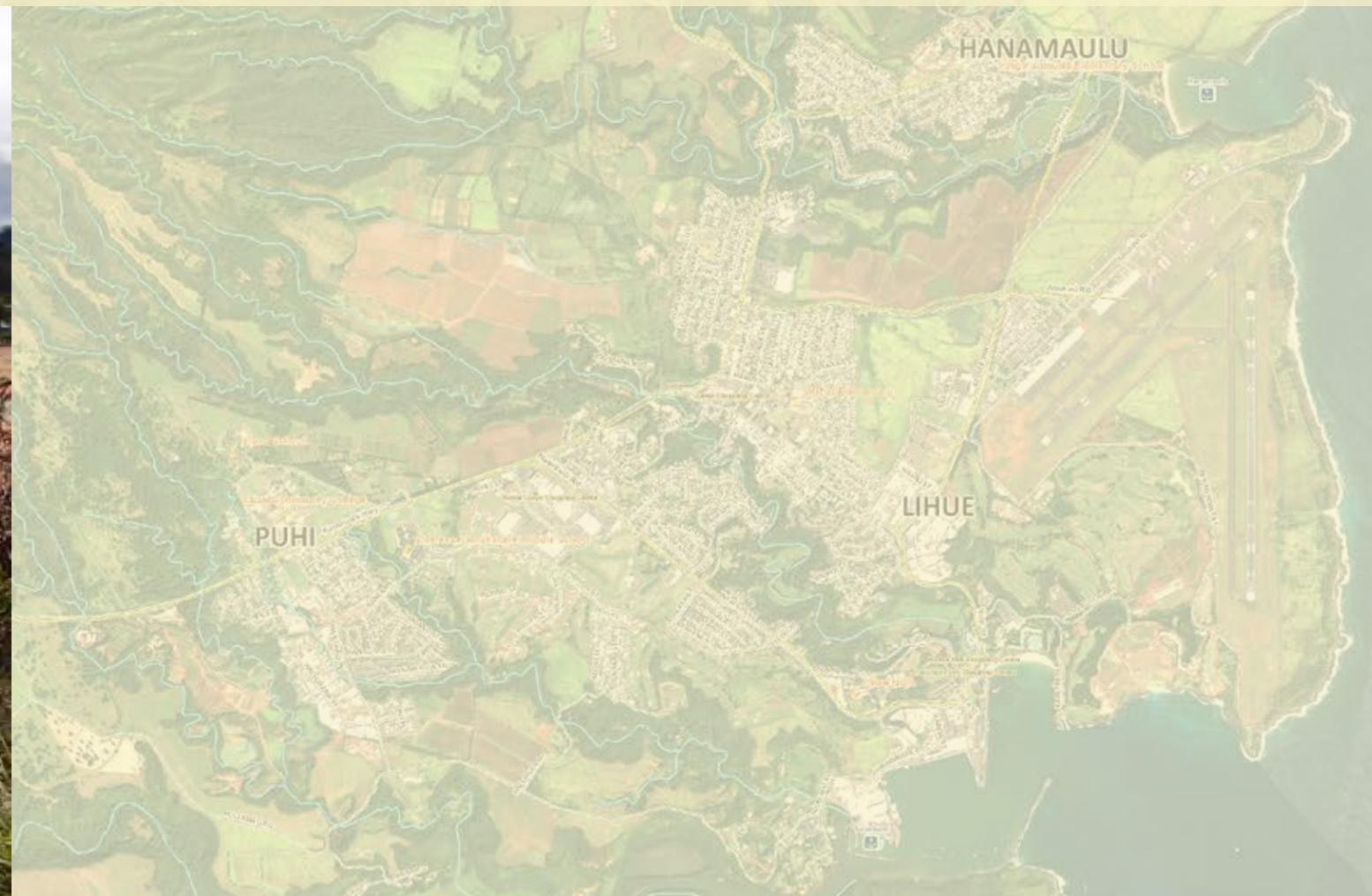


3.0 LĪHU‘E TODAY: NATURAL, BUILT, AND HUMAN ENVIRONMENT



Kaua'i Island has a land area of about 552.3 square miles and is the fourth largest island in the Hawaiian island chain. The Līhu'e District is bounded on the north by the Wailua River (where it adjoins the Kawaihau District with Wailua and Kapa'a) and on the south near Maluhia Road (where it adjoins the South Kaua'i District). The Līhu'e District encompasses approximately 55,142 acres or 86 square miles, equaling 15% of Kaua'i's total land area.

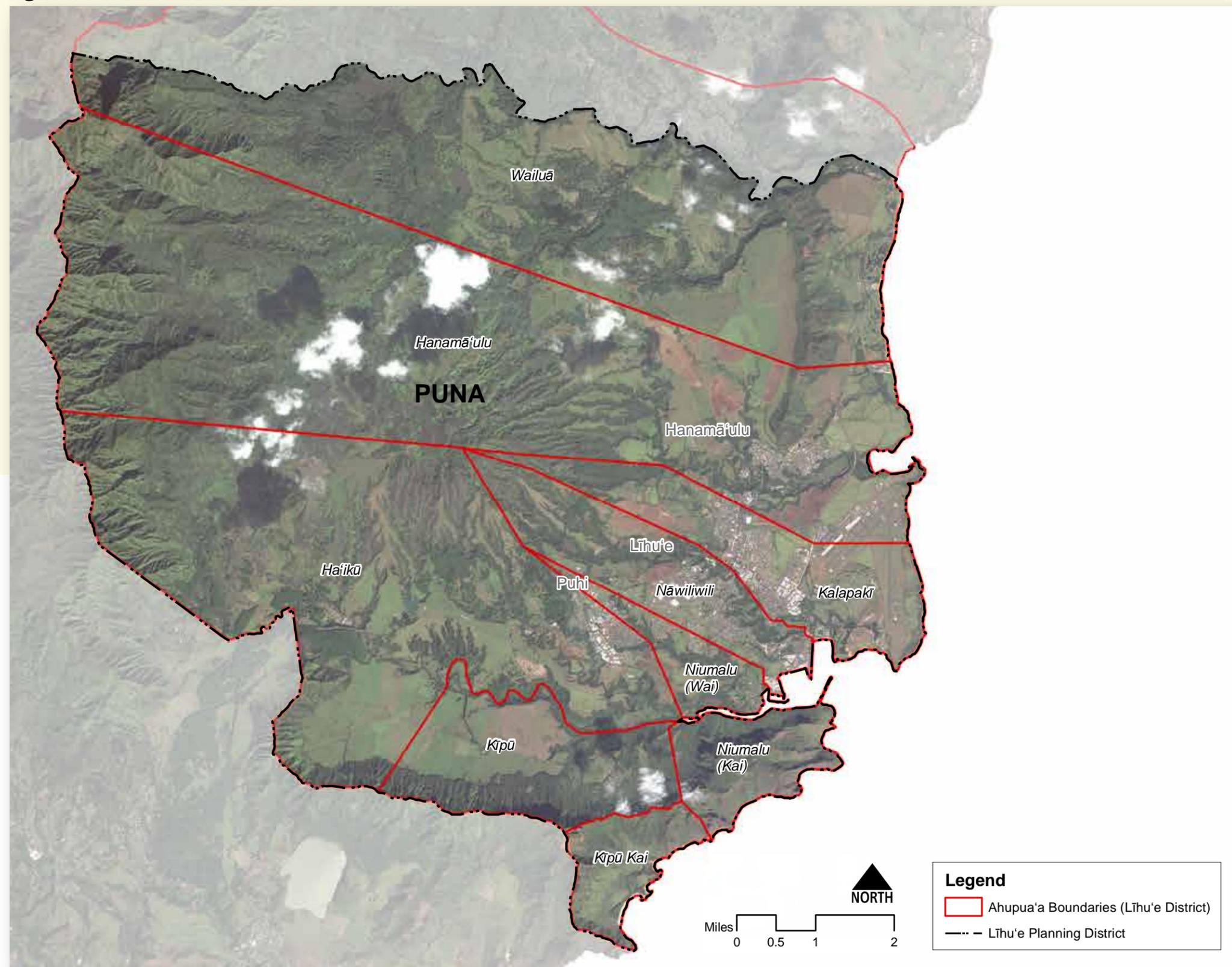
This Chapter provides a picture of the natural and built environment of the Līhu'e District as it exists today. Sections 3.1 through 3.7 describe the incredible natural features and landmarks that shape the landscape and are to be preserved and celebrated. Sections 3.8 through 3.15 describe the built environment and distinct communities that interact with the natural environment to create the character and form of the Līhu'e District.

