Keauhou Bay Management Plan

ENVIRONMENTAL IMPACT STATEMENT PREPARATION NOTICE

KEAUHOU BAY, ISLAND OF HAWAIʻI

APPLICANT:

Kamehameha Schools®

PREPARED BY:

G70

MARCH 2022

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KEAUHOU BAY, ISLAND OF HAWAI'I

TMKs: (3) 7-8-012:098, (3) 7-8-012:101, (3) 7-8-012:048, (3) 7-8-010:044, (3) 7-8-012:027, (3) 7-8-012:004, (3) 7-8-012:013, (3) 7-8-012:014, (3) 7-8-012:054, (3) 7-8-012:061, (3) 7-8-012:065, (3) 7-8-012:007, (3) 7-8-010:049, (3) 7-8-012:103

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MARCH 2022

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Chapter 1

INTRODUCTION

1.1 Project Summary

Type of Document:	Environmental Impact Statement Preparation Notice (EISPN)
Project Name:	Keauhou Bay Management Plan
Applicant:	Kamehameha Schools Kawaiahaʻo Plaza 567 S King St, Honolulu, HI 96813 Contact: Ms. Emily E. Davids Phone: (808) 534-3841 Email: keauhoubay@ksbe.edu
Agent:	G70 111 S. King St., Suite 170 Honolulu, HI 96813 Contact: Mr. Kawika McKeague, AICP Phone: (808) 523-5866 Email: keauhoubay@g70.design
Accepting Authority:	County of Hawaiʻi Planning Department
EIS Triggers:	Hawaii Revised Statutes 343-5(a)(3) – Propose any used within a shoreline area as defined in section 205A-41; and Hawaiʻi Revised Statutes 343-5(a)(4) – Prose any use within a historic site designation.
Project Location:	Keauhou Bay, Island of Hawaiʻi, State of Hawaiʻi (**Figure 1-1)**
Ahupuaʻa	Keauhou 1 and Keauhou 2 (**Figure 1-2)**
Judicial District:	North Kona
Project Area:	29.12 acres

Project Tax Map Keys (TMK) (Figure 1-3):	TMK: (3) 7-8-012:098	(1.08 acres)
	TMK: (3) 7-8-012:101	(0.12 acres)
	TMK: (3) 7-8-012:048	(0.37 acres)
	TMK: (3) 7-8-010:044	(25.24 acres)
	TMK: (3) 7-8-012:027	(0.09 acres)
	TMK: (3) 7-8-012:004	(0.25 acres)
	TMK: (3) 7-8-012:013	(0.23 acres)
	TMK: (3) 7-8-012:014	(0.33 acres)
	TMK: (3) 7-8-012:054	(0.02 acres)
	TMK: (3) 7-8-012:061	(0.07 acres)
	TMK: (3) 7-8-012:065	(0.60 acres)
	TMK: (3) 7-8-012:007	(0.40 acres)
	TMK: (3) 7-8-010:049	(0.31 acres)
	TMK: (3) 7-8-012:103	(0.01 acres)
State Land Use District	Urban (**Figure 1-4)**	
Special Management Area (SMA)	Within the SMA (**Figure 1-5)**	
Land Use Pattern Allocation Guide (LUPAG)	Open Area and Resort Node **(Figure 1-6)**	
County of Hawai‘i Zoning:	V-.75: Resort-Hotel District (required land area of 750 square feet, for each dwelling unit, or for each separate rentable unit, or other similar rentable units)	
	V-1.25: Resort-Hotel District (required land area of 1,250 square feet, for each dwelling unit, or for each separate rentable unit, or other similar rentable units)	
	V-4: Resort-Hotel District (required land area of 4,000 square feet, for each dwelling unit, or for each separate rentable unit, or other similar rentable units)	
	RS-10: Single-Family Residential District (minimum building site area of 10,000 square feet)	
	Open District (**Figure 1-7)**	

1.2 Project Description Overview

Kamehameha Schools (KS) proposes to implement the Keauhou Bay Management Plan (KBMP) on its lands at Keauhou Bay. The KBMP will reorient uses at the bay and establish new place-based cultural education and revenue generating opportunities. For purposes of this document, implementation of the KBMP will be referred to as the "Project".

The Project is organized in five (5) primary Management Strategies:

A. Establish a Heritage Management Corridor
B. Reposition and Develop Commercial Bayfront Areas and Appropriate Density Resort Area
C. Reorient Recreational and Community Use
D. Maintain and Establish New Place-based Cultural Educational Areas
E. Manage Vehicle, Boat and Pedestrian Circulation and Wayfinding

Each Management Strategy will be discussed in detail in *Chapter 2.1: Project Description*.

1.3 Project Background

Keauhou Bay is a small bay along the Kona Coast (**Figure 1-1**), traditionally known as a place of aliʻi residence and of pastimes such hōlua sledding and surfing. Keauhou Bay is perhaps most well known as the birth site and resuscitation site of Kauikeaouli Kaleiopapa Kuakamanolani Mahinalani Kalaninuiwaiakua Keaweaweʻulaokalani, also known as Kamehameha III, who was the son of Kamehameha ʻEkahi and Keōpūolani. Today, kamaʻāina and visitors alike recognize the historical significance of Keauhou Bay relative to the birth of this significant Hawaiian leader while also enjoying the area as a popular ocean recreation and resort destination.

The bay is highly used by residents, visitors, and community groups, which creates congestion and competing interests. KS, as a major landowner of approximately 54 acres at Keauhou Bay, started developing a management strategy in 2018 to address some of the challenges that have resulted from these multiple uses that sometimes conflict with one another in a relatively confined geographical space.

Guided by KS plans and policies, the Project aligns with the current KS Strategic Map 2025 which is a strategic planning document aimed to achieve its goal of developing resilient communities by stewarding the ʻāina to support resilient economies, cultural landscapes, diverse learning, and career pathways. The Project aims to achieve this goal by reorienting uses and directing new development in appropriate areas around Keauhou Bay based upon community and organizational values that were identified during the Management Plan process.

1.4 Project Location

Keauhou Bay is located on the west coast of the Island of Hawaiʻi, approximately six miles southeast of the town center of Kailua-Kona, in the North Kona District (**Figure 1-1**). The bay is located within the traditional moku of Kona and straddles across the ahupuaʻa of Keauhou 1 and Keauhou 2 on the lower western slopes of Mount Hualālai (**Figure 1-2**).

The narrow, oblong-shaped inlet is approximately 1,670 feet long by 828 feet wide. There is minimal wave action within Keauhou Bay due to its narrow configuration and the coral reefs at outer edges of the bay that cause waves to break offshore. Basalt lava flows from Hualālai and Mauna Loa volcanoes merge at the bay and created a rocky and rugged shoreline, a typical characteristic of the Kona coast. The south side of the bay features gentle sloping terrain, typical of pāhoehoe basalt flows. Basalts at the bayfront area form a steep cliff on the south side with a narrow ledge and gradually sloping terrain on the north side. ʻAhuʻula Cliff is located approximately 30-40 feet mauka from the shoreline and rises to a 60-foot elevation. Portions of the original pāhoehoe lava ledges that once defined the shoreline are covered with fill, artificially hardened, or lined with basalt rock sea walls. Within Keauhou Bay, is Kaʻiliʻilinehe Beach, where two basalt rock sea walls frame a narrow section of natural beach comprised of black sand and pebbles.

Two natural water features remain at the bay including the freshwater Kuhalalua Spring (fronting the Sea Quest) and the brackish water Hoʻokūkū Pond (located at the base of ʻAhuʻula Cliff). Freshwater springs created microenvironments ideal for certain species of fish and shellfish.

The Project encompasses KS owned lands along Keauhou Bay totaling approximately 29 acres in size and presently identified by Tax Map Key (TMK) numbers: (3)-7-8-012:098; (3)-7-8-012:101; (3)-7-8-012:048; (3)-7-8-010:044; (3)-7-8-012:027; (3)-7-8-012:004; (3)-7-8-012:013; (3)-7-8-012:014; (3)-7-8-012:054; (3)-7-8-012:061; (3)-7-8-012:065; (3)-7-8-012:007; (3)-7-8-010:049; and (3)-7-8-012:103 **(Figure 1-3)**. Collectively, these parcels will be referred to as the "Project Area".

The majority of parcels comprising the Project Area are vacant or underutilized. Several of the remaining parcels are leased to commercial and recreational activities including the Keauhou Canoe Club. Other nearby activities surrounding the Project Area include private properties, commercial operators, and the Department of Land and Natural Resources (DLNR) Division of Boating and Ocean Recreation's (DOBOR) boating facility inclusive of boat trailer parking area, boat ramp, vehicle wash down, bathroom facility, and a pier with parking area.

The Project Area is bordered by the Pacific Ocean on the west, the Kona Country Club on the east, a residential subdivision to the north, and the Outrigger Kona Resort and Spa and the Hōlua Resort at Mauna Loa Village on the south. The Project Area is generally gently sloped at an elevation ranging from approximately sea level to 110 feet.

1.5 Purpose and Need

Keauhou Bay is well known for its rich cultural resources, ocean recreational activities, and resort-quality environment. The bay is highly used by visitors and community groups, which causes congestion and conflict of uses. The purpose of the Project is to enable KS to improve and develop its lands surrounding Keauhou Bay to meet its goal of building resilient communities.

The purpose of the Project is to guide future land use improvements, and operational uses in consideration of the following:

- KS has specific commitments to improve stewardship and management of cultural historic sites.
- The area is in high demand causing congestion and conflict of uses (recreational, commercial, cultural, educational, etc.).

- KS does not control external forces such as government, other landowners, and the public. However, its lands are significantly impacted by public access, unauthorized commercial activity, and community use.

The Project is needed to maintain and establish new place-based cultural educational areas, establish a heritage management corridor, reorient recreational and community uses, reposition, and develop commercial and resort areas, and manage vehicular, boat, and pedestrian circulation and wayfinding.

1.6 HEPA Process

Implementation of the KBMP requires compliance with State and County laws and administrative rules related to the management, use, and protection of coastal lands surrounding Keauhou Bay. The County Special Management Area (SMA) Use Permit is a management tool that ensures activities proposed within the Project Area meet the objectives and policies established for recreational and historic resources; beach protection; marine resources; scenic and open space resources; coastal ecosystems; and appropriate development. The SMA Use Permit application requires that KS complete the State Environmental Review Process, commencing with the preparation and review of an Environmental Impact Statement (EIS).

The EIS will fulfill the Hawai‘i Environmental Impact Statement statute and implementing rule, codified in Hawai‘i Revised Statutes Chapter 343 (HRS Chapter 343) and Hawai‘i Administrative Rules (HAR) Chapter 11-200.1. Collectively, the Hawai‘i statute and rule are referred to as the “Hawai‘i Environmental Policy Act (HEPA).” The purpose of HEPA is to ensure environmental concerns are given appropriate consideration in decision making, along with economic and technical considerations. HEPA requires an EIS Preparation Notice (EISPN) to alert the public of the applicant’s intention to prepare an EIS. This EISPN analyzes the reorientation of uses and proposed new development at Keauhou Bay.

HRS Section 343-5(e), enacted by Act 172 (2012), allows an applicant to prepare an EIS rather than an environmental assessment if the accepting authority determines, through its judgment and experience, that an EIS is the acceptable level of environmental review. Through consultation with the County of Hawai‘i Planning Department, serving as the accepting authority, it was determined that an EIS is required due to the KBMP involving multiple proposed uses within a shoreline area as defined in HRS Chapter 205A-41.

Per HAR Chapter 11-200.1-10, a group of actions proposed by an applicant shall be treated as a single action when the component actions are phased or increments of a larger total undertaking. The management strategies outlined in the Project should be treated as one single action according to HAR 11-200.1-10, and a single comprehensive EIS should be prepared.

1.7 Required Permits and Approvals

A list of all permits and approvals from federal, state, and county agencies necessary for implementation of the Project is required to be included in the EIS under HAR Section 11-200.1-23. **Table 1-1** lists the anticipated permits and approvals.

Table 1-1 Anticipated Permits and Approvals	
Permits and Reviews	**Agency**
State	
Coastal Zone Management *HRS Chapter 205A*	State Office of Planning
Hawai'i Historic Preservation Review *HRS Chapter 6E-8, 6E-10 and* *HAR Chapter 13-275*	State DLNR Land Division State Historic Preservation Division
National Pollutant Discharge Elimination System Permit *HAR Chapter 11-55*	State Department of Health Clean Water Branch
County	
Special Management Area Use Permit (Major) *HRS Chapter 205A -22*	County of Hawai'i Planning Department
Use Permit *Hawai'i County Code Chapter 25-2-61*	County of Hawai'i Planning Department
Grading Permit *Hawai'i County Code Chapter 10-9*	County of Hawai'i Department of Public Works
Building Permit *Hawai'i County Code Chapter 5-3*	County of Hawai'i Department of Public Works

1.8 Consultation Process

Consultation is a requirement under HAR Chapter 11-200.1-23. Accordingly, all appropriate agencies noted in Section 11-200.1-23(b), including the county agency responsible for implementing the county's general plan, agencies having jurisdiction or expertise, and other citizen groups and concerned individuals, will be consulted in preparation of the Draft EIS. A full list of the consulted parties is provided in Chapter 8 of this document.

Consultation has been and will continue to be conducted through a series of personal meetings and telephone conversations with State and County agency representatives, elected officials, commercial operators, community leaders, and neighbors. Information gleaned from these meetings helped to identify important issues and provide guidance on the scope of the studies for the Draft EIS. Agency and community issues will be considered in greater detail in the Draft EIS. In addition, the applicant will continue to consult with surrounding stakeholders regarding their priorities for community benefits.

An EIS public scoping meeting will be held on Monday, April 11, 2022, from 6:00 – 8:00 PM. The meeting allows for agencies and the public to assist KS in determining the range of actions, alternatives, impacts, significant issues and proposed mitigation to be considered in the Draft EIS.

The EIS public scoping meeting will be held virtually on the Zoom web platform at the following link: https://g70design.zoom.us/j/89816255216. A recording of the public scoping meeting will be made available on the KS website at https://www.ksbe.edu/keauhou_bay/.

1.9 Contents of the EISPN

The EISPN primarily defines the scope of analysis that will be conducted to assess and identify impacts relative to the Project development and operations. Accordingly, this EISPN identifies specific studies or research that will be completed and integrated into the presentation of findings in the Draft EIS.

The EISPN presents information in eight (8) sections to meet the content requirements outlined in HAR 11-200.1-23(a). *Chapter 1.0* contains an introduction including an overview of the proposed project and environmental review process. *Chapter 2.0* describes the Proposed Project. *Chapter 3.0* describes the project setting. *Chapter 4.0* discusses potential impacts of the Proposed Project and measures to mitigate impacts. *Chapter 5.0* discusses the Project in relation to relevant plans, policies and controls. *Chapter 6.0* summarizes the determination and findings of this report. *Chapter 7.0* describes the public scoping process. *Chapter 8.0* identifies parties to be consulted during the preparation of the EIS.

