwai, it is important focus on the priority elements that must be protected and held sacred (Kapu) and develop programs and operational protocols. These kapu are meant to be foundational guidelines to aide on how decisions are made on how the 'āina should be preserved.

Kapu	Reference	Interpretation Notes	Relevant Kānāwai
Kapu o Pau Haena i ke ahi	A ka lae ohia i Papalauahi e	This kapu references the recognition of boundaries of Haena area. These boundaries help us understand what elements exist in this environment and refer to the function of the landscape on how to behave in this space.	Kānāwai o ouhollowai / eleuli
Kapu o Nanahuki	Ke haa la Puna i ka makani	The current and wave action along the Haena coastline is dangerous and violent. This kapu acknowledges the strength of the ocean surrounding this trail, and the need to educate others of its dangers.	Kānāwai o nana i kai o Hopoe
Kapu o Ahu a Kahoalii, Ahu o Lono	Kaao no Iwa	This kapu acknowledges the health and abundance of the ili o Haena. This abundance is attributed due to the amount of freshwater that enters Haena from the many punawai. This kapu ensures that the freshwater ways that facilitate the abundance of the land and sea shall not be interrupted in any form.	Kānāwai o kini o Hā'ena Kānāwai o ouhollowai / eleuli

Table 1. Kapu and Kānāwai are interdependent. The relationship between each Kapu and Kānāwai as well as the source and summarized notes for each Kapu are listed.