3.1 TRADITIONAL LAND DIVISIONS

Cultural Surveys Hawai'i (CSH) prepared an archaeological literature review of the Līhu'e District, including a description of cultural resources and traditional land divisions. The information in this section is drawn from the resulting report (CSH 2013).

Much of the Līhu'e District is a flat plain nestled between the Hā'upu mountain range to the south and the Makaleha mountain range to the north. The Līhu'e District is fed by four main water sources, the Hulē'ia River, the Hanamā'ulu River, Keālia River, and the Wailua River. The District is in the moku (traditional land division) of Puna and encompasses eight ahupua'a (land divisions, usually extending from mauka to makai), including: Hanamā'ulu, Kalapakī, Nāwiliwili, Niumalu Wai, Niumalu Kai, Hā'ikū, Kīpū, and Kīpū Kai. These are shown on Figure 3-1 and described as follows.

Figure 3-1 Traditional Land Divisions



3.1.1 Puna Moku

Some stories say that the Moku (district) of Puna was settled by the chief Punanuikaianaina, who came to Hawai‘i from the Marquesas around AD 1000 to 1100 (Fornander 1996). The early settlers of the Hawaiian archipelago would have been especially attracted to the windward side of Kaua‘i, which boasted large river valleys supporting a vast inland region of irrigated pondfields for kalo (taro) cultivation that became the agricultural core of Kaua‘i. The greatest of these river valleys were around Wailua and Hanamā‘ulu Streams. Excavation data near the mouth of Hanamā‘ulu Stream indicates early occupation of the area between AD 1170 and 1400 (SIHP #50-30-11-1839, Walker et al. 1991). This area was richly endowed with agricultural wealth and was a major residential and religious center for the nobility (Kirch 2010). The attractiveness of this region to the early Kaua‘i residents is preserved in the following ‘ōlelo no‘eau (proverb):

He nani wale no o Puna mai ‘o a ‘o. There is only beauty from one end of Puna to the other. There is nothing to complain about—refers to Puna, Kaua‘i (Pukui 1983).

Līhu‘e (literally translated as “cold chill;” Pukui et al. 1974:132) became the modern political name for the traditional moku of Puna. According to Ethel Damon (1928), the name Līhu‘e was first applied to this area by Kaiki-oewa, Governor of Kaua‘i in the 1830s, perhaps after Kaiki-oewa’s upcountry residence on the island. This late derivation of the name has been recently disputed (Griffin 2012).

3.1.2 Wailua Ahupua‘a

The traditional boundary of Wailua began at the coastal point called Kaikihaunaka (“the tang, or strong smell of the sea;” Damon 1931) near Kukui Heiau on the boundary of Olohena Ahupua‘a. The boundary then extended mauka (inland) to Pu‘u ‘Ōpae (“shrimp hill”) and then to Makaleha peak (“eyes looking about as in wonder and admiration”) in the Ko‘olau Mountain Range. The mauka boundary followed the Makaleha Moun-

tains to Wai‘ale‘ale (“rippling water” or “overflowing water”) peak and the Kawaikini (“the multitudinous water”) peak. When the modern districts were formed, Wailua was split in two between Kawaihau and Līhu‘e Districts along the Wailua River. The modern northern boundary of the Līhu‘e portion of Wailua extends from the mouth of Wailua River at the shore, then along the North Fork



of the Wailua River to Wai‘ale‘ale and Kawaikini peaks. The southern boundary along Hanamā‘ulu Ahupua‘a extends in a straight line to the shore.

Wailua was the religious and political center of Kaua‘i during ancient times. There were more heiau in Wailua than in other ahupua‘a on Kaua‘i (Bennett 1931). The lower portion of the river valley, makai of Nounou ridgeline to the north and Mauna Kapu to the south, was known as Wailuanuiho‘āno (Wailuanuiaho‘āno) or alter-

nately Wailuanuilani. It was an area so sacred that it was kapu to maka‘āinana or commoners. Only the ali‘i, their kahuna (priests), and retainers could reside or visit here (Dickey 1917).

The area was prominently associated with some of the most famous legendary and historic figures including Maui, Kawelo, Pikoikaala, Laieikawai, Mō‘īke-

ha, La‘amaikahiki and Kaililauokekoa (Dickey 1917; Fornander 1916; Kalākaua 1990; Rice 1977). It is also said to be the site of the first kalo, hau, and ‘uala on Kaua‘i, the first temple drum, and the first coconut tree in the islands (Dickey 1917; Fornander 1878-85). In pre-contact and early post-settlement times, sweet potatoes and taro were cultivated at multiple locations. Later many of the taro terraces were converted to rice cultivation (Handy 1940).

3.1.3 Hanamā‘ulu Ahupua‘a

The ahupua‘a of Hanamā‘ulu occupies a narrow section on the southeast side of the island. Kilohana Crater (“vantage point”) bounds the ahupua‘a to the west. Ka‘ilī‘iliahinale (“pebble stone of the clear fire”) is the northernmost peak within the ahupua‘a. The upper slopes of Wai‘ale‘ale are the maka (source) of several streams that feed into the north and south forks of Wailua River (“many waters”). The waters flowing from the northern side of Kawaikini (in Wailua Ahupua‘a), such as Waikoko Stream (“blood water”) feed into the North Fork of Wailua River. The waters from the southern side of Kawaikini (in Hanamā‘ulu Ahupua‘a) flow toward the South Fork of Wailua River. The highest peak on the range within the ahupua‘a of Hanamā‘ulu is known as Kawaikini (“the multitudinous water”), which rises to 5,208 feet.

Hanamā‘ulu literally translates to “tired (as from walking) bay.” In Hanamā‘ulu, people grew taro in the gulches and planted sweet potatoes on the cliffs above, near where they built their houses (Handy 1940). Hanamā‘ulu is mentioned in multiple legends that hint at life as it was. The recurring themes indicate first, that canoe landings were frequent in the protected bay environment of Hanamā‘ulu; second, that travelers will not find much sustenance here on their way through, either due to lack of resources or the perceived “stinginess” of local inhabitants; third, that this area might have been known for its production of fine kapa or tapa, the traditional material used for clothing, mats, and sails prior to contact with western cultures; and that Hanamā‘ulu was the residence of some ali‘i-status individual.

3.1.4 Ha‘ikū Ahupua‘a

This ahupua‘a is bound on the north by the ahupua‘a of Hanamā‘ulu, on the northeast by Nāwiliwili and Niūmalu, on the south by Kīpū Ahupua‘a, and on the southwest by the Līhu‘e/Kōloa District line. The name “Ha‘ikū” is translated as “speak abruptly” or “sharp break.” Wichman (1998) says this land area included the peak Kālanipu‘u (“royal” or “heavenly”) hill, which was a kāhea,

calling hill, where spotters watched for fish schools and signaled their locations to the fishermen at sea.