Figure 1-1: Location of Keauhou Bay, Island of Hawaiʻi

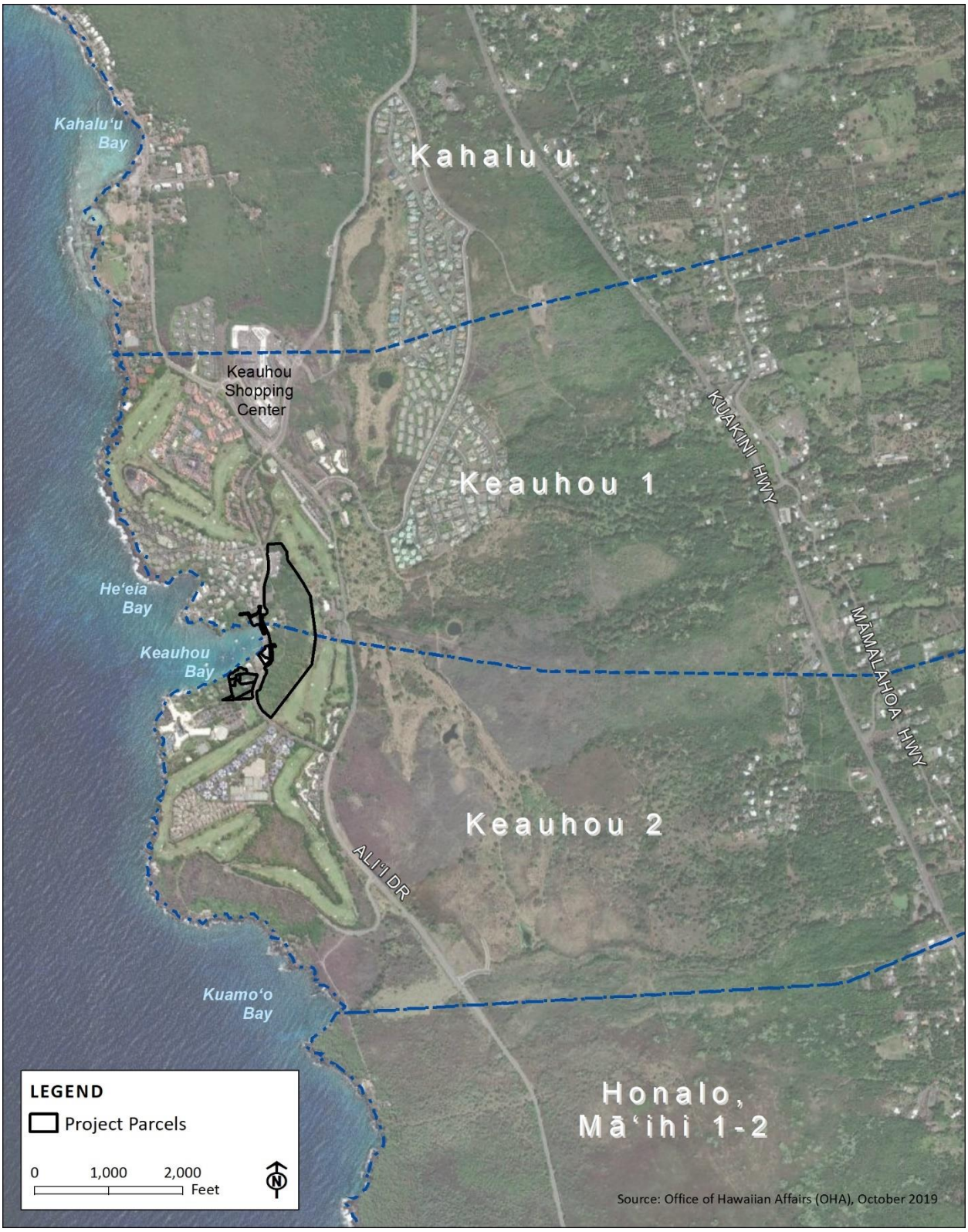

Figure 1-2: Ahupuaʻa Delineation

Figure 1-3: Project Tax Map Key Parcels

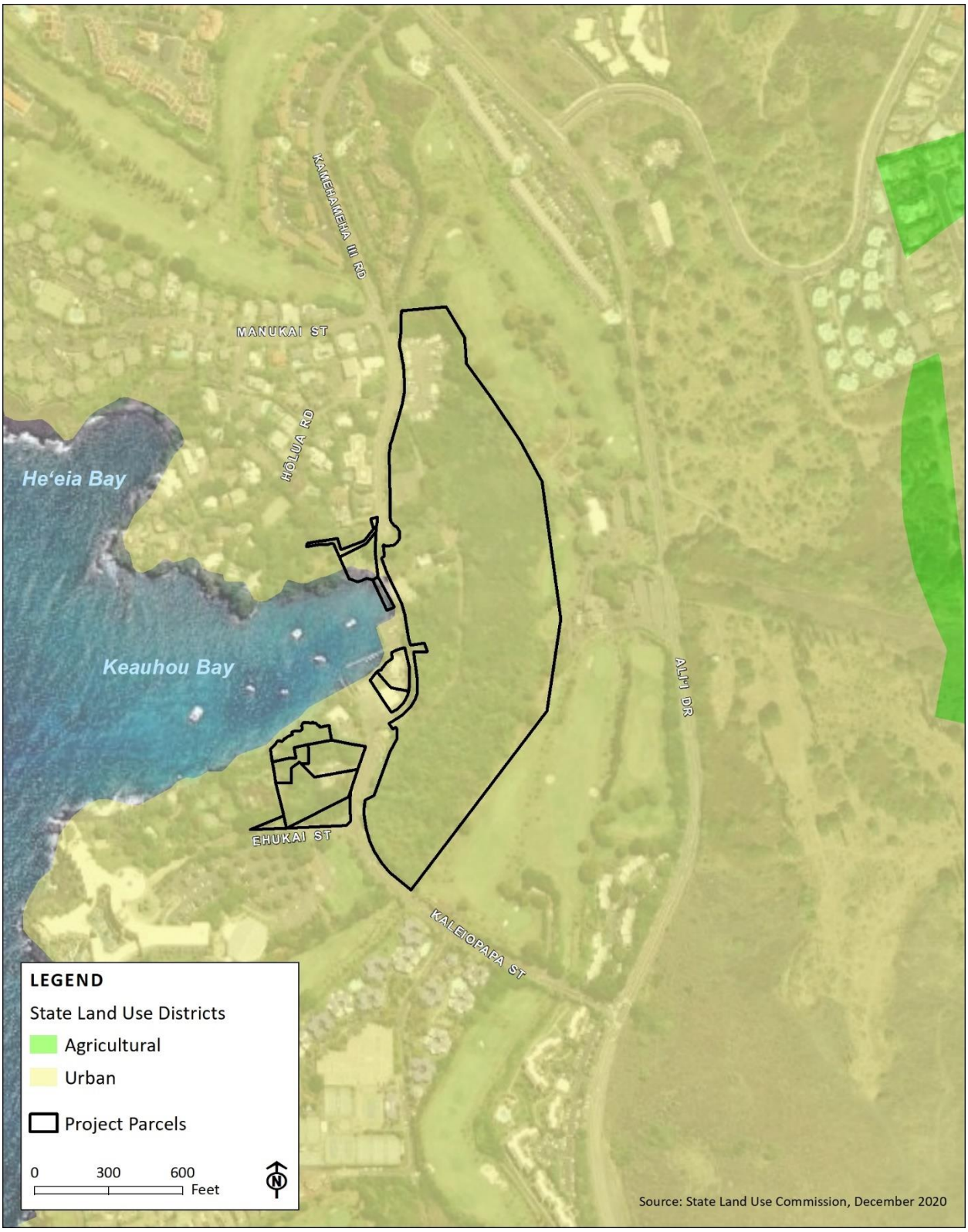

Figure 1-4: State Land Use Designation

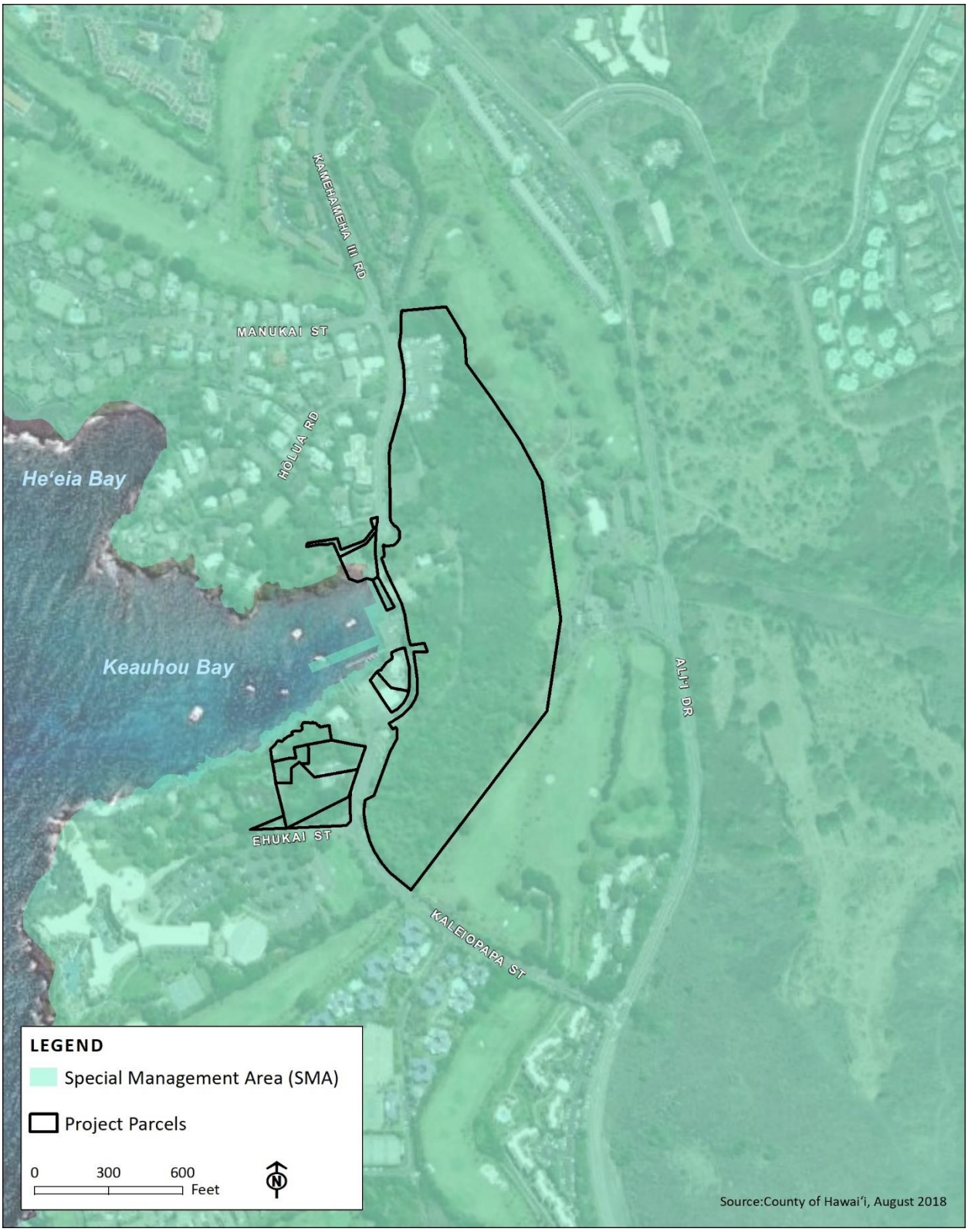

Figure 1-5: County of Hawai'i Special Management Area

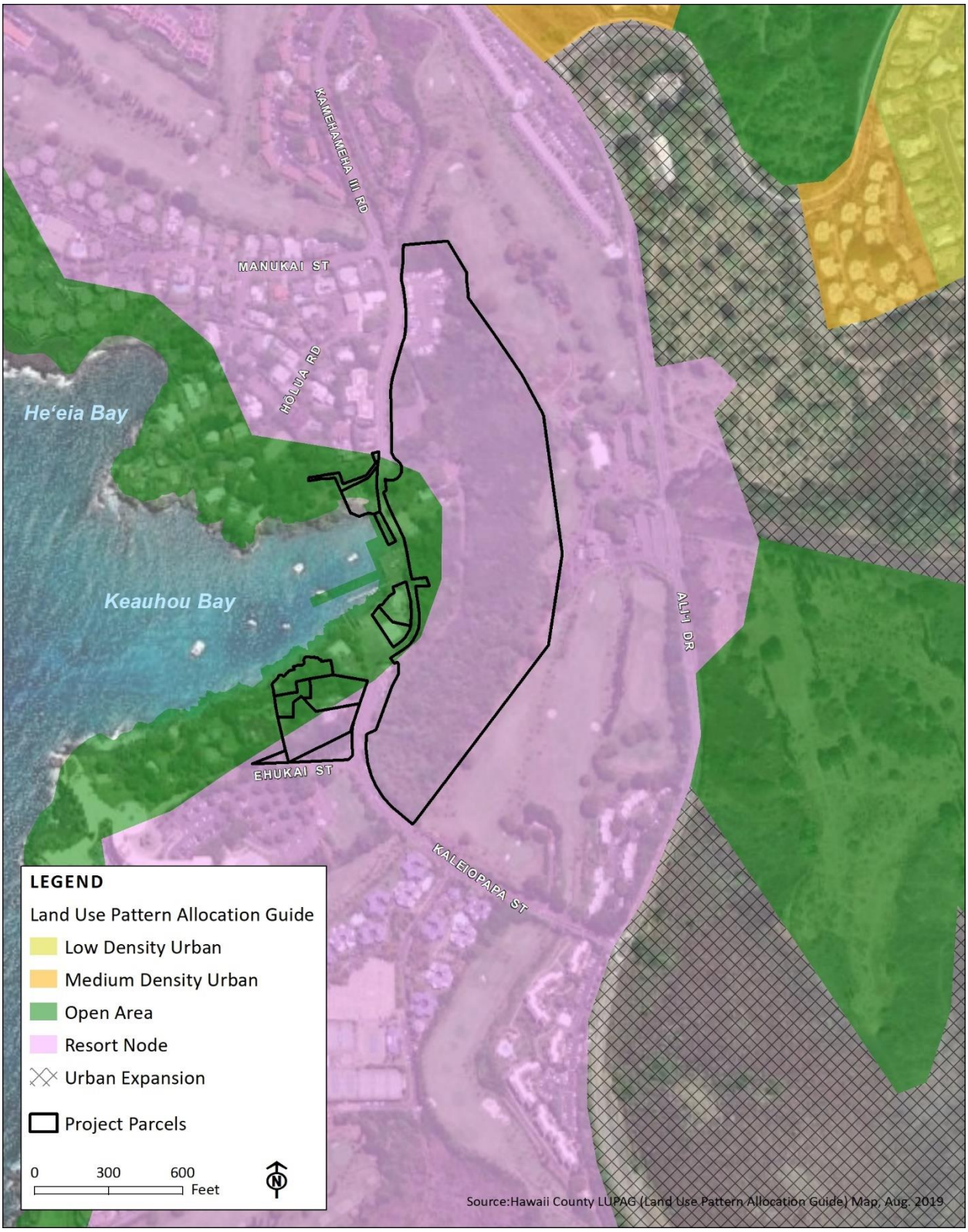

Figure 1-6: Land Use Pattern Allocation Guide

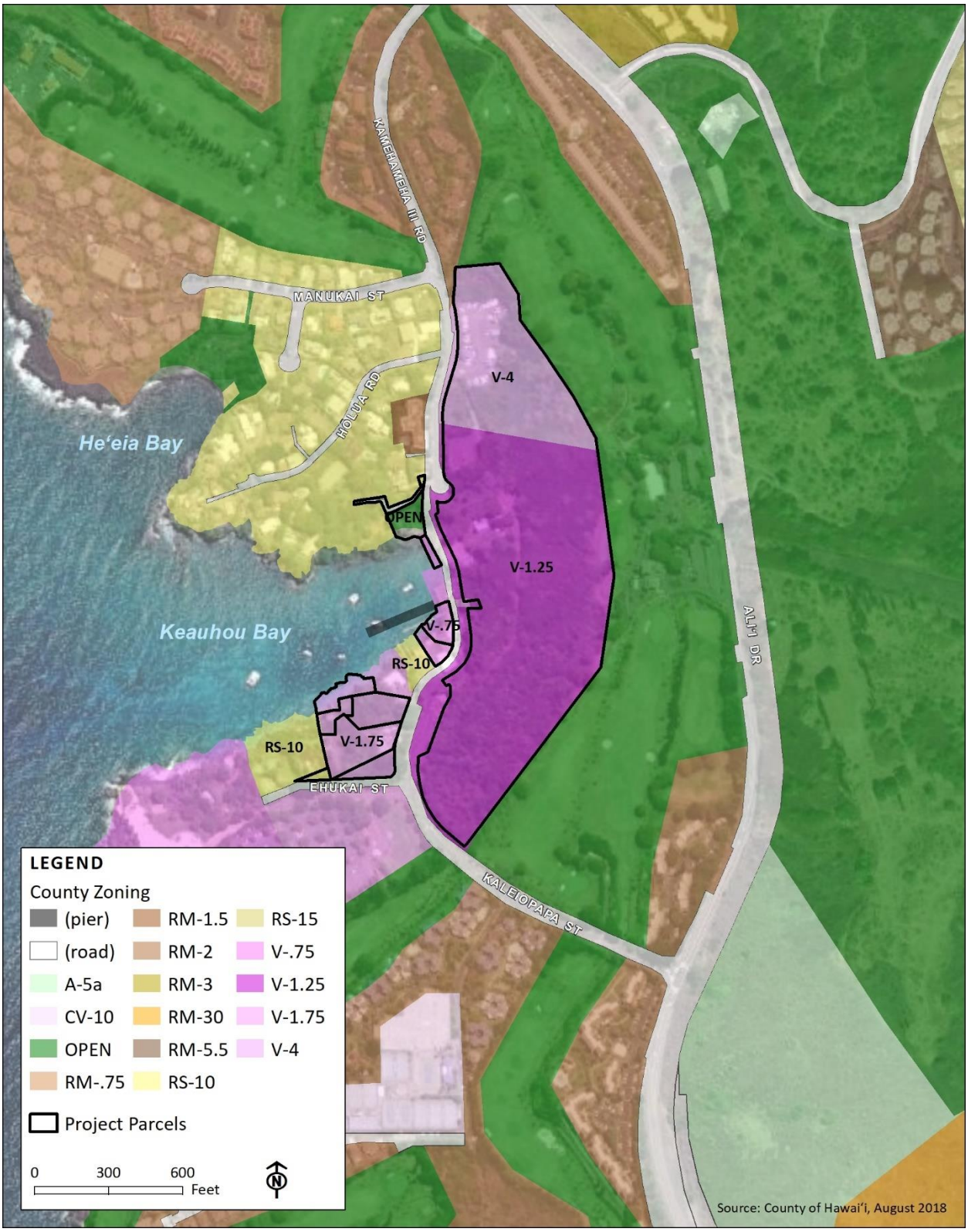

Figure 1-7: County of Hawai'i Designated Zoning Districts

Chapter 2

DESCRIPTION OF PROPOSED PROJECT AND ALTERNATIVES

2.1 Project Description

The mission of Kamehameha Schools is to fulfill the desire of its founder, Ke Aliʻi Bernice Pauahi Bishop Pauahi's, to create educational opportunities in perpetuity to improve the capability and well-being of people of Hawaiian ancestry. Through Pauahi's generosity, the legacy of ʻāina has been preserved for the education of Native Hawaiian children.

As the birth site of Kauikeaouli, who would become Kamehameha III, Keauhou Bay is well known for its rich cultural resources, ocean recreational activities, and resort-quality environment. The bay is highly used by visitors and community groups. It was Kauikeaouli's genius and progressive thinking that helped bolster education, culture and other aspects of living in Hawaiʻi when he ascended to the responsibility of Mōʻī. Kauikeaouli's roots are planted deep in Keauhou Bay, which is why the bay is considered as an significant wahi pana, or sacred place.

Born on March 17, 1814, Kauikeaouli was said to have been still-born and resuscitated back to life with the prayers of a powerful priest, Kapihe. Kauikeaouli was born at Keauhou Bay, purportedly at or near a stone that is now commemorated as his birthplace. In 1914, 100 years after the king's birth, a lava tablet was attached to the birthstone dedicating the site. Today, 200 years since Kauikeaouli's birth, Native Hawaiians and others continue to commemorate the birth site.

KS plans to reinvigorate and transform the Keauhou Bay area to become a place where culture and education is celebrated and highlighted amidst viable commercial operations, which are essential to fund the cultural and educational programming within the immediate area. The Project aims to reestablish Keauhou Bay as an important wahi pana by realigning the focus to the history and legacy of the bay. The Project proposes to reorient commercial activities away from culturally sensitive areas to alleviate congestion and establish a new place-based cultural educational center. Existing commercial operations and parking areas will be relocated to new facilities in more appropriate locations away from cultural resources. The Project will also create a new boutique resort on the resort-zoned plateau mauka of the bay. The new reconfiguration will help revive the living cultural legacy and strengthen Keauhou Bay as an iconic destination, drawing visitors to Keauhou and local businesses.

The Project is organized into five (5) Management Strategies discussed in following sections.