According to Māhele records, the Hulē'ia Valley, shared by Ha'ikū on the north and Kīpū on the south, was a major locus for irrigated taro cultivation. In his survey of agricultural remains in the late 1930s, Handy (1940) noted numerous terraces along Hulē'ia Stream, and mango, breadfruit, and wild plum trees on the banks above, indicating the area of former housesites. By the 1850s, many of these former taro lands had been converted to rice paddies; the tax records of the 1880s list at least sixty Chinese living and working in the area. The Hulē'ia Valley was not only noted for food production, but its lush pastures were used for roaming cattle. By 1900, there were over 200 head of cattle in Kīpū and Ha'ikū on both sides of the Hulē'ia River (Neller and Palama 1973).

3.1.5 Kalapakī Ahupua'a

Kalapakī is separated from Hanamā'ulu Ahupua'a to the north. Along the Kalapakī shore, going south, are Ahukini [Ahuhini] Point, Kamilo Point, Ninini Point, Kū-ki'i Point, and Kalapakī Beach. Pukui and Elbert (1986) define the word kalapakī as "double-yolked egg, Kaua'i." According to a collection of Kaua'i place names by Kelsey (n.d.), Kalapakī was also known in traditional times as "Ahukini."

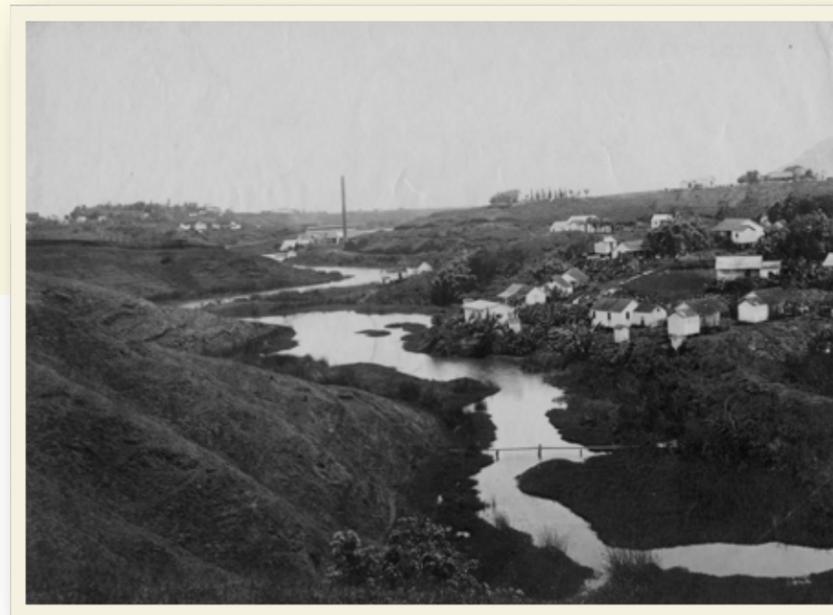
The ahupua'a of Kalapakī was permanently inhabited and intensively used in pre-contact and early historic times. Traditional fishing villages were once located near the seashore at Kalapakī, east and north (around and up the coast) of Kalapakī Beach. Loko (fishponds) and small drainages were inland of these settlement areas. There were three heiau (ceremonial structures) in Kalapakī, Ahukini (sometimes written Ahuhini) near Ahukini Point, Ninini Heiau near Ninini Point, and an unnamed heiau near Kūki'i Point. The kula (dry inland areas) contained native forests and were cultivated with crops of wauke (paper mulberry, *Broussonetia papyrifera*), 'uala (sweet potatoes, *Ipomoea batatas*), and ipu (bottle gourd). Legends and historic documentation (especially Land Com-

mission records) elaborate on many of these important natural resources (Cultural Surveys Hawai'i 2013).

3.1.6 Nāwiliwili Ahupua'a

Nāwiliwili is bound on the east by the western shore of Nāwiliwili Bay. The boundary point between Nāwiliwili and Niumalu Ahupua'a to the south is at the mouth of Pū'ali Stream (also called Waikōnui Stream). The division of the two ahupua'a inland follows a straight line from the lower portion of Pū'ali Stream along the meandering Pāpālinahoa Stream to an unnamed peak at an elevation of 536 ft above mean sea level (AMSL); this is the mauka point of Niumalu. Nāwiliwili continues from this point, along the boundary with Ha'ikū Ahupua'a, in a straight line to the boundary point at Kamoanakukaua.

Nāwiliwili Ahupua'a takes its name from the wiliwili tree (nā is the plural article, as in "the wiliwili trees" or "place of the wiliwili trees"). The archaeological record of early Hawaiian occupation in this area indicates a date range of ca. AD 1100 to 1650 (Walker et al. 1991). Handy (1940:67) describes Nāwiliwili Valley in his chapter on the main kalo (taro) growing locations in Puna, Kaua'i. Wichman (1998) states that the area was named for a famous wiliwili grove, and that the full name is Nāwiliwilipaka'āwaiilau'ilua, "the wiliwili trees upon which raindrops fall, twisting the leaves so the rain touches both sides." The heiau



Kuhiau, meaning "I gesture," was located near the old courthouse. The area inland of the jailhouse, which was south of the old courthouse, was the original passenger landing area in the mid to late nineteenth century; this area was called Pāpālinahoa. Kikuchi (1973) states this was the name of a water spirit.

3.1.7 Niumalu Ahupua'a

Niumalu is bound by the ahupua'a of Nāwiliwili to the north. The ahupua'a extends along the bay to the mouth of the Hulē'ia River, and along a rocky promontory with several peaks, Kawai Point (Outer Hill), Kalanipu'u, Hoku, and Hoku-lei (Cone Peak), which is on the boundary line separating Niumalu from Kīpū Ahupua'a. Along the northern boundary with Nāwiliwili, it extends along the Waikonui Stream, and then along a pali (cliff) to the peak Kilohana; it then extends back to the shore, along the boundary with Ha'ikū, Kīpū, and Kīpū Kai along the southern bank of Momikuhookuinanu Stream, across the Hulē'ia River, to a fishpond called Pepewa, across a ridge called Haku, to the shore.

Handy (1940) has noted that the major occupation for the Hawaiian occupants of Niumalu was fishing in the rich offshore waters and at the inland fishponds. One of the most noted features of Niumalu is 'Alekoko Fishpond, which provided mullet to the ali'i of the area. It was

awarded to Victoria Kamāmalu in the Māhele, but by the 1890s it was generally unused and neglected. It was repaired in 1900 and operated by a Chinese company (Neller and Palama 1973). Handy (1940) noted a few taro terraces were found along Pū'ali and Halehaka Streams.

3.1.8 Kīpū Ahupua'a

Kīpū means "hold back." Kīpū was divided into two areas by topography: Kīpū Kai (seaward), a relatively dry area between the sea shore and the Hā'upu Ridge; and Kīpū Uka (mountainward), a fertile, well watered area between the Hā'upu Ridge and the south bank of the Hulē'ia River. By the time of the Māhele, these two areas were considered separate ahupua'a.

Kīpū Ahupua'a is land-locked and is bordered by Kīpū Kai Ahupua'a on the makai side, Māhā'ulepū and Pā'a Ahupua'a on the makai and southwest side, Ha'ikū on the west and mauka sides, and Niumalu on the east side. Although Kīpū is watered by Puakukui Stream (Handy 1940:66), the major agricultural area of Kīpū was along the Hulē'ia River at the border of Ha'ikū ahupua'a, where irrigated taro was grown.