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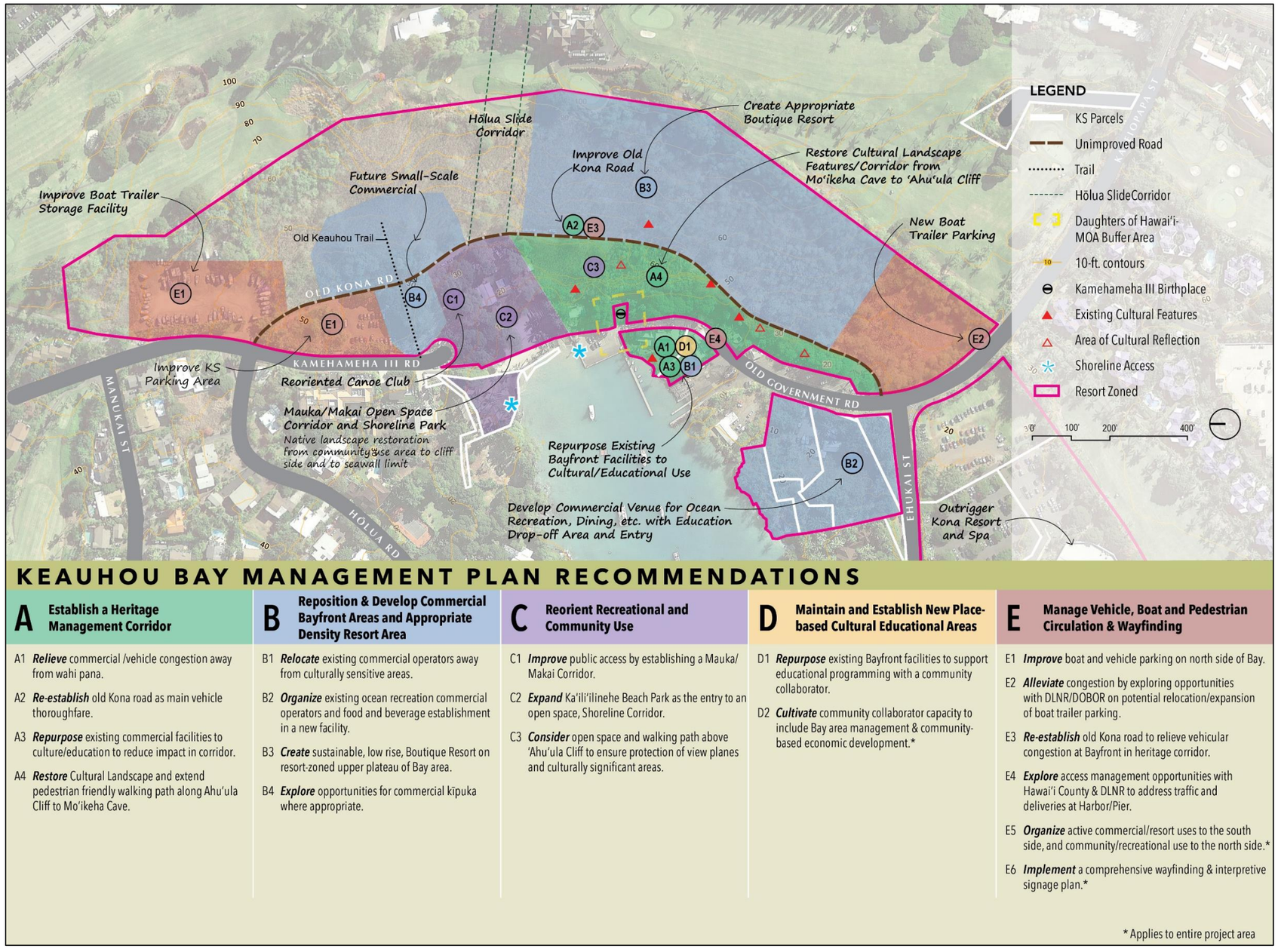

KEAUHOU BAY MANAGEMENT PLAN RECOMMENDATIONS

A Establish a Heritage Management Corridor

A1 ***Relieve*** commercial /vehicle congestion away from wahi pana.

A2 ***Re-establish*** old Kona road as main vehicle thoroughfare.

A3 ***Repurpose*** existing commercial facilities to culture/education to reduce impact in corridor.

A4 ***Restore*** Cultural Landscape and extend pedestrian friendly walking path along Ahu'ula Cliff to Mo'ikeha Cave.

B Reposition & Develop Commercial Bayfront Areas and Appropriate Density Resort Area

B1 ***Relocate*** existing commercial operators away from culturally sensitive areas.

B2 ***Organize*** existing ocean recreation commercial operators and food and beverage establishment in a new facility.

B3 ***Create*** sustainable, low rise, Boutique Resort on resort-zoned upper plateau of Bay area.

B4 ***Explore*** opportunities for commercial kīpuka where appropriate.

C Reorient Recreational and Community Use

C1 ***Improve*** public access by establishing a Mauka/Makai Corridor.

C2 ***Expand*** Ka'ili'ilinehe Beach Park as the entry to an open space, Shoreline Corridor.

C3 ***Consider*** open space and walking path above 'Ahu'ula Cliff to ensure protection of view planes and culturally significant areas.

D Maintain and Establish New Place-based Cultural Educational Areas

D1 ***Repurpose*** existing Bayfront facilities to support educational programming with a community collaborator.

D2 ***Cultivate*** community collaborator capacity to include Bay area management & community-based economic development.*

E Manage Vehicle, Boat and Pedestrian Circulation & Wayfinding

E1 ***Improve*** boat and vehicle parking on north side of Bay.

E2 ***Alleviate*** congestion by exploring opportunities with DLNR/DOBOR on potential relocation/expansion of boat trailer parking.

E3 ***Re-establish*** old Kona road to relieve vehicular congestion at Bayfront in heritage corridor.

E4 ***Explore*** access management opportunities with Hawai'i County & DLNR to address traffic and deliveries at Harbor/Pier.

E5 ***Organize*** active commercial/resort uses to the south side, and community/recreational use to the north side.*

E6 ***Implement*** a comprehensive wayfinding & interpretive signage plan.*

* Applies to entire project area

Figure 2-1: Keauhou Bay Improvement Plan

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2.1.1 Management Strategy A: Establish a Heritage Management Corridor

Immediately adjacent to the Kauikeaouli birthsite is ʻAhuʻula Cliff and its associated cultural properties of Hoʻokūkū Pond, a remnant anchialine pond, and Moʻikeha Cave (Site 50-10-38-24264), which is located at the northern base of the cliff. The cliff and overarching plateau has been identified as having important historic resources and cultural sites with a remaining ancestral footprint.

A key driver of the Project is to continue the commitments to cultural stewardship by establishing a heritage management corridor that seeks to: 1) steward the areas surrounding Kauikeaouli's birthsite; 2) create associative linkage to other sites and features within the immediate bay area and along this portion of the Kona coast; and 3) establish Native Hawaiian identity.

One of the strong criticisms by community and cultural leaders is the extent to which bayfront activities lead to a congested environment with either parking at the bay or long lines of customers waiting to board for commercial vessels. To alleviate congestion and protect sensitive cultural areas, the Project includes the relocation of existing commercial activities fronting the Kauikeaouli birthsite area to a more appropriate location (refer to A1 on Figure 2-1). Additionally, the Old Kona Road will be reestablished as the primary vehicle throughfare through the bay to direct traffic away from the birthsite (refer to A2 on Figure 2-1). Relocation of commercial activities and rerouting of traffic will help realign the focus back to the cultural heritage of Keauhou Bay (refer to A3 on Figure 2-1).

The existing walking path along the ʻAhuʻula Cliff will be extended from the birthsite to the Moʻikeha Caveand rehabilitated with native landscaping to maintain and enhance the Hawaiian sense of place (refer to A4 on Figure 2-1). Vegetation will be compatible with the historic character of the bay or suitable to coastal regimes typical of the Kona area. Landscaping may also include the use of native plants that could be utilized for select cultural demonstrations and practices related to hōlua sledding, fishing, healing practices, or hula. All stewardship activities occurring near the Kauikeaouli's birthsite will be completed in concert with the Daughters of Hawaiʻi, key lineal descendants, and cultural stakeholders. Three new pavilions will also be constructed along the pathway to offer shaded seating areas for social gatherings, cultural programming, or quiet areas for reflection.

2.1.2 Management Strategy B: Reposition and Develop Commercial Bayfront Areas and Appropriate Density Resort Area

Improving revenue generation is critical to the Project. The income generated from activities at Keauhou Bay will be used to support KS' mission as well as the educational and cultural components of the KIBP. KS proposes to generate needed income by including appropriate commercial and resort development within the Project Area.

Commercial Areas:

As the existing ocean commercial operations must be relocated as part of the overall strategy (refer to B1 on Figure 2-1), a new commercial area will be developed first and prior to any implementation of subsequent relocation actions. The new commercial facility will be developed in the currently underutilized land to the south of the bay (refer to B2 on Figure 2-1). This new facility will be used to accommodate the relocation of commercial activities from the bayfront and develop new space for

existing ocean recreation operations who currently do not have a physical presence or official check in location at the bay.

The new commercial area will serve as the gateway to the bay and provide an authentic arrival experience for visitors. The new facility will include approximately 9,520 SF of commercial space and feature a 3,000 SF fine dining restaurant. Ample parking and native landscaping will also be part of this new commercial facility. Structures will be constructed using natural building materials and be modeled upon the historic pier structure that once resided in the bay.

The Project will also include an area for small-scale commercial activities on the north side of the bay along the Old Kona Road (refer to B4 on Figure 2-1). This area will consist of approximately ten (10) kiosks for ocean recreational activity check-in points or food and craft stands. Kiosks will be leased by KS to individual businesses to provide revenue generation and a unique village commercial experience for both visitors and recreational users at Keauhou Bay.

Boutique Resort:

Mauka of the Old Kona Road, KS proposes to develop a sustainable, low-rise, boutique resort on the plateau overlooking Keauhou Bay (refer to B3 on Figure 2-1). The resort will consist of 43 two-story 4-plex bungalows arranged over an approximately eight-acre area of the plateau. Each of the 150 total units will offer guests with a panoramic view of Keauhou Bay and the Kona coast. The resort is designed to complement other visitor uses and activities with integrated cultural, educational and community uses in close proximity.

The resort is developed with a low-impact approach tied to an overall concept associated with sustainable design incorporating native building materials. The bungalow concept allows development of the hillside without extensive mass grading that might otherwise be required. Each 1,800 SF suite will be equipped with an ensuite bathroom and outdoor lānai.

The main reception building will be an approximately 14,500 SF facility housing the lobby check-in lounge, a food and beverage venue, meeting facilities, wellness pavilion, administrative offices, back-of-house spaces, and storage spaces. An infinity pool and deck will front the reception building. Parking will be available at the makai portion of the property off of the Old Kona Road and will include parking stalls and loading spaces.

2.1.3 Management Strategy C: Reorient Recreational and Community Use

Although there is legal public access to the shoreline, canoe and volleyball activities dominate the shoreline area and create a perception of exclusivity. This, coupled with the hustle and bustle of ocean commercial operations catering mainly to visitors cause many local families, with some long-standing generational ties to the bay, to no longer feel welcomed - ultimately disconnecting them from the wahi pana.

The Project aims to improve public access to the shoreline by establishing a mauka to makai corridor and reconfiguring recreational uses along the immediate bayfront area. The central mauka to makai open space corridor will be approximately 200 feet wide and connect to a 100-foot-wide shoreline park area (refer to C1 on Figure 2-1). Within this zone, the presence, and activities of the Keauhou Canoe Club (KCC) will continue to be supported. Assigned areas of use, activities, and equipment storage by KCC will be

clearly demarcated to ensure all park users can access and enjoy the area's recreational amenities. The Project will also continue to support the use of the Ka'ili'ilinehe beachfront for specific recreational uses. Other portions of KS-owned land in the central bayfront area will be dedicated to public open space with landscaping improvements that will complement the focused efforts within the heritage corridor, creating connections to the area's key cultural and educational spaces throughout.

The mauka area of the cliff will remain as passive open space area. View sheds will be enhanced and maintained as appropriate for cultural orientation and association to place (refer to C3 on Figure 2-1).

2.1.4 Management Strategy D: Maintain and Establish New Place-based Cultural Educational Areas

Keauhou Bay is an area underutilized by current KS educational programs for reasons ranging from a sense of respect and reverence absent at the present time for the area's significance in ali'i lineage; the sense of overcrowding and congestion by commercial users adjacent to the Kauikeaouli Birthsite; and the lack of community meeting space.

Upon relocation of the existing commercial tenants, the remaining facilities will be repurposed and renovated to establish a new cultural education heritage center (refer to D1 on Figure 2-1). The new heritage center will be utilized to support a range of activities including: 1) KS place-based educational programming, 2) key commemoration events such as the Kamehameha III celebration; and 3) specific culturally-related collaborations with a key community partner to host events that honor the legacy of Keauhou Bay. The new heritage center will be utilized to honor and enrich the history and living legacy of excellence in this wahi pana, and to provide a place of learning and connection for locals, lineal descendants, and visitors alike.

As part of the renovations, the facility will be opened-up by removing the fencing surrounding buildings and the Kuhalalua SpringThe fence will be replaced by a low rock wall and native vegetation. These improvements are designed to visually connect Kauikeaouli's Birthsite to the Kuhalalua Spring. Various pedestrian walkway and wayfinding improvements will also enhance access and safety.

2.1.5 Management Strategy E: Manage Vehicle, Boat and Pedestrian Circulation and Wayfinding

Queuing of vehicles with boat trailers causes congestion and traffic during peak use (mainly early morning, afternoon, and weekends). Trailer parking along the shoulder of the road also causes a disorderly appearance and makes it difficult for pedestrians to walk along the road. Parking near the bay is severely limited, discouraging many locals from visiting.

The Project proposes reorganization of vehicle and pedestrian circulation systems at the bay by reestablishing the Old Kona Road as the primary vehicular and pedestrian circulation route in anticipation of future resort development on the bluff (refer to E3 on Figure 2-1). The road will be improved as a private drive to include new asphalt pavement, drainage improvements, infrastructure, and pedestrian promenade along the 'Ahu'ula Cliff heritage area. The pedestrian promenade is envisioned to serve as a new community recreational resource that integrates with the heritage engagement area around the 'Ahu'ula Cliff. Interpretative signage will be incorporated to promote place-based cultural learning for residents, visitors, and students.

The existing roadway to the bayfront, Old Government Road, will become a limited/managed access road to reduce congestion.

The Project will expand and improve the KS owned parking area on the north side of the bay. The newly improved lot will include public parking within a short walking distance to both the bay and to the new boutique resort (refer to E1 on Figure 2-1).

The Project will also improve and expand areas for boat trailer parking (refer to E2 on Figure 2-1). The existing boat storage parking area, north of the bay, will be improved to meet code requirements and will include a total of 34 stalls. Additionally, a new 0.6-acre boat trailer parking area will be developed on the south end of the bay, and will include 8 stalls.

2.2 Development Schedule

The Project is expected to commence upon issuance of the required County of Hawai‘i permits and approvals subject to market conditions at such time. Improvements could be expected to start between 2023 and 2025.

The Project will be implemented in a phased approach as certain actions must be completed prior to the commencing of others, whereas some actions may run concurrently. The first action to be implemented includes the construction of the new commercial facility (refer to B1 on Figure 2-1). Upon completion of the new commercial facility, existing commercial bayfront tenants may move operations into their newly assigned commercial spaces (refer to A1, B1, and B2 on Figure 2-1). The vacated bayfront facilities will then undergo necessary renovations to be repurposed as the new culture and heritage education center (refer to A3, and D1 on Figure 2-1). Revenue generated from commercial leases will go towards funding the next phases of Project implementation.

Once the bayfront area has been reorganized, the next phase includes the establishment of the heritage management and shoreline corridor (refer to C1 and C2 on Figure 2-1). Cultural landscape improvements and pedestrian friendly walking paths will then be developed to enhance the Hawaiian sense of place (refer to A4 and C3 on Figure 2-1). The Old Kona Road will be re-established as the main vehicle thoroughfare across Keauhou Bay (refer to A2 and E3 on Figure 2-1). The Old Kona Road will also become the primary means of vehicle access for the construction and operation of the new boutique resort. Once this access road is operational, construction of the resort development may begin on the plateau located mauka of the bay (refer to B3 on Figure 2-1). New boat and vehicle parking facilities will also be developed (refer to E1 and E2 on Figure 2-1). Revenue generated from the new resort and boat parking may be utilized to develop a new commercial kipuka on the north side of the bay (refer to B4 on Figure 2-1).

2.3 Alternatives Considered

Alternatives to the Project will be evaluated in the Draft EIS. The following are brief summaries of these alternatives.

2.3.1 No Action Alternative

Under the No Action Alternative, Keauhou Bay would remain in its current state and no new facilities would be built. Without the development of the boutique resort, KS would lack the revenue to support

future cultural and educational programs at the bay and cultural sites would not be restored. Congestion and conflicts between users would continue and the cultural integrity of the bay could become further diminished.

Under the No Action Alternative, the anticipated new jobs associated with the boutique resort and expansion of commercial opportunities would not be created. There would be no positive benefit of new employment opportunities for the construction industry or long-term operational employment in support of the boutique resort.

2.3.2 Higher Density Development Alternative

Under this alternative, the Project Area would be developed with greater density than the Project. This alternative to the proposed project would result in the layout and construction of a substantially larger resort complex on the mauka plateau. Thus, this project alternative would result in a larger overall footprint on the site and therefore may result in more extensive long-term, irreversible, and irretrievable environmental impacts. With additional visitor units, there could also be an increase in overall employment for the project as well as impacts to traffic, beach recreational use, and others to be identified and evaluated. The building would not blend with the setting of Keauhou Bay, as it would stand out as an individually separate and visually hard structure.

2.3.3 Lower Density Development Alternative

Under this alternative, the Project Area would be developed at a lower density than the Project. This alternative includes developing the mauka plateau for a mixture of hotel, timeshare and/or residential apartment or condominium uses. These alternative uses would result in fewer total rooms that the project could provide, since the typical timeshare or condominium/apartment unit is significantly larger than the typical hotel room. This would reduce the potential hotel room inventory at the resort, and with it, reduce the number of hospitality jobs that could be provided. The development would generate less revenue than the Project and therefore fewer funds to support education and cultural programs. In addition, timeshare or condominium/apartment uses would require more parking than hotel uses and would thereby result in increased traffic related impacts.

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Chapter 3

AFFECTED ENVIRONMENT

This chapter provides a preliminary overview of the requisite studies that will be conducted as a part of this environmental review. Additionally, an initial presentation of existing natural, cultural, socio-economic, and jurisdictional conditions for the resources and uses within the KS-owned land and surrounding areas is provided in this Chapter. Further details on the existing conditions and potential effects of the Proposed Action on the resources will be provided in the Draft EIS. Additionally, the Draft EIS will include measures to minimize or mitigate potential effects of the Project.

3.1 Land Use

The Draft EIS will evaluate the Project's conformance with relevant state and county land use plans, policies and controls, with the intent to provide decision makers with a comprehensive overview of the regulatory compliance associated with the Project.

3.1.1 State Land Use District

The State of Hawai'i has a unique system of classifying and managing lands in which both state and county agencies hold distinct responsibilities. All lands in Hawai'i are classified into four land use districts: urban, rural, agricultural and conservation. The KS-owned lands at Keauhou Bay are currently designated as being in the Urban District (**Figure 1-6**). Lands in the Urban District includes lands characterized by "city-like" concentrations of people, structures, and services. This District also includes vacant areas for future development. The County primarily regulates proposed development in the Urban District. Generally, lot sizes and uses permitted in the district area are established by the County through ordinances or rules. The proposed uses within the Project are consistent with the intent and purpose of the State Land Use Urban District. Therefore, a State Land Use District amendment is not required.

3.1.2 County of Hawai'i Zoning

The County of Hawai'i zoning for the KS-owned land is "V-.75" Resort-Hotel District (required land area of 750 square feet, for each dwelling unit, or for each separate rentable unit, or other similar rentable units)**;** **"**V-1.25" Resort-Hotel District (required land area of 1,250 square feet, for each dwelling unit, or for each separate rentable unit, or other similar rentable units); "V-4"Resort-Hotel District (required land area of 4,000 square feet, for each dwelling unit, or for each separate rentable unit, or other similar rentable units); "RS-10" Single-Family Residential District (minimum building site area of 10,000 square feet), and Open District (**Figure 1-7**).

The land uses planned within the Project are generally consistent with permitted uses under the existing zoning classifications for these parcels. Permitted Uses for individual parcels are specified under the County of Hawai'i Zoning Code in Chapter 25, Hawai'i County Code. A change of zoning district is not

required. A Use Permit may be required for certain uses as identified in the Hawai‘i County Code. Use Permit requires review and approval through the Hawai‘i County Leeward Planning Commission.