3.1.9 Kīpū Kai Ahupua'a

Kīpū Kai is bounded by Māhā'ulepū Ahupua'a to the south, Kīpū to the north (mauka), and Niumalu Ahupua'a to the north. Kīpū Kai was watered by only one small stream, but there were some springs that could be used to irrigate small patches of taro and sweet potatoes (Handy 1940). Kīpū Kai was also known as a salt-making area (Clark 2002).

Kīpū Kai is associated in legend with the Hawaiian pig-god Kamapua'a. After an epic battle with the Hawaiian volcano goddess, Pele, on Hawai'i, Kamapua'a traveled around the islands, finally arriving at Kīpū. He traveled inland and came to a famous spring in Kīpū Kai called Kemanō and asked a woman there for a drink of water. When she lied, and said that there was no water, he threw her off a cliff (Fornander 1919, Vol V, Part II).

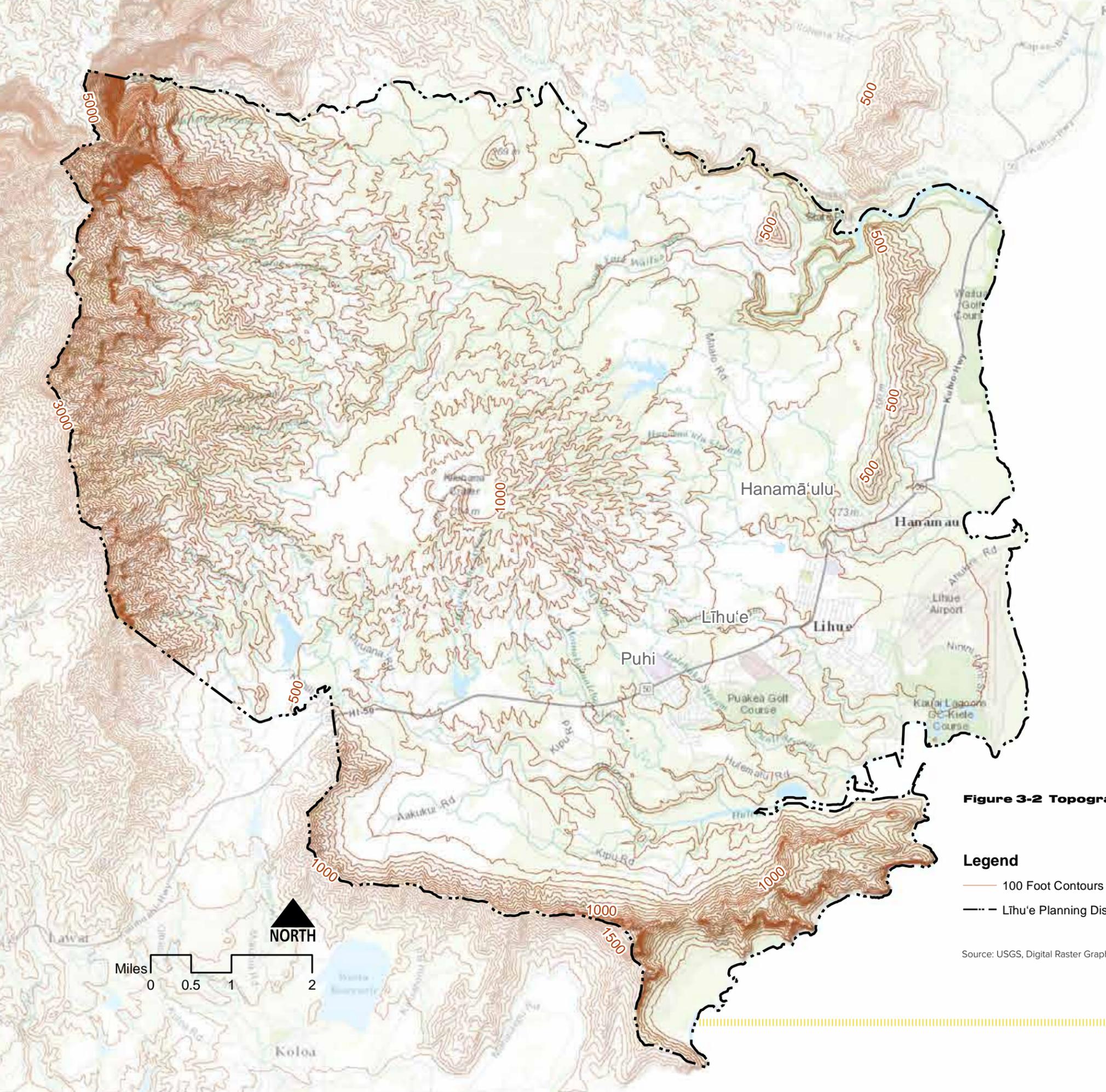


Figure 3-2 Topography

Legend

- 100 Foot Contours
- - - Līhu'e Planning District

Source: USGS, Digital Raster Graphic Topographic Map

3.2 CLIMATE

The climate of the Līhu'e is predominantly warm with moderate rainfall. Average daily temperatures in Līhu'e range between 71.7 and 80.2 degrees Fahrenheit with an average annual temperature of 76.3 degrees. The average annual rainfall recorded at the Līhu'e Airport station was 42.67 inches in 2011. Rainfall in 2011 was higher than the normal average for Līhu'e which received 26.3 and 25.9 inches in 2009 and 2010, respectively (NOAA-NCDC Climatological Data Annual Summary for 2009, 2010, and 2011).

The predominant surface wind occurring in the Līhu'e area is the prevailing trade winds from the northeast direction which usually dominate from April to November. Winds from the south are infrequent, occurring only a few days a year and mostly in the winter associated with "Kona" storms. Wind speeds in this area are predominantly in the 13 to 24 miles per hour range for much of the time.

3.3 TOPOGRAPHY, GEOLOGY, & LANDFORMS

Kauai Island consists of a single great shield volcano that has a volume of about 4,200 cubic kilometers and rises to 5,100 meters above the adjacent sea floor (Macdonald, Abbott, Peterson, 1983). This volcano is characterized by basaltic lavas known as the Waimea Canyon Volcanic Series. More than 1.5 million years after the primary shield-building volcanism ended, and a long-period of erosion, volcanism was renewed from several vents and the younger lava covered the eastern portion of the island and is known as the Kōloa Volcanic Series (Moberly 1963). The landscape within the Līhu'e District is spatially formed into a natural amphitheater by the distant Makaleha mountain range to the north, Wai'ale'ale and Kawaikini peaks to the west, Hā'upu Range to the south and Kālepa Ridge that stretches from Hanamā'ulu to the Wailua River. The region is divided by several gulches with steep topography that provide natural divisions between and within communities in the Līhu'e District. Topography and landforms of the District are depicted on Figures 3-2 and 3-3.

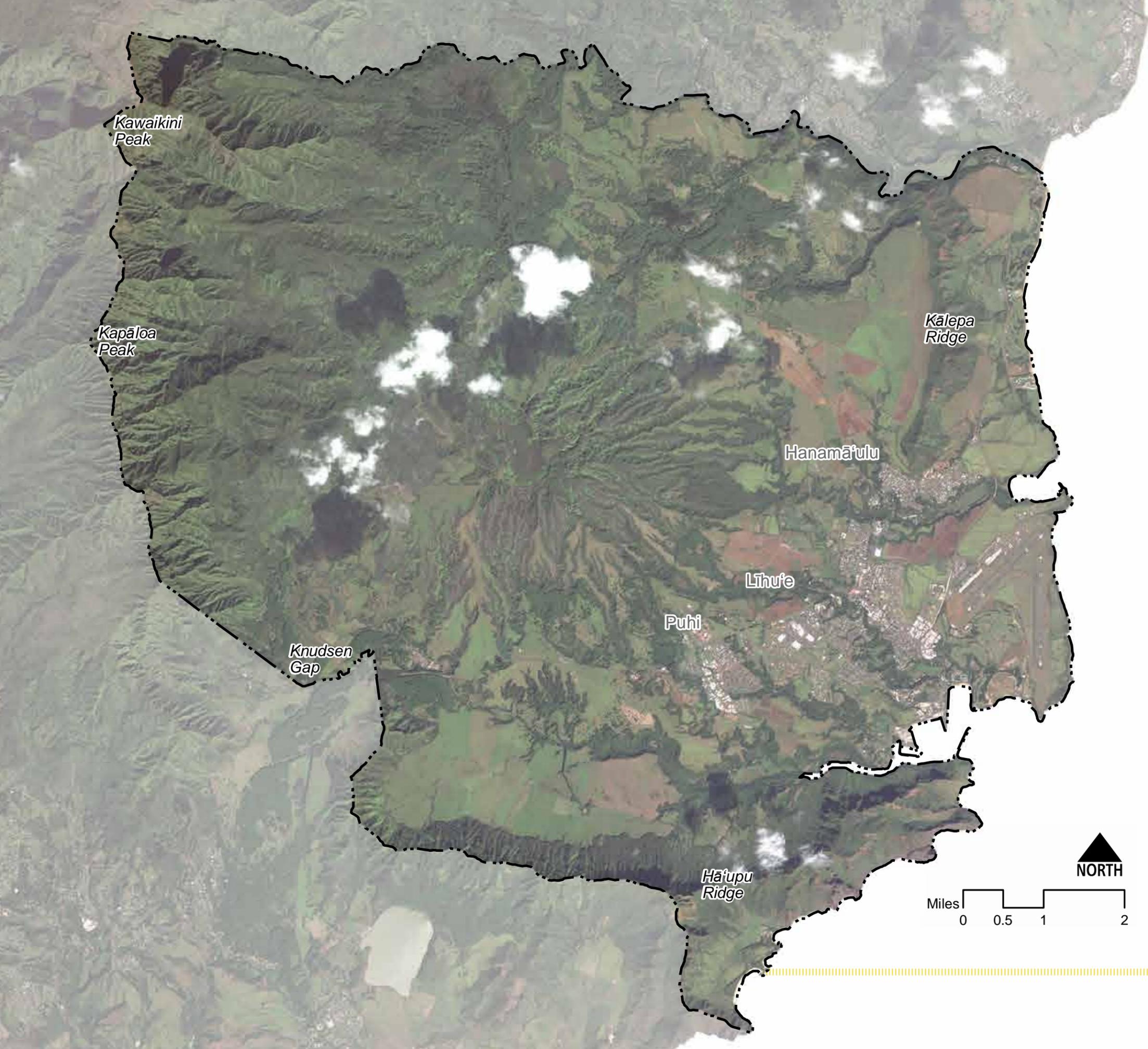
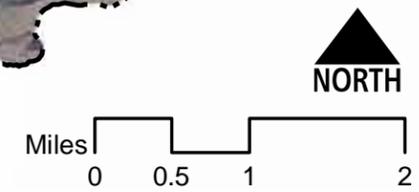


Figure 3-3 Major Landforms in Līhu'e District

Legend

--- Līhu'e Planning District

Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, i-cubed, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community



3.4 VEGETATION & WILDLIFE HABITAT

Natural vegetation varies widely within the project area, as the project area ranges from the coastal plains to the mountains. Characteristic plants include: lantana, koa haole, kou, panini, līma, Natal redtop grass, guava, Spanish clover, Bermuda grass, ‘ōhi‘a lehua, hapu‘u tree, olapa, Boston fern, Hilo grass, basket grass, false staghorn fern, kukui, and hala (CSH 2013).

Native Ecosystems as defined by the Nature Conservancy of Hawai‘i are restricted to the westernmost mauka reaches of the Līhu‘e District, away from inhabited areas. These are classified as Lowland Wet Forest and Shrubland ecosystems. There are pockets of Lowland Wet Forest and Shrubland and Lowland Mesic Forest and Shrubland in the mountains just south of the Līhu‘e District boundary. Outside of these areas, there is no designated Critical Habitat in the Līhu‘e District (USFWS 2010).

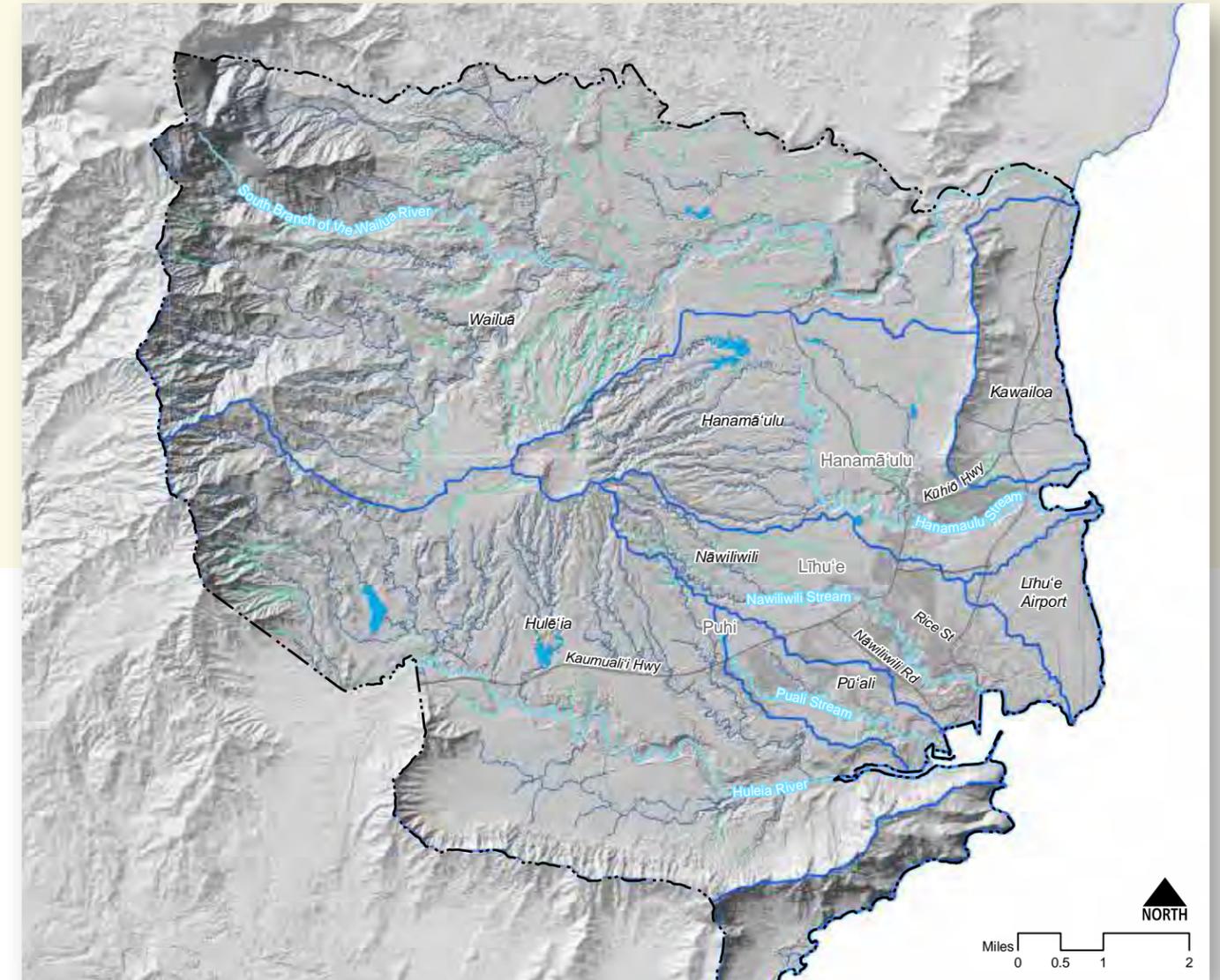
3.5 WATERSHEDS & SURFACE WATERS

There are eight watersheds associated with the Līhu‘e District. They include:

- Wailua (por.) - 34,041 acres
- Kawailoa – 2,389 acres
- Hanamā‘ulu – 7,305 acres
- Nāwiliwili – 4,014 acres
- Līhu‘e Airport – 1,204 acres
- Pū‘ali – 1,327 acres
- Kīpū Kai – 1,904 acres
- Hulē‘ia (por.) – 17,937 acres

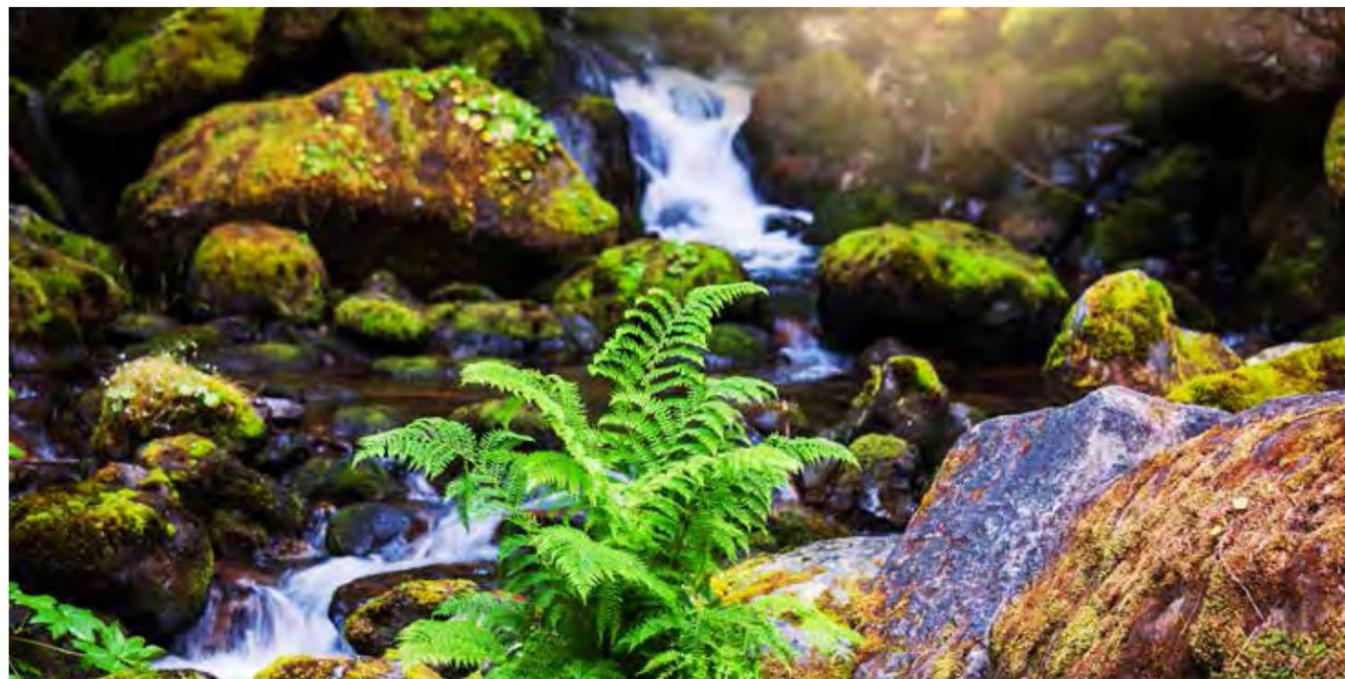
Major perennial streams and tributaries in the Līhu‘e District include the Wailua River and Wailua Falls, Hanamā‘ulu Stream, Nāwiliwili Stream, Pū‘ali Stream, Puhi Stream, and Hulē‘ia Stream. The Wailua River is the largest and only navigable river in the state (see Figure 3.4).

Figure 3-4 Watersheds and Surface Waters



Legend

- | | |
|---------------|--------------------------|
| Watersheds | Intermittent Streams |
| Reservoirs | Perennial Streams |
| Parcels | Līhu‘e Planning District |
| Major Streams | Major Roads |





3.6 COASTAL AREAS

The last 5 million years on Kaua'i have been characterized by intensive weathering and erosion of its relatively unstable volcanic rocks. Large ocean waves have eroded the coasts and carried away sediment. Meanwhile, biogenic reefs comprised mainly of coralline algae and coral have grown around the island, creating fringing reefs. The skeletal material from these reefs provides sand for the beaches that rim nearly half of the island.

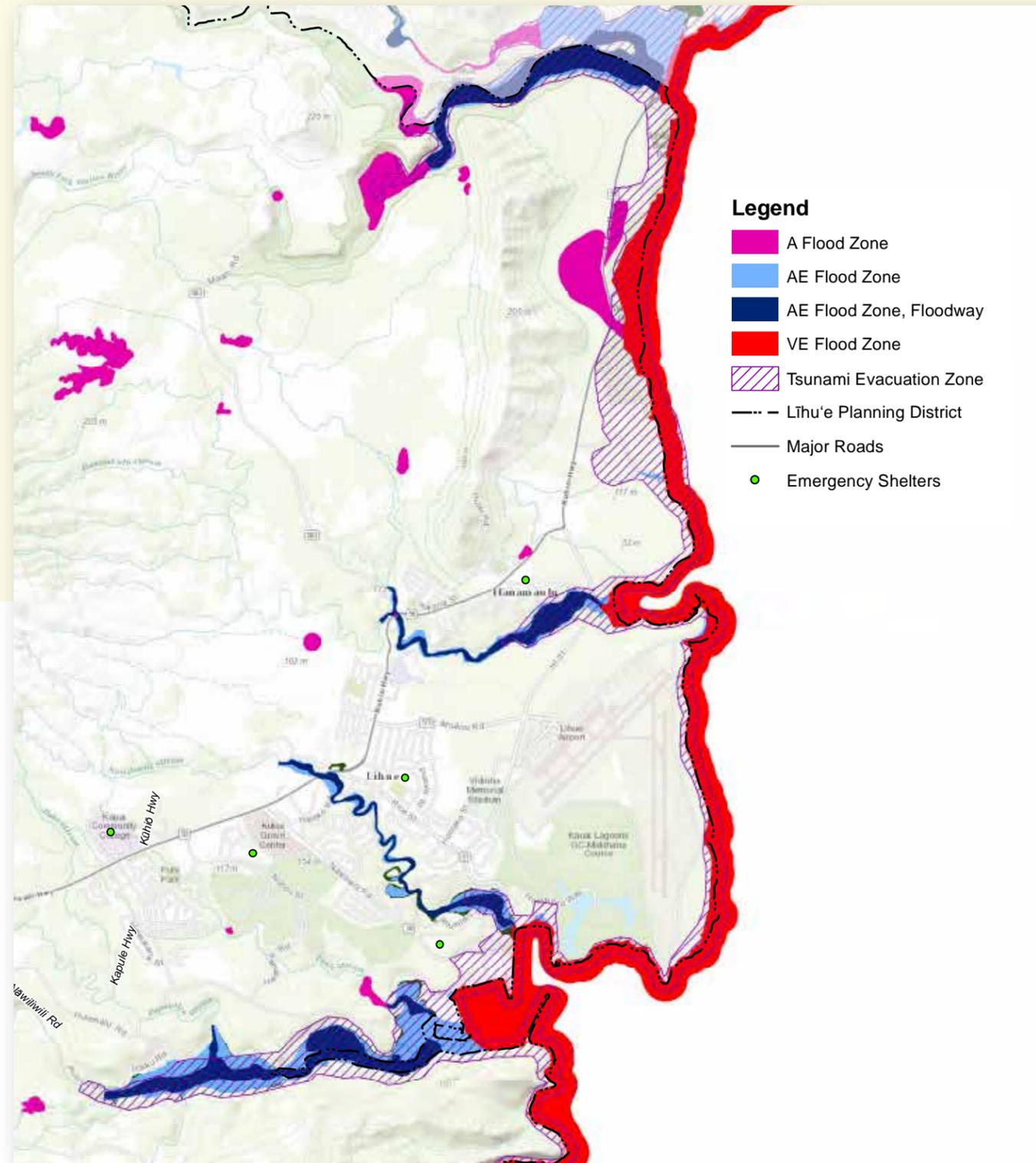
An important asset for Līhu'e is its coastline areas, which are used for both recreation and commercial activities. The district has several undeveloped coastal areas that are considered pristine and beautiful. Figure 3-5 shows coastal destinations and access points in the District.