3.1.3 County of Hawai‘i Special Management Area

The entire Project Area is located within the County of Hawai‘i Special Management Area (SMA). Pursuant to Rule 9 (Special Management Area of the County of Hawai‘i) and Hawai‘i Revised Statutes (HRS) 205A-22. Projects that involve maintenance and repair of existing facilities are exempt from the SMA permit requirement. Projects classified as “development” which are valued less than $500,000 will require the approval of an SMA Minor Permit, which is reviewed and approved directly by the County Planning Department. Projects classified as “development” which are valued above $500,000 require the approval of a SMA Use Permit Major. The County Planning Department reviews the SMA Major permit application and provides its recommendation to the Planning Commission, which is the decision authority. The SMA permit requires an environmental review.

The Project is anticipated to require an SMA Major Use Permit due to an expected construction value in excess of $500,000.

3.1.4 Kona Community Development Plan

The Kona Community Development Plan (CDP) is consistent with the principles of “Smart Growth” that encourages the protection and preservation of open space, an area’s natural beauty, as well as its cultural and environmental resources. The Project Area is located within the Kona CDP designated Urban Area. According to the Kona CDP, future growth within the Urban Area shall be encouraged in a pattern of compact villages at densities that support public transit. Therefore, a high-density development is encouraged within the Project Area.

3.2 Biological Resources

A Biological Survey of the KS-owned parcels in Keauhou Bay will be conducted by AECOS, Inc. to characterize the flora and fauna of the Project Area. The terrestrial Biological Survey included surveys of bird, mammal, and botanical resources that occur or potentially occur in the Project Area, with a focus on state and federally-listed species. Results of the survey will determine if any existing habitat in the Project Area is essential for the continued survival of listed species.

Although the Project does not propose any immediate uses within the nearshore waters, as the Project Area is located in proximity to the shoreline, other relevant studies that have identified the characterization of marine and benthic resources will analyzed as part of the Draft EIS.

The Draft EIS will provide additional information and analyze potential impacts to biological resources at Keauhou Bay. The Draft EIS will include species lists and assessments of Project impacts upon biological resources and mitigations to avoid and minimize potential impacts.

3.3 Archaeological and Cultural Resources

Several recorded archaeological sites within Keauhou Bay are in areas with overgrown vegetation and not easily accessible. Others have been incorporated into interpretive trails. The best-known site is the Kamehameha III Birthplace, also known as Kauikeaouli Stone (State Inventory of Historic Places (SIHP) Number 4348 and National Register of Historic Places (NRHP) number 78001018)(**Figure 3-1**). The site is located at the terminus of Kaleiopapa Street, across from the Fair Wind building and the pier. The stone is on a small parcel bounded by a three-foot high lava rock wall. ʻAhuʻula Cliff provides a backdrop to the site. At the south end of the interpretive path is Hoʻokūkū Pond (SIHP No. 24263). Once much larger, the pond now measures approximately eight feet wide and 15 feet long. It is enclosed in a stacked basalt rock wall about three feet high, in the shallow water level. The pond's water level is subterraneously connected to the ocean and rises and falls with the tides, typical for an anchialine pond (**Figure 3-2**).

Figure 3-1: Kauikeaouli Stone (SIHP No. 4348)

Figure 3-2: Hoʻokūkū Pond (SIHP No. 24263)

Kuhalalua Spring (SIHP No. 29266), also referred to as Kaopa Spring by the Daughters of Hawai'i, is located at the shoreline fronting the Fair Wind and the Sea Quest buildings (**Figure 3-3**). The spring enclosure is approximately 10 feet by 15 feet and completely enclosed with stacked basalt rock walls. A small opening was added on the makai side to allow water to flow in and out.

Figure 3-3: Kuhalalua Spring (SIHP No. 29266)

Remnants of the historic and prehistoric sites that were found after the construction of the Outrigger Kona Resort and Spa in the 1970s, are character defining features of the cultural landscape. These sites are oriented towards Keauhou Bay and connected by narrow dirt and asphalt paths along the shoreline. Nearest the hotel are the remnants of Kaukulaelae Heiau (SIHP No. 23911), a cluster of basalt boulders topped with a 1960s-era concrete house foundation. East of Kaukulaelae Heiau is a historic habitation and cattle pen enclosure made of lava rock, approximately 32 feet by 26 feet with rock walls two to five feet tall. Further east along the shoreline is a grouping of historic structures. A historic house terrace (SIHP No. 23911-C) is adjacent to the chapel. Makai of this terrace are two sites, a house platform (SIHP No. 23912) filled and grassed for resort use, and a canoe shed (SIHP No. 23911-B). Adjacent to the ocean near the east end of the dirt path, there is a fishing shrine called Kanikanika'ula Heiau (SIHP No. 23913), 24 by 27 feet in size with walls two to five feet high. Among these sites are a number of large upright stones that served as kū'ula stones for worshipping and attracting fish, and a salt pan for the small-scale production of salt (Haun and Henry, 2010).

Many traditional cultural practices are no longer sustained at Keauhou Bay today. Coves and beaches are no longer used as canoe landings in part because of the conversion of bayfront properties to private ownership and because canoes are not used as primary mode of transportation anymore. Other traditional lifestyles, such as fishing, have been retained by some, but confined to certain areas due to lack of access to private lands and loss of fishing sites as many have been leveled or filled. There is a sense that the bayfront is too commercialized and that Hawaiian families are no longer welcome.

Despite the many changes to Keauhou Bay since 1946, the area remains significant as part of a larger indigenous cultural landscape. There are opportunities within the Project Area to reconnect the few

remaining indigenous features or to restore those that have been covered or filled and ultimately enhance the integrity of the indigenous cultural landscape.

The Draft EIS will characterize archaeological sites and cultural resources within the Project Area in Keauhou Bay. An Archaeological Reconnaissance and Site Condition Update will be conducted by Haun & Associates to support the Draft EIS. The survey will include a review of existing archaeological and historic documentary literature relating to the Project Area and its immediate vicinity. Haun & Associates will visit the Project Area to relocate previously identified sites and conduct a 100% systematic reconnaissance survey of any undeveloped areas that have not been previously surveyed. Identified sites will be documented and evaluated for significance and appropriate treatment (i.e. preservation or data recovery).

Additionally, a Cultural Impact Assessment (CIA) will be conducted by ASM Affiliates which will include a review and synthesis of relevant mo'olelo, Hawaiian language newspapers, historic maps, documents, and photographs, place-name research, and previous archaeological, cultural, and ethnographic studies. ASM will conduct informal interviews with organizations and community members having long-standing genealogical ties, or who are familiar with, the cultural landscape of the project area. The interviews will be informal, that is they will not be taped or transcribed, but will be summarized. The information gathered through archival research and interviews will be used to identify traditional and significant cultural places and beliefs specific to the study area and any traditional cultural practices that have occurred or still occur in the area. These findings will be presented in a written CIA report that will include a discussion of potential cultural impacts that may occur as a result of the proposed Project, and, if impacts are identified, recommended appropriate mitigative measures.

3.4 Natural and Manmade Hazards

3.4.1 Earthquakes

On the Island of Hawai'i the majority earthquakes are linked to volcanic activity and the movement of magma within the Kīlauea Volcano or Mauna Loa Volcano. Based on the 2006 United States Geological Survey (USGS) International Building Code (IBC) Seismic Design Map, the County of Hawai'i could experience severe seismic activity with ground motion anywhere from 0.30 up to 1.23 of the earth's ground motion accelerations (g-force). The seismic hazard is highest along the southeast coast of the Island of Hawai'i, followed by the Kona coast. Seismic tremors on the Island of Hawai'i have caused ground cracks, landslides, ground settlement, damaging tsunami, and mudflows. Existing buildings and infrastructure have been destroyed or damaged, and new construction could be impacted by seismic activity resulting in destruction and possible injury or loss of life (Fletcher III, Grossman, Richmond & Gibbs, 2002). The Project will comply with IBC and County design standards to mitigate potential earthquake hazards.

3.4.2 Lava Hazards

Hazard zones from lava flows are based mainly on the location and frequency of both historic and prehistoric eruptions. Volcanic hazard zone maps developed for the Island of Hawai'i were revised by the U.S. Geological Survey in 1987. The Island of Hawai'i is divided into nine (9) hazard zones according to the level and degree of potential hazards related to lava flows. An area designated as Zone 1 is considered to be an area of greatest potential hazard. The Project Area is within lava hazard Zone 4, indicating a

moderate hazard. Zone 4 includes all of Kailua-Kona and the entire Hualālai Volcano. The rating of 4 is for areas having a greater distance from active vents and topography making it less likely that flows will cover that area. The Project Area is situated on the west-facing flank of the Hualālai Volcano. Hualālai Volcano is considered dormant, having last erupted in 1801. The percentage of Mount Hualālai that has been subject to damage from lava in the last 750 years is less than 15 percent. The Hualālai Volcano is considered by geologists to represent a post-shield stage of Hawaiian volcanism, characterized by a marked decrease in the eruption rate as the volcano drifts off the Hawaiian hotspot. Property loss and economic devastation are the most frequent consequences of lava flow. Based on the probability of lava flows in Zone 4, there is a low concern for developing structures in the Project Area.

3.4.3 Hurricanes and Tropical Storms

Hurricanes and tropical storms are both categorized as tropical cyclones, which are warm-core storms that originate over tropical waters with well-defined centers of closed surface wind circulation. A hurricane is a tropical cyclone that sustains surface winds of 64 knots (74 mph) or more. Tropical storms are categorized as an organized system of strong thunderstorms with defined circulation and maximum sustained winds of 39-73 mph (NOAA, 2015).

Hurricanes are considered to be relatively rare events in the Hawaiian Islands. Records show that strong wind storms have struck all major Hawaiian Islands. The first officially recognized hurricane in Hawaiian waters was Hurricane Hiki in August 1950. Since that time, five hurricanes have caused serious damage in Hawai‘i: Nina (1957), Dot (1959), ‘Iwa (1982), Estelle (1986), and ‘Iniki (1992).

However, with rising global temperatures, Hawai‘i is expected to experience a higher incidence of tropical storm events. In most recent history, Tropical Storm Iselle made landfall on Hawai‘i Island in 2014, causing considerable damage to utility poles, roadways, and homes on the windward side of the island. In 2016, Tropical Storm Darby made landfall on Hawai‘i Island, producing heavy rain and widespread flash floods. In 2018, Hurricane Lane passed southeast of the Hawai‘i Island as a weakening Category 5 hurricane, causing severe mudslides and flash flooding.

As the Project Area has the potential to be impacted by hurricanes and tropical storms, the DEIS will analyze the hazard risk and potential measures to improve resiliency.

3.4.4 Flooding

The Federal Emergency Management Agency’s Flood Rate Insurance Maps indicate that the Project Area is within Zone X, Zone AE, and Zone VE (**Figure 3-1**). Zone X is defined as areas determined to be outside the 500-year flood plain. Zone AE is defined as areas that present a one percent risk of flooding annually. Flood Zone VE is defined as areas subject to inundation by the one percent annual chance flood event with additional hazards due to storm-induced velocity wave action. The Base Flood Elevation (BFE) is 10 feet.

3.4.5 Tsunami

The Project Area is located entirely within the Federal Emergency Management Area (FEMA) designated Tsunami Inundation Zone; an area which needs to be evacuated prior to the estimated arrival of a tsunami

(**Figure 3-2**). Development is allowed within the tsunami evacuation zone, however, the Project Area is susceptible to damage from flooding and debris in a tsunami event.

Twenty-five of the tsunamis recorded in Hawai'i since 1812 have had an adverse impact on the Island of Hawai'i, seven caused major damage, and three were generated locally. The most recent tsunami to impact Hawai'i Island occurred on March 11, 2011, causing property damage at several locations on the Kona coast. In 1946, an 8.1 magnitude earthquake in the Aleutian Islands generated a tsunami that struck the Hawaiian Islands, taking the lives of 160 individuals. At Keauhou Bay the water rose 13 feet, severely damaging one house and washing several boats ashore.

3.4.6 Wild Land Fires

The greatest danger of fire is where wild land (trees and brush) borders urban areas. Although all the Hawaiian Islands are vulnerable to wild-land fires (especially during the summer months, prolonged drought and/or high winds), the great majority of wildfires are human-caused (intentionally caused or by negligence) and start along roadsides. The numbers of such fires are increasing. Wildfires can and do also occur naturally. Hawai'i County has a Fire Prevention Bureau that works to prevent fires before they can cause injuries and property damage. The proposed project will comply with all fire code requirements.

3.4.7 Climate Change and Sea Level Rise

As global temperatures increase, established patterns of weather and climate are shifting. These erratic changes in weather patterns have increased the severity of events like droughts, storms, floods, and even hurricanes, while at the same time causing these events to be more difficult to predict and protect against. The fragility of the ecosystems and unique island nature of the Hawaiian Islands make the State particularly vulnerable to the damaging effects of climate change. Among the impacts associated with climate change is the threat of rising sea levels. Recent projections of global sea level rise by the Intergovernmental Panel on Climate Change (IPCC) estimate an increase of up to 1-meter or higher above current sea levels by 2100. This is of particular concern to low-lying coastal communities and ecosystems that are exposed to a variety of coastal hazards, such as tsunamis and hurricanes. These hazards and the resulting risk to coastal areas can be exacerbated by sea level rise.

The National Oceanic and Atmospheric Administration (NOAA) provides an intermediate-high sea level rise scenario for West Hawai'i projecting over a three-foot increase by 2070 (NOAA Sea Level Rise Viewer). A 3.2-foot sea level rise scenario is depicted in (**Figure 3-3**). Modeling indicates that sea level rise could significantly impact the Project Area. The model shows that a 3.2-foot increase in sea level will cause chronic inundation of the shoreline, pier, and Ka'ili'ilinehe beach park. Most of the shoreline surrounding the bay is either naturally rocky or has been artificially hardened by the construction of seawalls.

The Draft EIS will provide an analysis of how projected sea level rise will impact the Project Area.

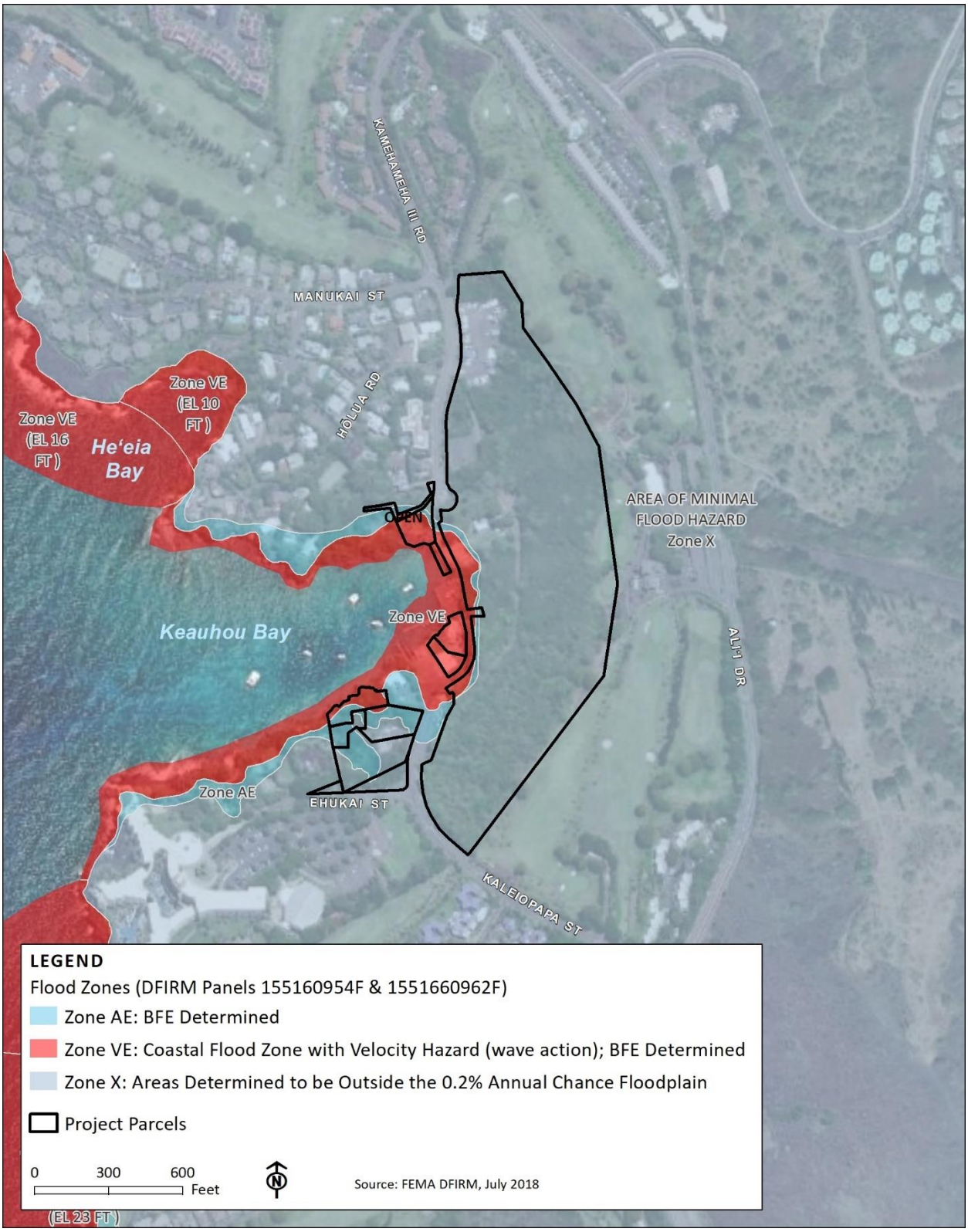

Figure 3-1: FEMA Flood Zones

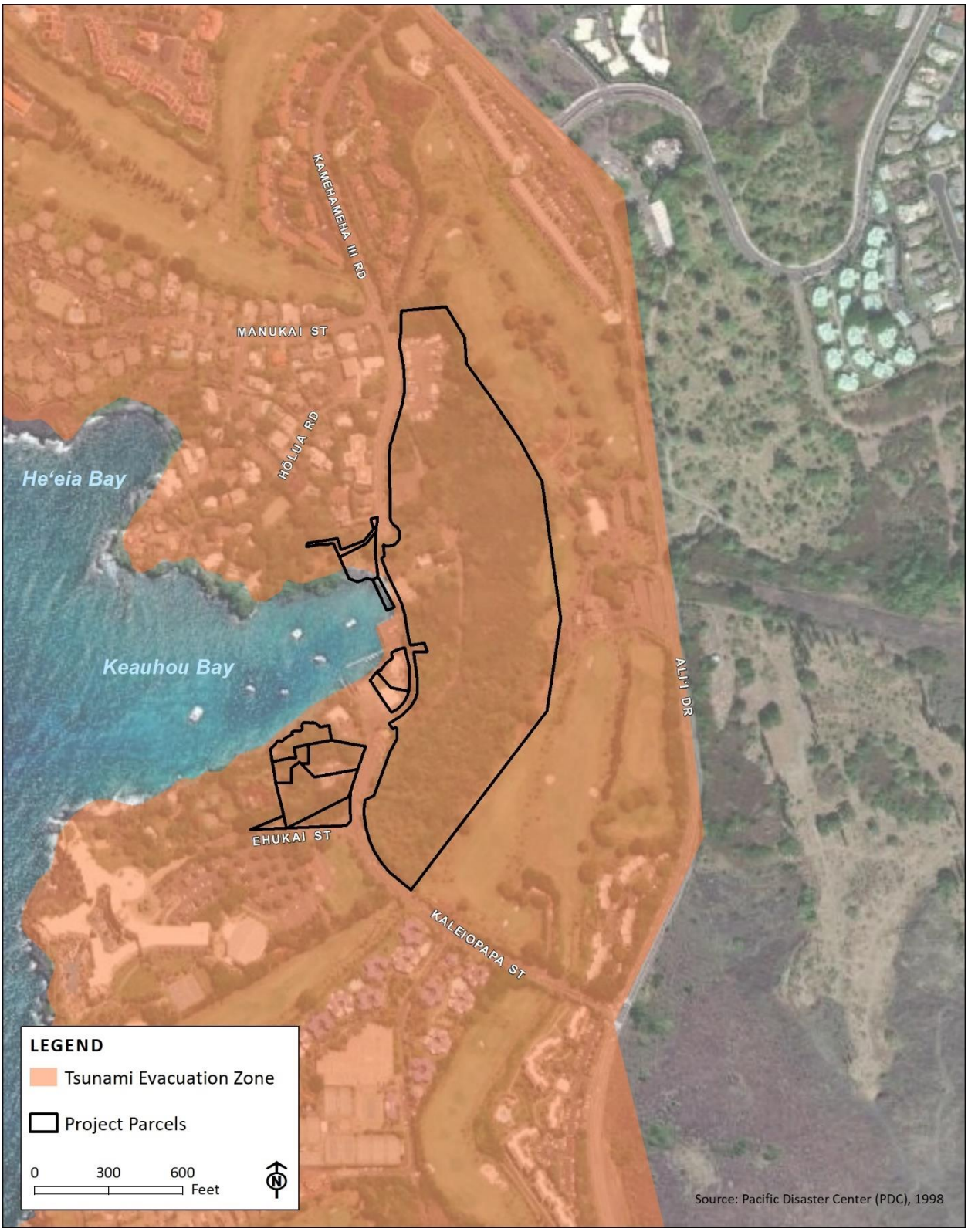

Figure 3-2: Tsunami Evacuation Zone

Figure 3-3: Sea Level Rise Exposure Area (3.2 Feet)

3.5 Air Quality

Air quality is dependent on the type and quantity of pollutants emitted into the atmosphere, the size and topography of the air basin, and the prevailing meteorological and weather conditions. The U.S. Environmental Protection Agency has established national ambient air quality standards for several different air pollutants that are considered harmful to public health and the environment. These pollutants, referred to as criteria pollutants, are sulfur dioxide (SO2), nitrogen dioxide (NO2), carbon monoxide (CO), ozone (O3), suspended particulate matter (measured less than or equal to 10 microns in diameter [PM10] and less than or equal to 2.5 microns in diameter [PM2.5]), and lead (Pb). CO, SO2, Pb and some particulates are emitted directly into the atmosphere from emissions sources. O3, NO2 and some particulates are formed through atmospheric chemical reactions that are influenced by weather, ultraviolet light, and other atmospheric processes. Volatile organic compounds (VOCs) and nitrogen oxide emissions are used to represent O3 generation because they are precursors of O3.

The Hawai‘i Department of Health (DOH), Clean Air Branch (CAB) also regulates and monitors air pollutants under HAR Chapter 11-59, Ambient Air Quality Standards, and HAR Chapter 11-60.1, Air Pollution Control. The CAB has established its own ambient air quality standards for the criteria pollutants, and these standards are stricter than the national ambient air quality standards for some pollutants. The CAB also has promulgated an additional air quality standard for hydrogen sulfide.

Based on air monitoring results, the island of Hawai‘i is currently designated unclassified/attainment for all criteria pollutants, which means the criteria pollutants are and historically have been within the ambient air quality standards or have not been evaluated (USEPA, 2020). Hawai‘i has relatively good air quality due to persistent northeast trade winds, which limit locally-generated air pollutants from accumulating. The CAB currently operates 11 monitoring stations on the island of Hawai‘i to measure SO2 and PM2.5 (primarily from volcanic activity) and to monitor air quality. The nearest air monitoring station to the Project Area is approximately 3.9 miles north of Keauhou Bay in Holualoa.

Sources of air emissions at Keauhou Bay include exhaust from motor vehicles, internal combustion engines, and dust from vehicle use on gravel and dirt roads. The Draft EIS will provide additional information and analyze potential impacts to air quality.

3.6 Noise

Sound is vibration of air, a term used to describe pressure variations that are sensed by humans and animals. Noise is generally defined as unwanted sound and can negatively affect the health and well-being of humans and wildlife. Sound is measured in decibels (dB) with the average human hearing ranging between 0 and 140 dB. Sound measurements are frequently filtered, known as A-weighting, to adjust for human ear functions (USAG-HI, 2017). Noise outside of comfort levels can affect humans and wildlife. Human and wildlife noise responses vary depending on multiple factors including noise level, distance, noise regularity, noise perception, and species sensitivity (Shannon, et al., 2016).

Noise control standards are enforced by federal and state laws. Federal noise standards focus on workplace standards. In Hawai‘i, the DOH Indoor and Radiological Health Branch regulates noise in accordance with HAR Chapter 11-46, *Community Noise Control*. HAR Section 11-46-3 defines maximum permissible sound levels for three classifications of land use, by zoning district, and provides for the abatement and control of excessive noise sources (DOH-IRHB, 2018).

Existing background ambient noise levels within the Project Area are largely attributed to motor vehicle traffic along the roadways bordering Keauhou Bay. The noise levels around Keauhou Bay are consistent with noise levels found in typical urban areas.

A Noise Assessment supporting the EIS noise analysis will be prepared by Y. Ebisu & Associates to identify existing sources and exposure thresholds of noise. The Noise Assessment will then identify potential short-term and long-term impacts related to noise generation. Short-term impacts may include noise generation impacts as a result of increased frequency and exposure to possible construction-related activities to neighboring residences and nearby uses. Long-term impacts may include increased noise generated by increased traffic, resort activities or various cultural and educational programs at the bay.

3.7 Geology, Topography and Soils

3.7.1 Geology and Topography

The Island of Hawai‘i is comprised of several volcanoes: Kohala, Mauna Kea, Hualālai, Mauna Loa, and Kīlauea. Of these volcanoes, only Mauna Loa and Kīlauea are considered active in addition to one active seamount, Lō‘ihi located offshore. The Project Area is situated on the western slopes of Hualālai Volcano, which is dormant with its last eruption ending sometime in 1800-1801. The Hualālai Volcano is composed of two (2) types of lava flows: ‘a‘ā lava flow and pāhoehoe lava flow. The ‘a‘ā lava flow was formed by a slow moving and very viscous molten rock. The ‘a‘ā flow consists of a layer of clinkers and a core of hard massive basalt that originated from Hualālai between 1,500 and 3,000 years ago. The pāhoehoe lava is a fluid type of molten rock that flows relatively quickly down the slope with no overlying soil. The pāhoehoe lava was originated from Hulalālai 3,000 to 5,000 years ago. Most of the Project Area is covered in ‘a‘ā and pāhoehoe lava flow.

The Project Area is generally gently sloped at an elevation ranging from approximately sea level to 110 feet (**Figure 3-4**). The south side of the bay features gentle sloping terrain, typical of pāhoehoe basalt flows. Basalts at the bayfront area formed a steep cliff on the south side with a narrow ledge and gradually sloping terrain on the north side. ‘Ahu‘ula Cliff is located approximately 30-40 feet from the shoreline and rises to a 60-foot elevation. Portions of the original pāhoehoe lava ledges that once defined the shoreline are covered with fill, artificially hardened, or lined with basalt rock sea walls. At the Ka‘ili‘ilinehe beach park are two basalt rock sea walls, leaving a narrow section of natural beach with black sand and pebbles.

3.7.2 Soils

The NRCS Soil Survey for the Island of Hawai‘i classifies the four primary soils of the Project Area as: Waiaha cobbly medial silt loam, 10 -20% slopes; Waiaha medial silt loam, 10-20% slopes; Punalu‘u-Lava flows complex, 10-20% slopes, and the Punalu‘u-Lava flows complex, 2-10% slopes (**Figure 3-5**). All present soils are located on low elevation, leeward slopes of Hualālai Volcano at elevations from sea level to 1,000 feet and slope gradients range from 2 to 40 percent. Present soils are well drained, permeability is moderately rapid in the soils and very slow in the underlying bedrock with slow runoff, and erosion hazard is slight. The typical uses identified are for grazing and homesites.

The Draft EIS will provide additional information and analyze potential impacts to geology, topography, and soils .

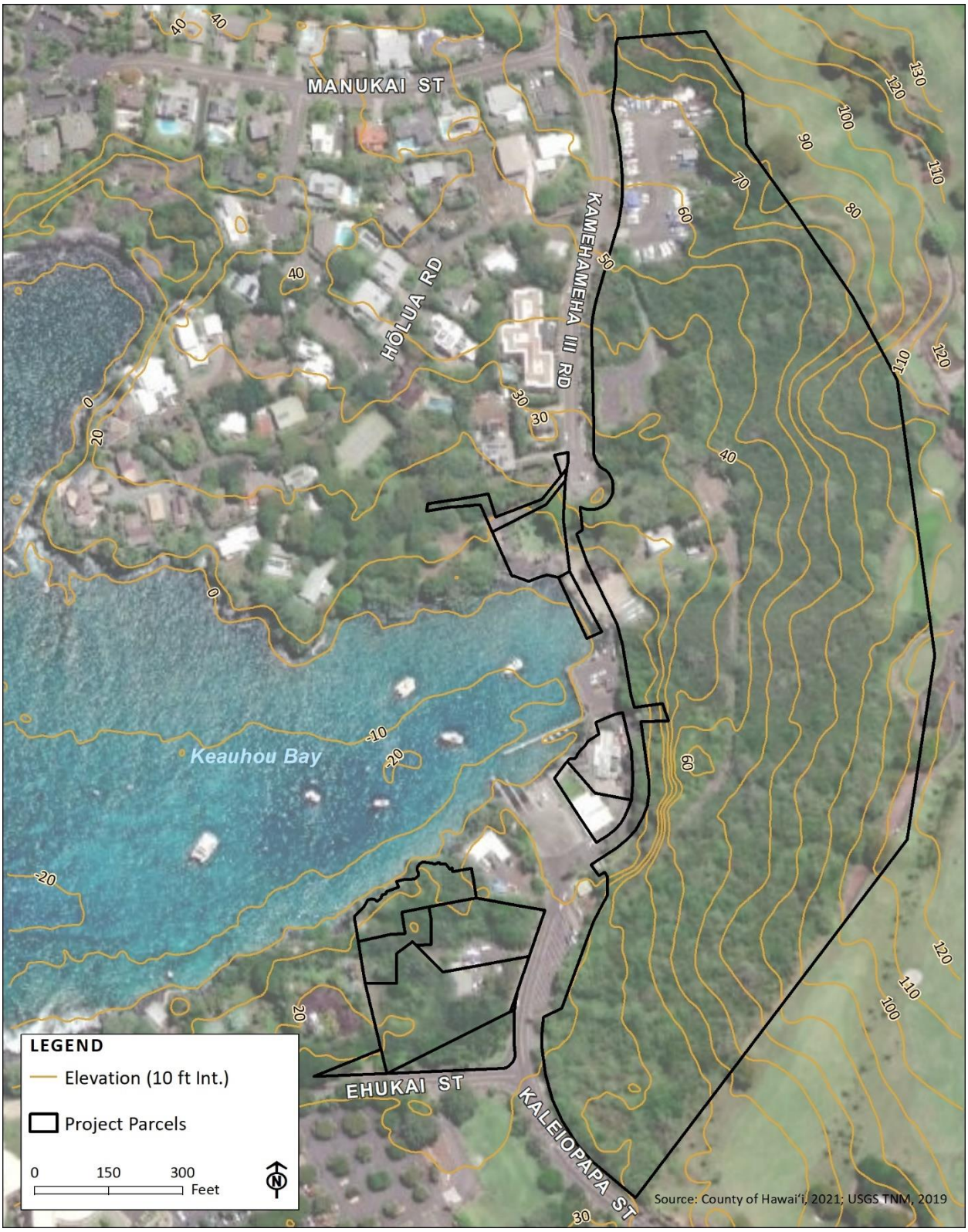

Figure 3-4: Topographic Survey(10-foot)

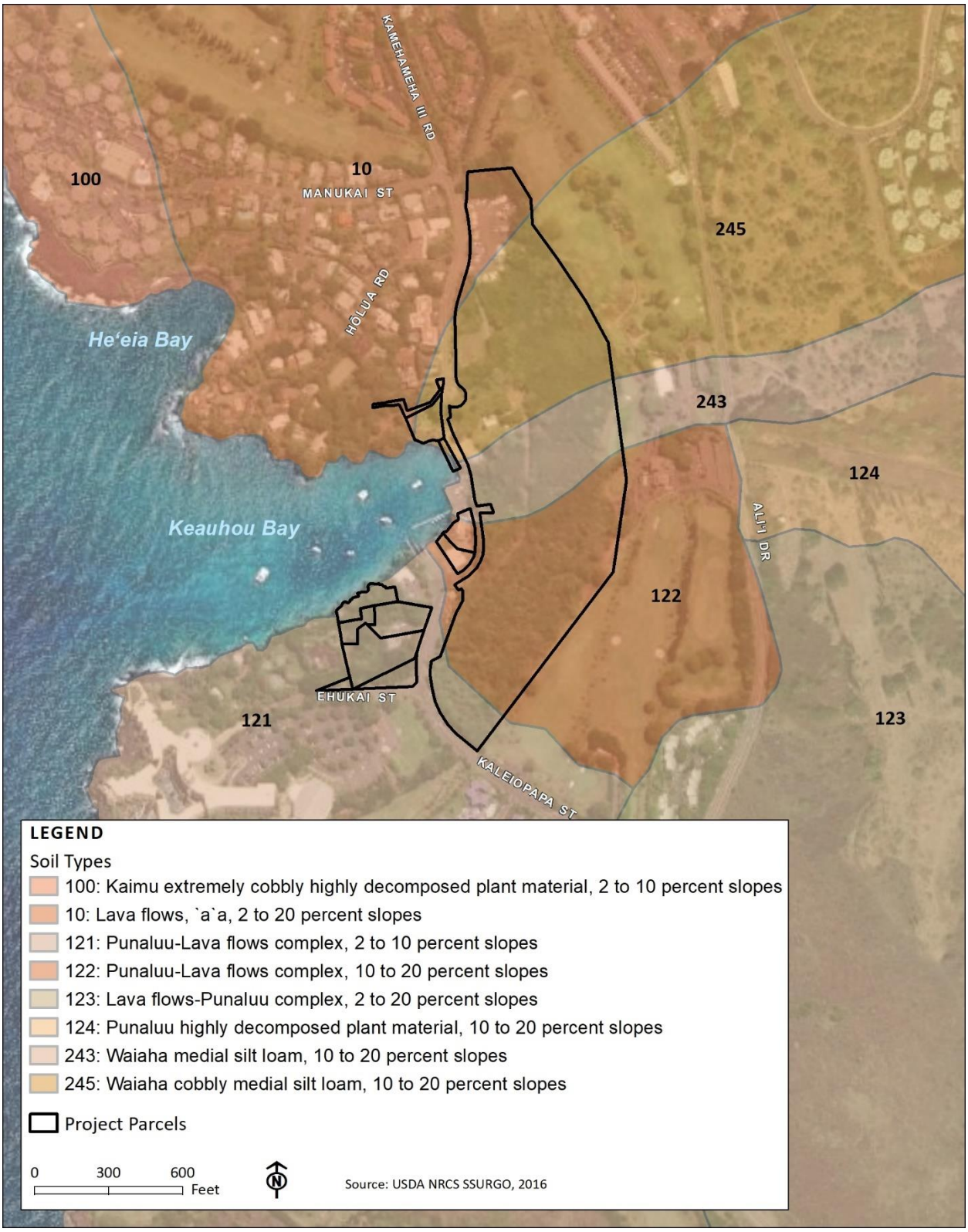

Figure 3-5: NRCS Soil Survey

3.8 Socioeconomics and Environmental Justice

3.8.1 Socioeconomics

Socioeconomics is the relationship between economics and social elements such as population levels and economic activity. Factors that describe the socioeconomic environment represent a composite of several inter-related and non-related attributes. There are several factors that can be used as indicators of economic conditions for a geographic area such as demographics, median household income, unemployment rates, employment, and housing data. The U.S. Census Bureau (USCB) is the principal agency in the U.S. that collects and provides demographic and economic data.

The Project Area is located in the U.S. Census Bureau's Kahaluʻu-Keauhou (CDP). In 2010, the Kahaluʻu-Keauhou CDP population was 3,549 compared to 2,414 in 2000. Table 3-1 below summarizes the population and characteristics of the Kahaluʻu-Keauhou CDP compared to the County and State. The median age for the Kahaluʻu-Keauhou CDP is 49. The 2010 U.S. Census reported 2,339 households in the Kahaluʻu-Keauhou CDP with an average of 2.68 persons per household. The permanent population of North Kona is very ethnically diverse, with about 25% of the population being Hawaiian or Part-Hawaiian. The median income for a household in the Kahaluʻu-Keauhou CDP was reported as $52,522, which is lower than the average median income for the County. About 13.4% of the population is below the poverty line.

Table 3-1: Population Characteristics

Area	Population (2010)	Median Age (years)	Persons/ Household	Ethnicity (percent)
Kahaluʻu-Keauhou CDP	3,549	49	2.68	White: 65.5%; Asian: 11.4%; Hawaiian: 0.8%; Other/Mixed: 14.6%
County of Hawaiʻi	185,079	40.9	2.7	White: 33.7%; Asian: 22.2%; Hawaiian: 8.5%; Other/Mixed: 35.6%
State of Hawaiʻi	1,360,301	38.6	2.89	White: 24.7%; Asian: 38.6%; Hawaiian: 5.9%; Other/Mixed: 30.8%

Source: U.S. Census Bureau (2010)

According to the 2010 U.S. Census, the local economy within the Kahaluʻu-Keauhou CDP is primarily based on accommodation and food services, followed by retail, trade, finance, real estate, professional/management/administrative, and construction.

The Draft EIS will provide additional information and analyze potential impacts.

3.9 Groundwater, Surface Water Resources and Rainfall

Water resources include surface water (e.g., streams, lakes, rivers and wetlands), groundwater, floodplains, coastal resources, and marine water, and compose the hydrology of a watershed. The watersheds in the Hawaiian Islands are relatively small, steep, and have fast flowing streams with underlying highly permeable volcanic rocks and soils.