Figure 3-5 Coastal Destinations and Access Points

Legend

- Līhu'e Planning District
- Major Roads
- Roads
- 📍 Destinations and Access Points

Figure 3-6 Flood Zones, Shelters, and Tsunami Evacuation Zones



Service Layer Credits: Sources: Esri, HERE, DeLorme, TomTom, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, MapmyIndia, © OpenStreetMap contributors, and the GIS User Community

Figure 3-7 One Foot Sea-Level Rise Scenario for Nāwiliwili



Source: Kaua‘i Climate Change and Coastal Hazards Assessment, University of Hawaii Sea Grant Extension Program. 2014.

3.7 NATURAL HAZARDS AND CLIMATE RISKS

The Hawaiian Islands are subject to natural hazards including hurricanes, earthquakes, tsunamis, wildfires, landslides, and flooding. Figure 3-6 depicts flood zones, shelter locations, and tsunami evacuation areas in the Līhu‘e District. Coastal flooding, marine inundation, and coastal erosion in particular are predicted to be exacerbated by climate change related sea-level rise. The 2009 Update of the County of Kaua‘i Multi-Hazard Mitigation Plan outlines the County’s mitigation strategy for natural hazards and climate change risks. The County has already implemented several mitigation measures recommended in the 2003 Multi Hazard Mitigation Plan, including hardening of key County buildings, improving safety of bridges and harbors, improving emergency communications systems, and working with private landowners and hotels to designate additional shelters.

The Kaua‘i County Planning Department commissioned a technical study, the Kaua‘i Climate Change and Coastal Hazards Assessment (UH Sea Grant Program 2014) to address climate change related risks and hazards in anticipation of the General Plan update. The study included sea-level rise hazard assessments using the National Oceanic and Atmospheric Administration (NOAA) sea-level rise (SLR) viewer, showing the effects of sea-level rise under three different scenarios: 1-foot, 3-foot, and 6-foot SLR.

Nāwiliwili was highlighted as an area with key infrastructure that may require protection to maintain essential services such as shipping. Figures 3-7 through 3-9 show potential inundation from sea-level rise at Nāwiliwili under the 1, 3, and 6 foot scenarios. The study recommended that potential climate change impacts be factored into planning and policy-making. Policy recommendations related to climate change are provided in Section 5.9.

Figure 3-8 Three Foot Sea-Level Rise Scenario for Nāwiliwili



Source: Kaua'i Climate Change and Coastal Hazards Assessment, University of Hawaii Sea Grant Extension Program. 2014.

Figure 3-9 Six Foot Sea-Level Rise Scenario for Nāwiliwili



Source: Kaua'i Climate Change and Coastal Hazards Assessment, University of Hawaii Sea Grant Extension Program. 2014.

3.8 HERITAGE RESOURCES

The Līhu‘e District contains a variety of significant natural and cultural resources that shape the region’s history, identity, and character. The General Plan’s Līhu‘e District Heritage Resources Map (included in Appendix B) identifies some of these features, which are listed in the text box. The following sections describe these and other notable features.

3.8.1 Historic Features

The Līhu‘e District has several significant historic features listed on the State Register of Historic Places (those with an asterisk are also listed on the National Register of Historic Places):

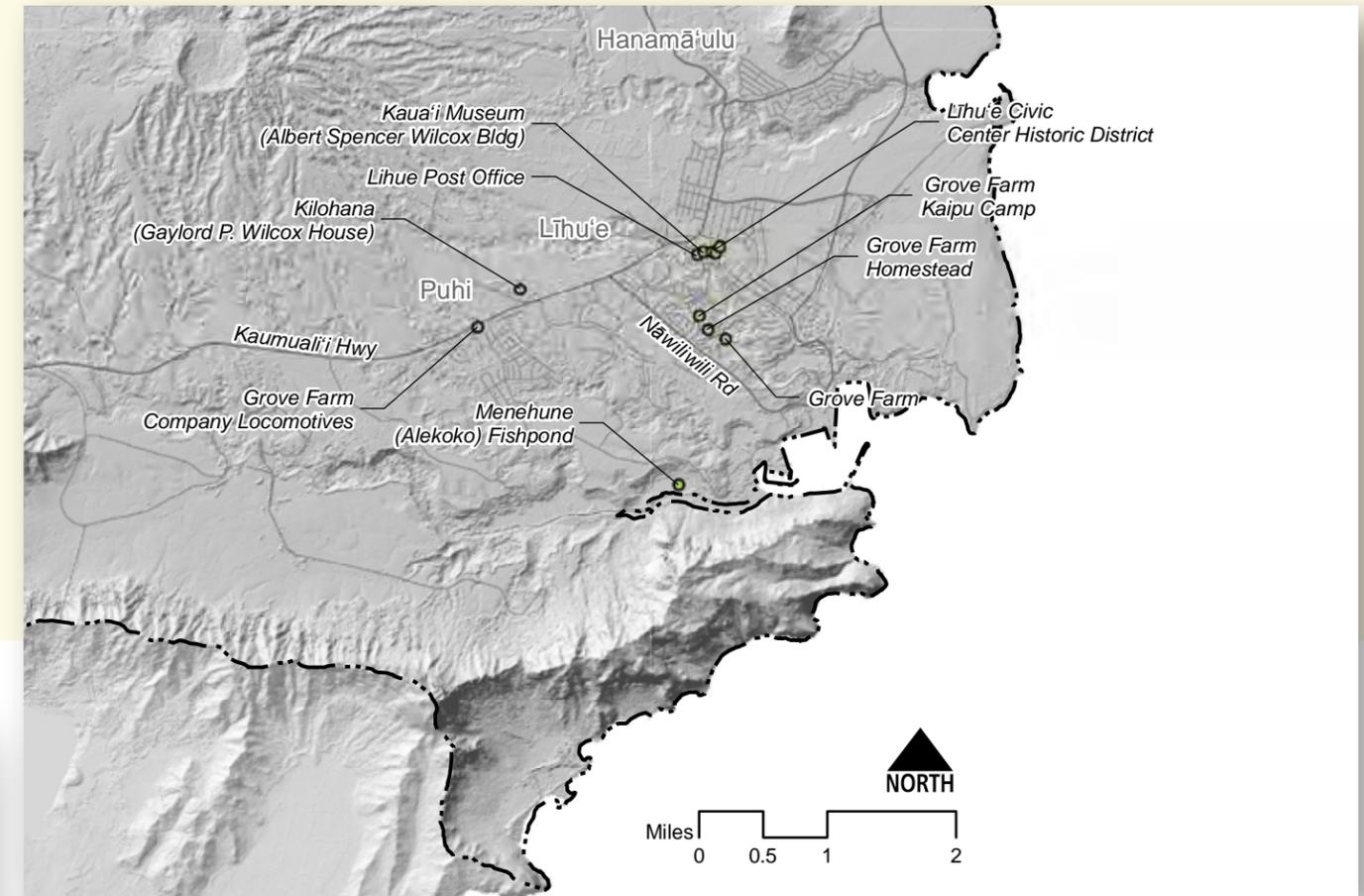
- ‘Alekoko or Menehune Fishpond*
- Grove Farm Homestead*
- Grove Farm Company Locomotives*
- Līhu‘e Civic Center Historic District*
- Līhu‘e Hongwanji Mission*