On the Island of Hawai‘i, groundwater is the primary source of drinking water. In Kona, groundwater occurs as both basal groundwater and high-level (dike-impounded perched) groundwater. The rainfall pattern of the region is responsible for the recharge of the basal aquifer that extends from the upper slopes of Hualālai to the shoreline. The basal lens in Kona is relatively thin and inconsistent due to the low rainfall input and the leakage of groundwater at the coastline. Wells drawing from basal groundwater in Kona are susceptible to salinity if they are drilled too deep or if they are over-pumped. The Project Area is situated in the Keauhou Aquifer System (80901), which currently has an existing usage of 15.4 million gallons per day (MGD) and a sustainable yield of 38 MGD. Brackish water is another groundwater resource reserve type in Kona. Brackish water is created as a result of seawater intrusion at the shoreline.

Two natural water features at the bay include the freshwater Kuhalalua Spring (fronts Sea Quest) and brackish water Hoʻokūkū Pond (located at the base of ʻAhuʻula Cliff). Kuhalalua Spring (SIHP No. 29266), also referred to as Kaopa Spring by the Daughters of Hawai‘i, is enclosed by an approximately ten feet by 15 feet stacked basalt rock walls. A small opening was added on the makai side to allow water to flow in and out. Freshwater springs created microenvironments ideal for certain species of fish and shellfish. Hoʻokūkū Pond (SIHP No. 24263) measures approximately 8 feet wide and 15 feet long. It is enclosed in a stacked basalt rock wall about three feet high, in the shallow water level. The pond’s water level is subterraneously connected to the ocean and rises and falls with the tides, typical for an anchialine pond. The pond Hoʻokūkū Pond was largely filled and raised by four feet in 1953-54 to make way for the widening and realignment of the Beach Trail.

There are no perennial streams within or near Keauhou Bay. The nearest surface water downgradient of Keauhou Bay is Waiʻaha Stream, an intermittent stream, approximately 5 miles north of the Project Area. The area surrounding Keauhou Bay has very low rainfall and runoff. Rainfall for this area reaches a maximum average of 35 inches per year (NOAA, 2016) (**Figure 3-7**).

The Draft EIS will provide additional information and analyze potential impacts to water resources.

Figure 3-7: Annual Rainfall

3.10 Circulation and Traffic

A Mobility Study supporting the EIS analysis will be conducted by Fehr & Peers to ascertain existing mobility for all travel modes and to observe vehicle operations and multimodal travel to and through the Project Area.

To provide up-to-date information for the operations analysis and ensure a comprehensive review of existing conditions, observations will be conducted for one weekday and one Saturday, where weekend activity may be higher than on a weekday. Accordingly, Fehr & Peers will obtain new traffic counts at the study intersections during the typical weekday peak morning and evening periods (6:00 am to 9:00 am and 3:30 pm to 6:30 pm) and during the Saturday midday peak period (10:30am to 1:30pm). Additionally, 72-hr roadway segment counts will be conducted (Thursday through Saturday) at two locations (one each on Kamehameha III Road and Kaleiopapa Street) adjacent to the Project Area to identify the approximate volume and temporal distribution of traffic generated by uses immediately adjacent to the bay. The findings of the Mobility Study will be provided in the EIS.

3.10.1 Vehicular Circulation:

Keauhou Bayfront is accessible from two streets - Kamehameha III Road at the north end and Kaleiopapa Street at the south end of the bay. Kamehameha III Road (formerly Keauhou Road) descends from Hawai'i Belt Road (Highway 11) into Keauhou Bay and terminates in a cul-de-sac just north of Ka'ili'ilinehe Park. Seven marked parking stalls are located within the cul-de-sac. A private, 14-foot wide, asphalt driveway leads from the cul-de-sac down to Ka'ili'ilinehe Park and the adjoining oceanfront property. Handicapped parking for two vehicles is located next to the park's comfort station; however, access to these stalls is controlled by a metal gate. An asphalt driveway (Old Government Road) connects Kaleiopapa Street to the Keauhou Small Boat Harbor where it terminates at a small parking area with nine marked stalls. The driveway also provides access to Fair Wind/Sea Quest buildings. The State provides 16 marked boat trailer parking spaces along the southern end of 'Ahu'ula Cliff. Between the cliff and the commercial businesses on the makai side, there is a ten-foot wide shoulder which is also used for overflow parking. The Keauhou Canoe Club members park along the dirt road above the bluff (Old Kona Road), which is accessible from Kamehameha III Road.

3.10.2 Pedestrian Circulation:

There are several walkways in the vicinity of the bay, but no connected network of pedestrian circulation. From the Kamehameha III Road cul-de-sac, an asphalt walkway, approximately eight to ten feet wide, serves as the public shoreline access to Keauhou Bay. This walkway provides direct access to the volleyball recreation area and the Ka'ili'ilinehe Beach park's sandy beach. To pass on foot from the Canoe Club area to the harbor, pedestrians must cross a gangway ramp which serves as a temporary bridge. The temporary bridge presents an unsafe condition. There are two pedestrian trails dedicated to the heritage area. A five-foot wide, ADA-accessible, concrete path links Kaleiopapa Street and the makai interpretive lookout near Kuhalalua/Kaopa Spring. A second concrete interpretive trail, installed in the 1970s, curves along 'Ahu'ula Cliff from the harbor comfort station to Kamehameha III Birthplace. Primary access to the bayfront area at the Sheraton Keauhou is via a public shoreline access walkway from the hotel parking lot off Ehukai Street. The shoreline path runs parallel to the shoreline, meandering around the archaeological sites and feeds into a narrow dirt path. The dirt path transitions to a narrow asphalt walkway near the hotel.

3.11 Utilities

Utility systems are essential to support daily operations at Keauhou Bay and include a broad array of services (e.g., water, wastewater, stormwater drainage, power, communications, and solid waste management). The utilities are presented in the following section to provide an overview of the systems at Keauhou Bay.

A Preliminary Engineering Report (PER) will be undertaken for the Project to assess existing and proposed infrastructure required to support the various projects, including; roadways and access, water, wastewater, stormwater management, and electrical and communications. Further information on the utility systems and potential impacts will be provided in the Draft EIS.

3.12 Potable Water

The Project Area is served from the Kahaluʻu Shaft Wells and Kahaluʻu Wells by a 12" waterline in Aliʻi Drive operated by County of Hawaii Department of Water Supply (DWS). The waterline loops from Aliʻi Drive along Kaleiopapa Street (12"), the Government Road ROW at the beach (12"), and Kamehameha III Road (12" and 8"), and ties back to Aliʻi Drive.

A Preliminary Engineering Report supporting the EIS water analysis will be prepared by G70 to identify the existing water system infrastructure and capacity and to determine the Project's water demand for domestic, fire protection, and irrigation uses. KS and DWS entered into agreements in 2011-2012 to allow KS to use the remaining credits within the Keauhou Resort Development Area. Assessments and improvements to the existing system may be identified but are not included in this project.

3.13 Wastewater

The Project Area is served by a privately owned and operated sewerage system. The system is owned by Keauhou Community Services Incorporated (KCSI), a subsidiary of Kamehameha Schools and is operated by Hawaiʻi Water Service. Wastewater generated within Keauhou Bay area is collected by pump stations (PS) and conveyed by a distribution system of gravity mains and force mains to the Heʻeia Wastewater Treatment Plant (WWTP) north of the bay. The treated effluent from the WWTP is reused as irrigation water for Kona Country Club golf courses.

3.14 Stormwater

There are no existing drainage systems at the Project Area. The Island of Hawaiʻi is relatively young in geologic terms and the ground is permeable. Dry wells are commonly used as storm water injection wells for disposing of storm water. Dry wells can be constructed to manage the increased runoff anticipated from the planned development.

3.15 Power and Communications

Electrical service to Keauhou Bay is currently provided by Hawaiian Electric (HE) and communication services are provided by both Hawaiian Tel (HTCO) and Spectrum. As State of Hawaiʻi Public Utility Commission (PUC) regulated public utilities, HE and HTCO are responsible for the development of off-site

facilities that meet island-wide needs, such as power generating plants and power and signal transmission lines, and facilities that serve regional needs of Kailua-Kona. Presently, the Project Area is served by these utilities off of Kamehameha III Highway.

Spectrum is a State of Hawai'i Department of Commerce and Consumer Affairs cable television franchisee that is the sole land-line provider of cable television service to Hawai'i Island. Although not a PUC regulated utility, Spectrum's off-site facility construction policy is to provide such facilities where the anticipated revenue from the prospective service connections warrants the expenditure. HTCO has a similar policy with regard to new developments.

3.16 Visual Resources

The Hawai'i County General Plan (2005) has identified the backdrop of Hualālai Volcano as the predominant visual attribute of the Kona region. Its steep green slopes can be viewed from the Kona coast, and from higher elevations spectacular vistas can be seen of the coastline, ocean, and horizon. The Keahuolu coastline and the Holualoa-Keauhou view plane from Kamehameha III Highway going mauka and makai are other notable sites of natural beauty identified by the General Plan that are visible from the Project Area.

A visual analysis will be conducted based upon the conceptual layout of all facilities and proposed uses. This analysis will identify if there are any potential impacts to known visual cooridors and associations (including cultural) within and adjacent to the project area. An expanded discussion on the visual resources will be evaluated in the Draft EIS, including any potential impacts and mitigative measures.

Chapter 4

POTENTIAL IMPACTS AND MITIGATION MEASURES

The Draft EIS will include a description of the environment in the vicinity of Keauhou Bay as it exists before the action's commencement. Impacts to the natural and/or human environment for all phases of the Project will be considered, along with indirect and cumulative impacts. Technical studies and investigations will describe existing conditions and provide an evaluation of potential impacts to the Project Area's flora and fauna, archaeological and cultural resources within the area, water supply and traffic flow. Storm water drainage, infrastructure needs, and impacts to municipal services will also be analyzed in the forthcoming Draft EIS. Impacts will be described as short-term, long-term and cumulative.

4.1 Short-Term Impacts and Long-Term Impacts

Short-term impacts would occur during the construction period. Noise from demolition and construction equipment, dust from grading, erosion from grading and excavation are typical impacts. The ability to stage and store construction equipment and trucks on-site will help to minimize traffic impacts stemming from construction.

Short-term economic benefits anticipated during construction would include direct, indirect, and induced employment opportunities, which benefits would increase when multiplier effects are considered, although not at a level that would generate significant statewide economic expansion.

The Draft EIS will more specifically assess the probable short-term impacts. Construction-generated impacts will be minimized and mitigated through adherence to Best Management Practices (BMPs), National Pollutant Discharge Elimination System and construction permit requirements, and other relevant regulations. The types of BMPs and controls to be implemented during construction periods will be described in the forthcoming Draft EIS.

Long-term impacts are those probable changes that would occur following implementation of the Project. Each environmental and human resource described in the Draft EIS will include a discussion of possible long-term impacts. Minimization and mitigation measures can be implemented to ensure no significant impacts will occur as a result of the Project. The Draft EIS will assess the probable long-term impacts of the Project.

4.2 Relationship Between Short-Term Uses and Long-Term Productivity

The Draft EIS will include a description of the relationship between local short-term uses of humanity's environment and the maintenance and enhancement of long-term productivity. The extent to which the proposed action involves trade-offs among short-term and long-term gains and losses will be discussed.

4.3 Direct and Indirect and Impacts

Indirect impacts or secondary effects are impacts that are associated with an activity but do not result directly from the activity. Projects that exist or are planned in the region will be assessed for the potential to add to the direct and indirect (secondary) impacts of the Project. The Draft EIS will assess the probable direct and indirect of the Project.

4.4 Irreversible and Irretrievable Commitment of Resources

The Draft EIS will evaluate the irreversible and irretrievable commitments of resources that would be involved in the implementation of the Project. Unavoidable impacts and the extent to which the Project makes use of non-renewable resources, or irreversibly curtails the range of potential uses of the environment will also be identified and analyzed.

4.5 Cumulative Impacts

Cumulative effects or impacts are those that result from the incremental effects of an activity when added to other past, present, and reasonably foreseeable future actions, regardless of what agency or person undertake such other actions. The Draft EIS will assess the probable cumulative impacts of the Project.

4.6 Unavoidable and Unresolved Impacts

The Draft EIS will address all probable adverse environmental effects that cannot be avoided. Any adverse effects such as water or air pollution, urban congestion, threats to public health, or other consequences adverse to environmental goals and guidelines established by environmental responses lows, coastal zone management laws, pollution control and abatement laws, and environmental policy will be evaluated. The Draft EIS will also summarize unresolved issues and discuss how such issues will be resolved prior to implementation of the Project.

4.7 Significance Criteria

In the Draft EIS, KS must consider the significant effect, defined under State law and rules as the sum of effects on the quality of the environment, including actions that irrevocably commit a natural resource, curtail the range of beneficial uses of the environment, are contrary to the state's environmental policies or long-term environmental goals and guidelines as established by law, or adversely affect the economic or social welfare. Accordingly, KS will address the thirteen (13) significance criteria to determine if the Project may have a significant effect.

While some negative environmental impacts from a project such as this are inevitable, the Project is expected to have an overall net beneficial impact. The following is an initial assessment based on criteria established in HAR, Chapter 200.1-13.

1. *Involves an irrevocable commitment to loss or destruction of any natural or cultural resource:*

   It is anticipated that the Project will not involve a significant loss of natural or cultural resources. Archaeological and ethnographic studies will be conducted during the preparation of the EIS to assess the potential sensitivity and potential occurrence of such resources. Appropriate mitigative measures that are in accordance with State Historic Preservation laws and administrative rules will be administered should such resources be discovered.

2. *Curtails the range of beneficial uses of the environment:*

   It is anticipated that the range of beneficial uses of the environment will not be significantly curtailed by proposed Project. The project will improve an existing developed area located along Keauhou Bay and is consistent with existing zoning and current land uses. It is anticipated that the Project will improve Keauhou Bay and the character of this area.

3. *Conflicts with the state's long-term environmental policies or goals and guidelines as expressed in Chapter 344, HRS, and any revisions thereof and amendments thereto, court decisions, or executive orders:*

   The purpose of Chapter 344, HRS, is "to establish a state policy which encourages productive and enjoyable harmony between people and their environment, promote efforts which will prevent or eliminate damage to the environment and biosphere and stimulate the health and welfare of humanity, and enrich the understanding of the economical systems and natural resources important to the people of Hawaii." The Project is expected to be consistent with and supportive of Chapter 344 policies, goals, and guidelines.

4. *Substantially affects the economic or social welfare of the community or State:*

   It is anticipated that the Project will enhance the visitor experience at one of Hawai'i Island's most popular resort destinations. The site improvements and boutique resort will positively affect both the State and City's economic welfare by providing additional lodging options that will accommodate increased visitors and guests to Keauhou Bay. The boutique resort will provide short-term construction employment opportunities with the development of the site, and long-term employment to support ongoing operations. In addition, the project will provide additional commercial and retail opportunities integrated with the project design, thereby increasing opportunities for visitor spending. Hence, the project's development will provide economic and social benefits from increased employment and tax revenues.

5. *Substantially affects public health:*

   The project is consistent with existing land uses and will have no substantial effect on public health.

6. *Involves substantial secondary impacts, such as population changes or effects on public facilities:*

   Implementation of the Project will result in the addition of approximately 150 hotel units, potentially resulting in a commensurate increase in the daily population in Keauhou. According to the 2020 State Department of Business Economic Development & Tourism Visitor Inventory Plant,

there were 4,634 visitor units in the Kona area, of which 2,061 were hotel units, 231 were condominium hotel units, and 930 were timeshares. The net increase of 150 units represents approximately 3.2 percent of the total number of visitor units currently developed in Kona. Hence, the impact of the increase in population is expected to be relatively small. Effects of the project on public facilities will be identified in the EIS.

7. *Involves a substantial degradation of environmental quality:*

   It is anticipated that the project will not degrade the environmental quality within this urban setting. Rather, the proposed improvements will incorporate the latest technology in building and landscape design. Where feasible, the Project will utilize sustainable design practices that improve the inter-relationship between the natural and built environment, including air quality, stormwater discharge and runoff, water quality, and the terrestrial environment.

8. *Is individually limited but cumulatively has considerable effect upon the environment or involves a commitment for larger actions:*

   The EIS preparation for the Project will provide a full disclosure of anticipated improvements to Keauhou Bay and the surrounding area. Proposed actions that do not require future entitlements or agency approval will be identified and disclosed, to ensure that the overall cumulative effect of the project has been evaluated in the EIS.

9. *Substantially affects a rare, threatened, or endangered species, or its habitat:*

   The Project is not expected to affect any rare, threatened, or endangered species or habitats.

10. *Detrimentally affects air or water quality or ambient noise levels:*

    Several specific studies will be conducted during the preparation of the EIS. These studies will address impacts of the project in the short term, during construction, and in the long term, and propose mitigative measures, as appropriate.

11. *Affects or is likely to suffer damage by being located in an environmentally sensitive area such as a flood plain, tsunami zone, beach, erosion-prone area, geologically hazardous land, estuary, fresh water, or coastal waters:*

    Most of Keauhou Bay, including the Project Area, is located within the State Civil Defense tsunami zone. Portions of the Project Area are also located within the AE and VE Flood Zones. Coordination with both State and City & County of Honolulu Civil Defense will be ongoing to ensure the Project will be designed in accordance to standards for tsunami preparedness and flood proofing of permitted uses. The analysis will also include the implications of the predicated future sea level rise (+3.2 feet) by 2070 and (+4.0 feet) by 2080.

12. *Substantially affects scenic vistas and view planes identified in county or state plans:*

    The Project is not expected to impact protected view planes at Keauhou Bay. The EIS will include a view impact analysis with simulations of view conditions before and after development, as experienced from locations surrounding the project site.

13. Requires substantial energy consumption:

The project will increase the developed area and number of hotel units, thereby increasing electrical energy consumption. However, it is anticipated that modern systems in new and renovated facilities will replace less efficient systems in older buildings, improving the efficiency of energy consumption. Infrastructure impacts, including energy consumption, will be studied in the EIS.

4.8 Mitigation Measures

In this section, potential mitigation measures are identified. Impacts can be reduced by compliance with applicable laws or regulations and implementation of best management practices (BMPs). These are identified in this chapter but are considered to be part of the Project rather than mitigation. Mitigation measures are new actions recommended to avoid, minimize, rectify, reduce, or compensate adverse impacts (HAR Chapter 11.200.1-24(q). Some mitigation measures may apply to multiple resource areas and appear several times throughout the analysis.

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Chapter 5

RELATIONSHIP TO PLANS, POLICIES AND CONTROLS

The Draft EIS will discuss the Project's consistency with applicable State and County land use plans, policies, principles and guidelines. The forthcoming EIS will include an expanded discussion of the Project's conformance with the following land use plans, policies, and controls, which have initially identified as relevant to the Project. The following list may be refined with input received in response to this EISPN.

5.1 Hawai'i State Plan

The Hawai'i State Plan, codified as Hawai'i Revised Statutes Chapter 226, establishes a statewide planning system that sets forth goals, objectives, policies, and priority directions to provide for wise use of Hawai'i's resources and guide the future long-range development of the State.

The Hawai'i State Plan establishes the following goals for the State:

- *A strong, viable economy, characterized by stability, diversity, and growth, that enables the fulfillment of the needs and expectations of Hawai'i's present and future generations.*
- *A desired physical environment, characterized by beauty, cleanliness, quiet, stable natural systems, and uniqueness, that enhances the mental and physical well-being of the people.*
- *Physical, social, and economic well-being, for individuals and families in Hawai'i, that nourishes a sense of community responsibility, of caring, and of participation in community life.*

The following policies of the Hawai'i State Plan are applicable to the Project. The Project's consistency with relevant Hawai'i State Plan objectives will be analyzed in the forthcoming Draft EIS.

§226-5: Objectives and Policies for Population:

(a) Objectives: It shall be the objective in planning for the State's population to guide population growth to be consistent with the achievement of physical, economic and social objectives contained in this chapter.

(b) Policies:

(2) Encourage an increase in economic activities and employment opportunities on the neighbor islands consistent with community needs and desires.

(3) Promote increased opportunities for Hawai'i's people to pursue their socio-economic aspirations throughout the islands.

§226-6: Objectives and Policies for the Economy in General:

(a) Objectives: Planning for the State's economy in general shall be directed toward achievement of the following objectives:

(1) Increased and diversified employment opportunities to achieve full employment, increased income and job choice, and improved living standards for Hawai'i's people, while at the same time stimulating the development and expansion of economic activities capitalizing on defense, dual-use, and science and technology assets, particularly on the neighbor islands where employment opportunities may be limited.

(2) A steadily growing and diversified economic base that is not overly dependent on a few industries and includes the development and expansion of industries on the neighbor islands.

(b) Policies:

(3) Promote Hawai'i as an attractive market for environmentally and socially sound investment activities that benefit Hawai'i's people.

(6) Seek broader outlets for new or expanded Hawai'i business investments.

(7) Expand existing markets and penetrate new markets for Hawai'i's products and services.

(9) Strive to achieve a level of construction activity responsive to, and consistent with, State growth objectives.

§226-8: Objectives and Policies for the Economy -- Visitor Industry:

(a) Objectives: Planning for the State's economy with regard to the visitor industry shall be directed towards the achievement of the objective of a visitor industry that constitutes a major component of steady growth for Hawai'i's economy.

(b) Policies:

(6) Provide opportunities for Hawai'i's people to obtain job training and education that will allow for upward mobility within the visitor industry.

(8) Foster an understanding by visitors of the aloha spirit and of the unique and sensitive character of Hawai'i's cultures and values.

§226-10: Objectives and Policies for the Economy – Potential Growth and Innovative Activities:

(a) Objectives: Planning for the State's economy with regard to potential growth and innovative activities shall be directed towards achievement of the objective of development and expansion of potential growth and innovative activities that serve to increase and diversify Hawai'i's economic base.

(b) Policies:

(1) Facilitate investment and employment in economic activities that have the potential to expand and diversify Hawai'i's economy, including but not limited to diversified agriculture, aquaculture, renewable energy development, creative media, health care, and science and technology-based sectors.

(6) Expand Hawai'i's capacity to attract and service international programs and activities that generate employment for Hawai'i's people.

(7) Enhance and promote Hawai'i's role as a center for international relations, trade, finance, services, technology, education, culture, and the arts.

(12) Develop, promote, and support research and educational and training programs that will enhance Hawai'i's ability to attract and develop economic activities of benefit to Hawai'i.

§226-11: Objectives and Policies for the Physical Environment – Land-Based, Shoreline, and Marine Resources:

(a) Objectives: Planning for the State's physical environment with regard to land-based, shoreline, and marine resources shall be directed towards achievement of the following objectives:

(1) Prudent use of Hawai'i's land-based, shoreline, and marine resources.

(2) Effective protection of Hawai'i's unique and fragile environmental resources.

(b) Policies:

(1) Exercise an overall conservation ethic in the use of Hawai'i's natural resources.

(2) Ensure compatibility between land-based and water-based activities and natural resources and ecological systems.

(3) Take into account the physical attributes of areas when planning and designing activities and facilities.

(4) Manage natural resources and environs to encourage their beneficial and multiple use without generating costly or irreparable environmental damage.

(6) Encourage the protection of rare of endangered plant and animal species and habitats native to Hawai'i.

(8) Pursue compatible relationships among activities, facilities, and natural resources.

§226-12: Objectives and Policies for the Physical Environment – Scenic, Natural Beauty, and Historic Resources:

(a) Objectives: Planning for the State's physical environment shall be directed towards achievement of the objective of enhancement of Hawai'i's scenic assets, natural beauty, and multi-cultural/historical resources.

(b) Policies:

(1) Promote the preservation and restoration of significant natural and historical resources.

(3) Promote the preservation of views and vistas to enhance the visual and aesthetic enjoyment of mountains, ocean, scenic landscapes, and other natural features.

(4) Protect those special areas, structures and elements that are an integral and functional part of Hawai'i's ethnic and cultural heritage.

(5) Encourage the design of developments and activities that complement the natural beauty of the islands.

§226-13: Objectives and Policies for the Physical Environment – Land, Air, and Water Quality:

(a) Objectives: Planning for the State's physical environment with regard to land, air, and water quality shall be directed toward achievement of the following objectives:

(1) Maintenance and pursuit of improved quality in Hawai'i's land, air, and water resources.

(2) Greater public awareness and appreciation of Hawai'i's environmental resources.

(b) Policies:

(2) Promote the proper management of Hawai'i's land and water resources.

(6) Encourage design and construction practices that enhance the physical qualities of Hawai'i's communities.

(7) Encourage urban developments in close proximity to existing services and facilities.

§226-21: Objectives and Policies for Socio-Cultural Advancement – Education:

(a) Objectives: Planning for the State's socio-cultural advancement with regard to education shall be directed towards achievement of the objective of the provision of a variety of educational opportunities to enable individuals to fulfill their needs, responsibilities, and aspirations.

(b) Policies:

(1) Support educational programs and activities that enhance personal development, physical fitness, recreation, and cultural pursuits of all groups.

(2) Ensure the provision of adequate and accessible educational services and facilities that are designed to meet individual and community needs.

(3) Provide appropriate educational opportunities for groups with special needs.

(4) Promote educational programs which enhance understanding of Hawai'i's cultural heritage.

(5) Provide higher education opportunities that enable Hawai'i's people to adapt to changing employment demands.

(7) Promote programs and activities that facilitate the acquisition of basic skills, such as reading, writing, computing, listening, speaking, and reasoning.

(8) Emphasize quality educational programs in Hawai'i's institutions to promote academic excellence.

§226- 23: Objectives and Policies for Socio-Cultural Advancement – Leisure:

(a) Objectives: Planning for the State's socio-cultural advancement with regard to leisure shall be directed towards achievement of the objective of the adequate provision of resources to accommodate diverse cultural, artistic, and recreational needs for present and future generations.

(b) Policies:

(1) Foster and preserve Hawai'i's multi-cultural heritage through supportive cultural, artistic, recreational, and humanities-oriented programs and activities.

(2) Provide a wide range of activities and facilities to fulfill the cultural, artistic, and recreational needs of all diverse and special groups effectively and efficiently.

(3) Enhance the enjoyment of recreational experiences through safety and security measures, educational opportunities, and improved facility design and maintenance.

(4) Promote the recreational and educational potential of natural resources having scenic, open space, cultural, historical, geological, or biological values while ensuring that their inherent values are preserved.

(7) Provide adequate and accessible physical fitness programs to promote the physical and mental well-being of Hawai'i's people.

(8) Increase opportunities for appreciation and participation in the creative arts, including the literary, theatrical, visual, musical, folk, and traditional art forms.

(9) Encourage the development of creative expression in the artistic disciplines to enable all segments of Hawai'i's population to participate in the creative arts.

§226-25 Objective and Policies for Socio-Cultural Advancement—Culture:

(a) Objectives: Planning for the State's socio-cultural advancement with regard to culture shall be directed toward the achievement of the objective of enhancement of cultural identities, traditions, values, customs, and arts of Hawai'i's people.

(b) Policies:

(1) Foster increased knowledge and understanding of Hawai'i's ethnic and cultural heritages and the history of Hawai'i.

(2) Support activities and conditions that promote cultural values, customs, and arts that enrich the lifestyles of Hawai'i's people and which are sensitive and responsive to family and community needs.

(4) Encourage the essence of the aloha spirit in people's daily activities to promote harmonious relationships among Hawai'i's people and visitors.

§226-102: Overall Direction:

The State shall strive to improve the quality of life for Hawai'i's present and future population through the pursuit of desirable courses of action in seven major areas of statewide concern which merit priority attention: economic development, population growth and land resource management, affordable housing, crime and criminal justice, quality education, principles of sustainability, and climate change adaptation.

5.2 Hawai'i State Functional Plans

The Hawai'i State Functional Plans implement the goals, objectives, policies and priority guidelines of the Hawai'i State Plan. The Functional Plans provide the connection between State of Hawai'i programs and State policy. Twelve functional plans have been adopted by the State Legislature, including in the areas of agriculture, conservation lands, education, energy, health, higher education, historic preservation, housing, recreation, tourism, transportation and water resources. The State Functional Plans are designed to address issues pertaining to physical resource needs and development. The functions and activities of the Project are required to be in conformance with these functional plans, including the State Education Functional Plan.

5.3 Hawai'i 2050 Sustainability Plan

The long-term strategy of the Hawai'i 2050 Sustainability Plan is supported by its main goals and objectives of respect for culture, character, beauty, and history of the State's island communities; balance among economic, community, and environmental priorities; and an effort to meet the needs of the present without compromising the ability of future generations to meet their own needs.

The Hawai'i 2050 Sustainability Plan delineates five goals toward a sustainable Hawai'i, accompanied by strategic actions for implementation and indicators to measure success or failure.

The goals and strategic actions that are applicable to the Project are as follows:

Goal One: *Living sustainably is part of our daily practice in Hawai'i Strategic Actions: Develop a sustainability ethic.*

Goal Two: *Our diversified and globally competitive economy enables us to meaningfully live, work, and play in Hawai'i. Strategic Actions: Develop a more diverse and resilient economy; support the building blocks for economic stability and sustainability.*

Goal Three: *Our natural resources are responsibly and respectfully used, replenished, and preserved for future generations*. *Strategic Actions: Provide greater protection for air, and land-, fresh water- and ocean-based habitats; conserve agricultural, open space and conservation lands and resources.*

Goal Four: *Our community is strong, healthy, vibrant and nurturing, providing safety nets for those in need. Strategic Actions: Provide access to diverse recreational facilities and opportunities.*

Goal Five: *Our Kanaka Maoli and island cultures and values are thriving and perpetuated. Strategic Actions: Honor Kanaka Maoli culture and heritage; Celebrate our cultural diversity and island way of life.*

The Project's consistency with relevant Hawai'i 2050 Sustainability Plan's goals and strategic actions will be analyzed in the forthcoming Draft EIS.

5.4 Hawai'i State Land Use District Boundaries

State Land Use Districts are established by the State Land Use Commission (LUC) pursuant to HRS Chapter 205. The basic intent of the law is to regulate the classification and uses of lands in the State in order to accommodate growth and development as needed, and to retain and protect important agricultural and natural resources areas. All State lands are classified as Urban, Rural, Agricultural, or Conservation, with consideration given to county general and development plans in determining the classification. The Project Area is situated on lands designated as "Urban" by the LUC, pursuant to HRS Chapter 205 (Figure 1-4). The Project's planned land uses are consistent with allowable uses in the Urban District.

5.5 Hawai'i Coastal Zone Management Program

The Coastal Zone Management Program (CZMP) is a comprehensive federal program that establishes and enforces standards and policies to guide the development of public and private lands within the coastal areas. In the State of Hawai'i, the CZMP is implemented through the State Coastal Zone Management Law

codified in HRS Chapter 205A (State CZM Law). The State CZM Law's objectives and policies address ten subject areas, including: recreational resources, historic resources, scenic and open space resources, coastal ecosystems, economic uses, coastal hazards, managing development, public participation, beach protection, and marine resources. Virtually all relate to potential development impacts on the shoreline, near shore, and ocean area environments. The State CZM Law charges each county with designating and regulating Special Management Areas (SMA) within the State's coastal areas. Any "development," as defined by the State CZM Law and county regulations, located within the SMA requires a SMA permit.

The Project Area is entirely within the SMA as delineated by the County. HRS Chapter 205A requires all state and county agencies to enforce objectives and policies as set forth in HRS §205A-2.

The Project's consistency with relevant State CSM objectives will be analyzed in the forthcoming Draft EIS. The following objectives and policies of the State CZM Law are applicable to the Project:

RECREATIONAL RESOURCES

Objective: *Provide Coastal Recreational Opportunities Accessible to the Public.*

Policies:

(A) Improve coordination and funding of coastal recreation planning and management; and

(B) Provide adequate, accessible, and diverse recreational opportunities in the coastal zone management area by:

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

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

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

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

v. Encouraging expanded public recreational use of county, state, and federally owned or controlled shoreline lands and waters having recreational value;

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

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

viii. Encouraging reasonable dedication of shoreline areas with recreational value for public use as part of discretionary approvals or permits by the land use Commissions, board of land and natural resources, county planning commissions, and crediting such dedication against the requirements of Section 46-6.

HISTORIC RESOURCES

Objective: *Protect, preserve and, where desirable, restore those natural and man-made historic and pre-historic resources in the coastal zone management area that are significant in Hawai'i and American history and culture.*

Policies:

(A) Identify and analyze significant archaeological resources;

(B) Maximize information retention through preservation of remains and artifacts or salvage operations; and

(C) Support state goals for protection, restoration, interpretation and display of historic resources.

SCENIC AND OPEN SPACE RESOURCES:

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

Policies:

(A) Identify valued scenic resources in the coastal zone management area;

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

(C) Preserve, maintain, and, where desirable, improve and restore shoreline open space and scenic resources; and

(D) Encourage those developments which are not coastal dependent to locate in inland areas.

COASTAL ECOSYSTEMS

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

Policies:

(A) Exercise an overall conservation ethic, and practice stewardship in the protection, use, and development of marine and coastal resources;

(B) Improve the technical basis for natural resource management;

(C) Preserve valuable coastal ecosystems, including reefs, of significant biological or economic importance;

(D) Minimize disruption or degradation of coastal water ecosystems by effective regulation of stream diversions, channelization, and similar land and water uses, recognizing competing water needs; and

(E) Promote water quantity and quality planning and management practices which reflect the tolerance of fresh water and marine ecosystems and prohibit land and water uses which violate state water quality standards.

ECONOMIC USES

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

Policies:

(A) Concentrate coastal dependent development in appropriate areas;

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

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

(i) Use of presently designated locations is not feasible;

(ii) Adverse environmental effects are minimized; and

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

COASTAL HAZARDS

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

Policies:

(A) Develop and communicate adequate information about storm wave, tsunami, flood, erosion, subsidence, and point and nonpoint source pollution hazards;

(B) Control development in areas subject to storm wave, tsunami, flood, erosion, hurricane, wind, subsidence, and point and nonpoint source pollution hazards;

(C) Ensure that developments comply with requirements of the Federal Flood Insurance Program; and

(D) Prevent coastal flooding from inland projects.

MANAGING DEVELOPMENT

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

Policies:

(A) Use, implement, and enforce existing law effectively to the maximum extent possible in managing present and future coastal zone development;

(B) Facilitate timely processing of applications for development permits and resolve overlapping or conflicting permit requirements; and

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

PUBLIC PARTICIPATION

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

Policies:

(A) Promote public involvement in coastal zone management processes;

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

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

BEACH PROTECTION

Objective: *Protect beaches for public use and recreation.*

Policies:

(A) Locate new structures inland from the shoreline setback to conserve open space and to minimize loss of improvements due to erosion;

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

(C) Minimize the construction of public erosion-protection structures seaward of the shoreline;

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

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

MARINE RESOURCES

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

Policies:

(A) Ensure that the use and development of marine and coastal resources are ecologically and environmentally sound and economically beneficial;

(B) Coordinate the management of marine and coastal resources and activities to improve effectiveness and efficiency;

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

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

(E) Encourage research and development of new, innovative technologies for exploring, using, or protecting marine and coastal resources.

5.6 County of Hawai'i General Plan

The County of Hawai'i General Plan is the policy document for the long-range comprehensive development of the Island of Hawai'i. The General Plan is intended to guide the pattern of future development in the County based on long-term goals, while identifying and promoting the visions, values, and priorities important to its people.

The Project's consistency with the General Plan objectives will be analyzed in the forthcoming Draft EIS. Specific County of Hawai'i General Plan goals and policies that are pertinent to the Project are as follows:

ECONOMIC

Goals:

(A) Provide residents with opportunities to improve their quality of life through economic development that enhances the County's natural and social environments.

(B) Economic development and improvement shall be in balance with the physical, social and cultural environments of the Island of Hawai'i.

Policies:

a. Assist in the expansion of the agricultural industry through the protection of important agricultural lands, development of marketing plans and programs, capital improvements, and continued cooperation with appropriate State and Federal agencies.

f. Support all levels of educational, employment and training opportunities and institutions.

ENVIRONMENTAL QUALITY

Goals:

(A) Define the most desirable use of land with the County that achieves an ecological balance providing residents and visitors the quality of life and an environment in which the natural resources of the island are viable and sustainable.

(B) Maintain and, if feasible, improve the existing environmental quality of the land.

Policies:

a. Take positive action to further maintain the quality of the environment.

k. Require implementation of the management measures contained in Hawai'i's Coastal Nonpoint Pollution Control Program as a condition of land use permitting.

FLOODING AND OTHER NATURAL HAZARDS

Goals:

(A) Protect human life.

(B) Prevent damage to man-made improvements.

(C) Control pollution.

(D) Prevent damage from inundation.

(E) Reduce surface water and sediment runoff.

(F) Maximize soil and water conservation.

Policies:

g. Development-generated runoff shall be disposed of in a manner acceptable to the Department of Public Works and in compliance with all State and Federal laws.

m. Encourage grassed shoulder and swale roadway design where climate and grade are conducive.

n. Develop drainage master plans from a watershed perspective that considers non-structural alternatives, minimizes channelization, protects wetlands that serve drainage functions, coordinates the regulation of construction and agricultural operation, and encourages the establishment of floodplains as public green ways.

p. Where applicable, natural drainage channels shall be improved to increase their capacity with special consideration for the practices of proper soil conservation, and grassland and forestry management.

q. Consider natural hazards in all land use planning and permitting.

r. Discourage intensive development in areas of high volcanic hazard.

HISTORIC SITES

Goals:

(A) Protect, restore, and enhance the sites, buildings, and objects of significant historical and cultural importance to Hawai'i.

(B) Appropriate access to significant historical sites, buildings, and objects of public interest should be made available.

(C) Enhance understanding of man's place on the landscape by understanding the system of ahupua'a.

Policies:

a. Agencies appropriate ordinances, either public or private, pursuing knowledge about historic sites should keep the public apprised of projects.

b. Require both public and private developers of land to provide historical and archaeological surveys and cultural assessments, where appropriate, prior to the clearing or development of land when there are indications that the land under consideration has historical significance.

c. Public access to significant historic sites and objects shall be acquired, where appropriate.

d. Embark on a program of restoring significant historic sites on County lands. Assure the protection and restoration of sites on other public lands through a joint effort with the State.

e. Encourage the restoration of significant sites on private lands.

f. Collect and distribute historic sites information of public interest and keep an inventory of sites.

m. All new historic sites placed on the State or Federal Register after the adoption of the General Plan shall be included in the General Plan.

n. Consider requiring Cultural Assessments for certain developments as part of the rezoning process.

o. Recognize the importance of certain natural features in Hawaiian culture by incorporating the concept of "cultural landscapes" in land use planning.

NATURAL BEAUTY

Goals:

(A) Protect, preserve and enhance the quality of areas endowed with natural beauty, including the quality of coastal scenic resources.

(B) Protect scenic vistas and view planes from becoming obstructed.

(C) Maximize opportunities for present and future generations to appreciate and enjoy natural and scenic beauty.

Policies:

a. Increase public pedestrian access opportunities to scenic places and vistas.

e. Develop standard criteria for natural and scenic beauty as part of design plans.

f. Consider structural setback from major thoroughfares and highways and establish development and design guidelines to protect important view planes.

g. Protect the views of areas endowed with natural beauty by carefully considering the effects of proposed construction during all land use reviews.

NATURAL RESOURCES AND SHORELINE

Goals:

(A) Protect and conserve the natural resources from undue exploitation, encroachment and damage.

(B) Provide opportunities for recreational, economic, and educational needs without despoiling or endangering natural resources.

(C) Protect and promote the prudent use of Hawai'i's unique, fragile, and significant environmental and natural resources.

(D) Protect rare or endangered species and habitats native to Hawai'i.

(E) Protect and effectively manage Hawai'i's open space, watersheds, shoreline, and natural areas.

(F) Ensure that alterations to existing land forms, vegetation, and construction of structures cause minimum adverse effect to water resources, and scenic and recreational amenities and minimum danger of floods, landslides, erosion, siltation, or failure in the event of an earthquake.

Policies:

a. Require users of natural resources to conduct their activities in a manner that avoids or minimizes adverse effects on the environment.

h. Encourage public and private agencies to manage the natural resources in a manner that avoids or minimizes adverse effects on the environment and depletion of energy and natural resources to the fullest extent.

i. Encourage an overall conservation ethic in the use of Hawai'i's resources by protecting, preserving, and conserving the critical and significant natural resources of the County of Hawai'i.

p. Encourage the use of native plants for screening and landscaping.

r. Ensure public access is provided to the shoreline, public trails and hunting areas, including free public parking where appropriate.

w. Implement Council Resolution Nos. 330-96 and 58-97 in land use approvals.

LAND USE

The County of Hawai'i General Plan's accompanying Land Use Pattern Allocation Guide (LUPAG) Map establishes the future land use patterns for the Island of Hawai'i, including the community of Keauhou. The LUPAG designates the Project Area "Open Space" and "Resort Node" (**Figure 1-6**). Proposed uses in the Project Area are consistent with these designations.

5.7 Kona Community Development Plan

The Hawai'i County General Plan requires that Community Development Plans be adopted by the County Council for each judicial district in the County. The Kona Community Development Plan (Kona CDP), which the County Council adopted in September 2008, covers the judicial districts of North and South Kona. The Kona CDP establishes a framework for future growth by identifying the County's major policies concerning the type and location of future development. The Kona CDP delineates urban and rural areas where future growth should be directed. Most of the future growth in Kona will be directed to the defined "Urban Area" and compact villages located along proposed transit routes or Transit-Oriented Development zones. The "Rural Area" consists of the lands outside of the Kona Urban Area where limited future growth should be directed to the existing rural towns and villages in a way that revitalizes and enhances the existing rural lifestyle and culture of those communities.

The Kona CDP articulates the area residents' vision for Kona's future: *A more sustainable Kona characterized by a deep respect for the culture and the environment and residents that responsively and responsibly accommodate change through an active and collaborative community*.

In order to achieve this vision, the Kona CDP presents guiding principles that are the foundation for the goals, objectives, policies, and implementation actions for eight thematic "elements": 1) transportation; 2) land use; 3) environmental resources; 4) cultural resources; 5) housing; 6) public facilities, infrastructure and services; 7) energy; and 8) economic development.

The Project's consistency with relevant Kona CDP objectives will be analyzed in the forthcoming Draft EIS. Specific Kona CDP guiding principles, goals, objectives, and policies most applicable to the Project are as follows:

GUIDING PRINCIPLES

1. *Project Kona's natural resources and culture.*
2. *Provide connectivity and transportation choices.*
3. *Provide recreation opportunities.*
4. *Direct future growth patterns toward compact villages, preserving Kona's rural, diverse, historical character.*
5. *Provide infrastructure and essential facilities concurrent with growth.*
6. *Encourage a diverse and vibrant economy emphasizing agriculture and sustainable economies.*
7. *Promote effective governance.*

LAND USE

Objective LU-1: Overall Growth Pattern. *To identify areas where higher intensity growth areas should occur and areas where the rural character and open space along the shoreline should be preserved.*

- ***Policy LU-1.2: Urban Area.*** *The majority of future growth in Kona shall be directed to the Kona UA shown on the Official Kona Land Use Map, which spans from the Kona International Airport to Keauhou subject to the policies set forth under Objective LU-2.*
- ***Policy LU-1.4: Consistency with LUPAG.*** *The current LUPAG accommodates the vision and needs for the Kona CDP area planning horizon and should be amended only for compelling reasons. Any rezoning application shall be consistent with the LUPAG.*

ENVIRONMENTAL RESOURCES

Objective ENV-1: Managing Impacts. *In order to minimize impacts on the land, make use of best management planning practices for any land-based endeavor by balancing public and private rights, and taking advantage of an ever-improving knowledge of resource sensitivity and natural processes.*

- ***Policy ENV-1.5: Sensitive Resources****. In the context of Kona's ecology and history, the following natural and cultural resources shall be considered sensitive and therefore shall be inventoried, as part of any permit application to the County Planning Department.*

- *Critical habitat areas as identified by the U.S. Fish and Wildlife or County General Plan;*
- *Predominantly native ecosystems, which may not be considered endangered but are valued because of their nearly pristine condition;*
- *Anchialine ponds subject to a management Program addressed in Policy ENV-1.10: Non-Degradation of Anchialine Ponds;*
- *High-level groundwater recharge area which shall initially be defined as all lands mauka of the 1,500 foot elevation and which may be refined by the Kona Mauka Watershed Management Program;*
- *Historic trails;*
- *Archaeological and historic sites subject to protection under HRS Chapter 6E; and,*
- *Enhanced Shoreline Setback (see Policy LU-1.5).*

CULTURAL RESOURCES

Objective CR-1: Community-Based Program. *Develop a community-based program to evaluate and to protect Kona's cultural resources. Kona is rich with historic and cultural resources, but organized, proactive processes to provide stewardship for these resources are lacking.*

Objective CR-2: Funding of Kona Historic Resources Programs. *In addition to budgeting general fund revenues, the County of Hawai'i shall seek and participate in programs that can provide resources serving to protect and enhance Kona's historic resources.*

Objective CR-3: Preservation of Kanaka Maoli Culture and Island Values. *Ensure that our Kanaka Maoli and island values and cultures are preserved and perpetuated.*

- ***Policy CR-3.1: Honor Kanaka Maoli culture and heritage****. The Kanaka Maoli culture is the foundation of Hawai'i's living culture. We must ensure that the Kanaka Maoli people are supported and that this part of our culture is perpetuated. The success of this endeavor will ensure that the way of the Kanaka Maoli will guide our actions and behaviors in the years ahead.*
- ***Policy CR-3.2: Preserve and perpetuate our Hawaiian and island cultural values by celebrating our cultural diversity and island way of life.*** *Our diversity likewise defines us. Ensuring that our cultural practices flourish through language, dance, song, and art is crucial to sustaining who we are as a people. We must protect and nurture all aspects of our diverse history, traditions and cultures.*
- ***Policy CR-3.3: Enable Kanaka Maoli and others to pursue traditional Kanaka Maoli lifestyles and practices.*** *We must provide opportunities to those who want to pursue and perpetuate the way of the Kanaka Maoli.*
- ***Policy CR-3.4: Provide support for subsistence-based businesses and economies.*** *We must create opportunities for the Kanaka Maoli practice of subsistence-based businesses and economies, and remove the hurdles to their start-ups and development. Such traditional cultural practices are an economic alternative to Western forms of trade and commerce. Subsistence fishing, gathering, hunting and farming are examples of subsistence-based economies that are viable.*

- ***Policy CR-3.5: Ahupua'a Resource and Management.*** *Integrate the values and principles of the traditional ahupua'a resource and management systems as a basis for a sustainable Hawai'i.*

ECONOMIC DEVELOPMENT

Objective ECON-1: Strategic Public Facilities and Business Opportunities as Economic Stimuli.

To optimize the potential of certain public facilities and policies to stimulate ancillary economic growth that is desirable because they are environmentally clean, diversify the economy (i.e., not visitor-dependent), pay decent wages, and demand skills and intellect that challenge Kona's existing and upcoming workforce.

5.8 County of Hawai'i Zoning

The zoning regulations for the County of Hawai'i are prescribed in Chapter 25 of the Hawai'i County Code and applied and administered within the framework of the Hawai'i County General Plan. Under the Zoning Code, various zoning districts are established to regulate the type of development and permitted uses of property and are depicted on zoning district maps. Most of the Project Area is currently zoned Resort Hotel District (V-.75, V-1.25, and V-4) and a portion of the Project Area is zoned RS-10 (Single Family Residential District) and Open District (**Figure 1-7**). The functions and activities of the Project are required conform to the County Zoning Code.

5.9 County of Hawai'i Water Use and Development Plan Update, Keauhou Aquifer System

The primary objective of the County of Hawai'i Water Use and Development Plan (HWUDP) is to set forth the allocation of water to land use. As required by the Hawai'i Administrative Rules (HAR) Title 13, Chapter 170, Hawai'i Water Plan, each of the four counties is required to prepare a Water Use and Development Plan to include, but not be limited to the following:

1. *Status of county water and related land development including an inventory of existing water uses for domestic, municipal, and industrial users, agriculture, aquaculture, hydropower development, drainage, reuse, reclamation, recharge, and resulting problems and constraints;*
2. *Future land uses and related water needs; and*
3. *Regional plans for water developments including recommended and alternative plans, costs, adequacy of plans, and relationship to the water resource protection plan and water quality plan.*

The County adopted by ordinance the *Water Use and Development Plan Update* dated August 2010 and the Commission on Water Resource Management granted approval in December 2011. The Keauhou Aquifer System Area (ASYA) was identified to be considered for further evaluation and detailed assessment. The *Keauhou Aquifer System, Hawai'i Water Use and Development Plan Update (*HWUDP Keauhou Update*)*, dated March 2017, now guides the County in an integrated approach to land use planning and water resource development and provides an estimate of anticipated future water demand projections based on County land use/zoning policies and water use rates for the Keauhou ASYA.

The HWUDP Keauhou Update promotes overall themes common to several other HWUDP components:

- *Public Trust Doctrine – the State holds ownership over public water resources as a trustee for the benefit of the people of the State.*
- *Water is a most precious resource, shall be used wisely and conserved, not wasted.*
- *The highest quality water shall be used for the public's highest beneficial uses.*
- *Lower quality water (e.g. recycled water, surface water, brackish water) should be used whenever feasible.*

Specific recommendations for the *Keauhou ASYA* are as follows:

1. *Development of new ground water well sources is encouraged in areas within the high-level aquifer generally from the vicinity of the HDWS Queen Lili'uokalani Trust Deepwell extending south into the Kealakekua AYSA.*
2. *Continue studies of the ground water hydrology in the Keauhou ASYA, particularly the mid-elevation deep water source, which potentially could be a long-term solution.*
3. *Water purveyors are encouraged to assist in the development of non-potable water resource enhancement measures that do not involve ground water, such as recycled water, to satisfy non-potable demands. This may reduce reliance on ground water sources.*
4. *State and County agencies and private entities with water interests in the Keauhou ASYA are encouraged to participate and/or coordinate with the Three Mountain Alliance major landowners (KS, DOFAW and NPS) to assist in the preservation and restoration of watersheds in the Keauhou ASYA which will ultimately protect and potentially augment the ground water resources.*
5. *State and County agencies are encouraged to develop and implement ground water well protection initiatives and to participate in the State of Hawai'i Department of Health, Safe Drinking Water Branch (SDWB) Wellhead Protection Financial Assistance Program.*
6. *County of Hawai'i, Department of Water Supply (HDWS) will continue to work with 'Aha Moku to ensure that its proposed source development strategies are properly vetted for Traditional and Customary Native Hawaiian Rights (T&C) issues.*

The Project's consistency with the HWUDP will be analyzed in the forthcoming Draft EIS.

Chapter 6

DETERMINATION AND RATIONALE

In accordance with HRS Section 343-5(a)(3), the Project proposes uses within the shoreline area, which requires the preparation of an environmental assessment or EIS. HRS Section 343-5(e), enacted by Act 172 (2012), allows an applicant to prepare an EIS rather than an environmental assessment if the accepting authority (County of Hawai'i Planning Department) determines, through its judgment and experience, that an EIS is likely to be required.

Although the Project will be implemented in phases that, individually, may not have significant environmental impacts, HAR Chapter 11-200.1-10, requires that phases of a "larger total undertaking" be treated as a single action. Due to the collective scale of the Proposed Action, compliance with HRS Chapter 343 warrants the preparation and processing of an EIS.

The preparation of such an EIS begins with the preparation of an EISPN.

This EISPN has been prepared in accordance with HRS Chapter 343 and HAR Chapter 11-200.1.

It is anticipated that the EIS will fulfill the intent and provisions of HRS Chapter 342 and adequately disclose and describe all identifiable environmental impacts and respond to review comments. Per HRS Chapter 11.200.1-28, the FEIS will be deemed acceptable if the following criteria are satisfied:

1. *The procedures for assessment, consultation process, review, and the preparation and submission of the EIS, form proposal of the action to publication of the Final EIS, have all been completed satisfactorily as specified in 11.200.1;*
2. *The content requirements describes in 11.200.1 have been satisfied; and*
3. *Comments submitted during the review process have received responses satisfactory to the accepting authority, including properly identifying comments as substantive and responding in a way commensurate to the comment, and have been appropriately incorporated in the Final EIS.*

It is anticipated that the County of Hawai'i will accept the Final EIS.

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Chapter 7

PUBLIC SCOPING PROCESS

Pursuant to HAR Section 11-200.1-23, the public scoping process provides for public and agency input through outreach and a public comment period. Scoping serves as an opportunity to obtain input from the community, agencies and other stakeholders regarding the issues and resources they would like to see addressed and analyzed throughout the EIS process.

Publication of this EISPN in the Environmental Review Program's (ERP) bi-weekly publication *The Environmental Notice* started a 30-day public review and comment period, within which agencies, groups and individuals have an opportunity to make written comments regarding potential environmental effects from the development and implementation of the Project. The Project will respond to all substantive comments (defined as those pertaining to the scope of the EIS), and all comments and KS responses will be included in the Draft EIS.

Information collected during the scoping process will be incorporated into the EIS to help to identify important issues and provide guidance. HAR § 11-200.1-23 also requires a public scoping meeting to be held during the 30-day EISPN comment period. Given the on-going COVID-19 pandemic, KS will comply with the State and County COVID-19 restrictions in effect at that time. If appropriate, KS will host an in-person meeting if the rules allow. Otherwise, opportunities for public input will be facilitated through an EIS Scoping Virtual Site, where presentations on the project can be viewed and oral public comments can be submitted. Notification of the scoping meeting was published and announced with the publication of this EISPN and in local news media outlets including the Tribune Herald, West Hawai'i Today, and Ka Wai Ola.

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Chapter 8

CONSULTED PARTIES FOR PREPARATION OF THE EIS

Consultation is a requirement of the scoping process for the EISPN. Information collected during the public scoping process will be incorporated into the Draft EIS to help identify important issues and provide guidance on the analysis and evaluation of potential impacts from the Proposed Action. The following list of agencies, organizations, and individuals (**Table 8-1**) will be consulted during the scoping period.

Table 8-1: Consulted Parties
Federal Agencies
U. S. Army Corps of Engineers, Honolulu District
U.S. Department of the Interior, U.S. Fish and Wildlife Service Pacific Islands Fish and Wildlife Office
State of Hawai'i Agencies
Department of Agriculture
Department of Business, Economic Development & Tourism (DBEDT) and DBEDT Office of Planning
Hawai'i Tourism Authority
Office of Planning
Hawai'i Community Development Authority
Hawai'i State Energy Office
Department of Defense
Department of Hawaiian Home Lands
Department of Health
Clean Air Branch
Clean Water Branch
Hazard Evaluation and Emergency Response
Indoor and Radiological Health Branch
Safe Drinking Water Branch
Solid and Hazardous Waste Branch
Department of Land and Natural Resources

Table 8-1: Consulted Parties
Commission on Water Resources Management
Division of Forestry and Wildlife
Engineering Division
Land Division
Office of Conservation and Coastal Lands
State Historic Preservation Division
Department of Transportation, Highways Division
Office of Hawaiian Affairs
Public Utilities Commission
County of Hawai‘i Departments
Hawai‘i Civil Defense Agency
Hawai‘i Department of Environmental Management
Hawai‘i Department of Parks and Recreation
Hawai‘i Department of Public Works
Hawai‘i Department of Water Supply
Hawai‘i Fire Department
Hawai‘i Planning Department
Hawai‘i Police Department
Hawai‘i Department of Finance
Elected Officials
The Honorable David Ige, Governor of Hawai‘i
State Senator Dru Mamo Kanuha, District 3
State House Representative, Jeanné Kapela, District 5
County of Hawai‘i, Mayor Mitch Roth
Council Member Rebecca Villegas, District 7
Community Institutions and Organizations
Adjacent Landowners and Neighboring Community Associations
Daughters of Hawai‘i
Royal Order of Kamehameha
Nā Wāhine o Kamehameha

Table 8-1: Consulted Parties
Kona Hawaiian Civic Club
Aha Moku Advisory Committee
Kona Community Cultural and Educational Foundation, Inc
Nakoa Foundation
Keauhou Canoe Club
He‘eia Bay Forever
Public Repositories
Hawaii State Library, Hawaii Documents Center
Kealakekua Public Library
Kailua-Kona Public Library
Utility Companies
Hawaii Electric Light Company, Inc.
Hawaiian Telecom, Inc.
Hawaii Water Service
Keauhou Community Services Incorporated
Spectrum
News Media
Hawaiian Tribune Herald
West Hawai‘i Today
Ka Wai Ola

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Chapter 9

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