- Former US Post Office – Līhu‘e*
- Albert Spencer Wilcox Building (Kaua‘i Museum)*
- Kilohana (Gaylord P. Wilcox House)
- Kaipu Camp*
- Wailua Complex of Heiau*
- Kapaia Swinging Bridge

Those sites listed on the State and National Registers of Historic Places are shown on Figure 3-10. Other iconic features that defined earlier eras, such as the Līhu‘e Plantation Sugar Mill and smoke stacks, are now gone.

Roads historically served as important places to meet people and are still used as landmark references. The intersection of Rice Street and Haleko Road was once the commercial and social center of town where on opposite corners sat the Līhu‘e Store and Tip Top. The streets brought the people to Līhu‘e and provided

Figure 3-10 Registered Historic Sites in the Līhu‘e District



HERITAGE RESOURCES IN THE LĪHU‘E DISTRICT IDENTIFIED IN THE KAUA‘I GENERAL PLAN

- **Important Land Forms:** Hā‘upu Mountains, Kilohana Crater, Kālepa Ridge, Hanamā‘ulu Stream, Pū‘ali Stream, Hulē‘ia Stream, Wailua River
- **Scenic Roadway Corridors:** Mā‘alo Road, Kapule Highway, Kūhiō Highway and Kaumuali‘i Highway between Kilohana and Nāwiliwili Road
- **Coral Reefs:** Offshore of Kuahonu Point and Punahoa Point
- **Registered Archaeological Sites:** Hauola Place of Refuge and ‘Alekoko Fish Pond
- **Heiau Sites:** Malae Heiau, Poli‘ahu Heiau,

- **Hikina o Kala Heiau, Holoholo Ku Heiau**
- **Registered Historic Buildings and Structures:** County Building and Annex, Grove Farm Homestead, Kilohana, Civic Center, Kaua‘i Museum, and others
- **Resource Parks and Sites:** Grove Farm Homestead, Wailua River State Park
- **Federal and State Natural Preserves:** Hulē‘ia National Wildlife Refuge
- **Other Important Historic Buildings and Structures:** Ninini Point lighthouse, Līhu‘e Mill
- **Small Boat Harbors/Ramps:** Nāwiliwili Harbor
- **Other Natural, Historic, Cultural, Scenic Features:** Māhā‘ulepū, Kīpū Falls, ‘Ōpaeka‘a Falls, Wailua Marina, Coconut Grove



The 100 acre Grove Farm Homestead is tucked away in the center of Līhu‘e and maintains the household and farm activities established in the 1850’s. Grove Farm got its name from the large grove of Kukui Trees that was cleared for the plantation.



The County Building is the centerpiece of the historic district



Lihū'e Plantation Sugar Warehouse is a reminder of the dominant sugar plantation period.



Kilohana was built in 1936 as a Tudor style mansion and is still owned by descendants of the Wilcox family. The building is a State of Hawai'i Historic Landmark.

'Alekoko Fish Pond (also known as Menehune Fishpond) is located at the mouth of the Hulē'ia River in the Hulē'ia National Wildlife Refuge. It comprises 238 acres of river valley that are a habitat for endangered Hawaiian water birds (ae'o or Hawaiian stilt, 'alae Ke'oke'o or Hawaiian coot, 'alae 'ula or Hawaiian gallinule, and kōloa maoli or Hawaiian duck). This is a significant archaeological site consisting of a 2,700-foot-long stone wall which was constructed hundreds of years ago.

3.8.2 Archaeological & Cultural Resources

Cultural Surveys Hawai'i completed a comprehensive archaeological and cultural resources review for this Lihū'e Community Plan (CSH 2013). Nearly one hundred previous archaeological studies and around two hundred cultural resources (archaeological and

architectural sites) have been documented within the Lihū'e District, with the majority of studies and documented sites concentrated near the coast. These range from pre-contact to historic times and include heiau, agricultural features (irrigation features, terraces, 'auwai, lo'i), settlement remnants, burials, bridges, fishponds, cultural deposits, cemeteries, and historic structures.

Potential cultural resources that could be discovered in the project area include both pre- and post-Contact sites. Pre-Contact sites could be in the form of human burials, heiau, and agricultural features. Post-Contact sites could be in the form of plantation-related features and structures, bridges, portions of old railroads, agricultural features, and human burials/cemeteries.

gathering places to meet and socialize. During the period when sugar prospered in Hawai'i, the civic functions of streets in rural towns and communities played an important social function for trade of information and goods.

Nāwiliwili Bay and Kalapakī Beach in prehistory were a "gateway" to Kaua'i and an original settlement of native Hawaiians existed. Much of the modern built environment has changed the character of Nāwiliwili and Niumalu, but the ever present scale and character of the surrounding landscape dominates as the recognizable signature of place.



Wailua River winds its way along the north edge of the District starting at the head waters of Mt. Wai'ale'ale in the center of the island.



'Alekoko Fish Pond

3.9 BUILT ENVIRONMENT

Kaua‘i’s built environment was formed by a pattern of plantation towns and camps situated along major roads and surrounding sugar fields. Līhu‘e’s natural setting features mountain ranges and gulches that frame the remnant agricultural field pattern. This settlement pattern remains today and is embedded in residents’ sense of place. Equally important are the gulches that dissect the built environment into usable areas for agriculture and urban development. Līhu‘e, as well as neighboring Hanamā‘ulu and Puhi, differ from other towns on Kaua‘i in that they are more built up and more urban than most areas on Kaua‘i. The area is expected to continue to serve the role as Kaua‘i’s urban center, and thus to experience a greater intensity of growth and development. This is consistent with the vision expressed in the Līhu‘e Community Plan and the Kaua‘i General Plan.

The following sections characterize patterns of settlement, development, and employment in the Līhu‘e District.

3.9.1 Regional Centers of Settlement and Employment

The major regional centers of settlement and employment in the Līhu‘e District are the communities of Līhu‘e, Puhi, and Hanamā‘ulu. These are all prominent residential centers, and they each have retail commercial centers as well as employment activity. This is especially highly concentrated in Līhu‘e. Residents from surrounding areas travel to the Līhu‘e core and Puhi for work. This pattern is depicted in Figure 3-11 and Figure 3-12.

Figure 3-11 Residential Centers: Where Workers Live

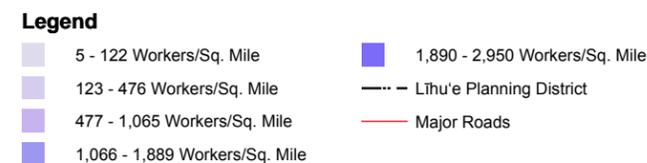
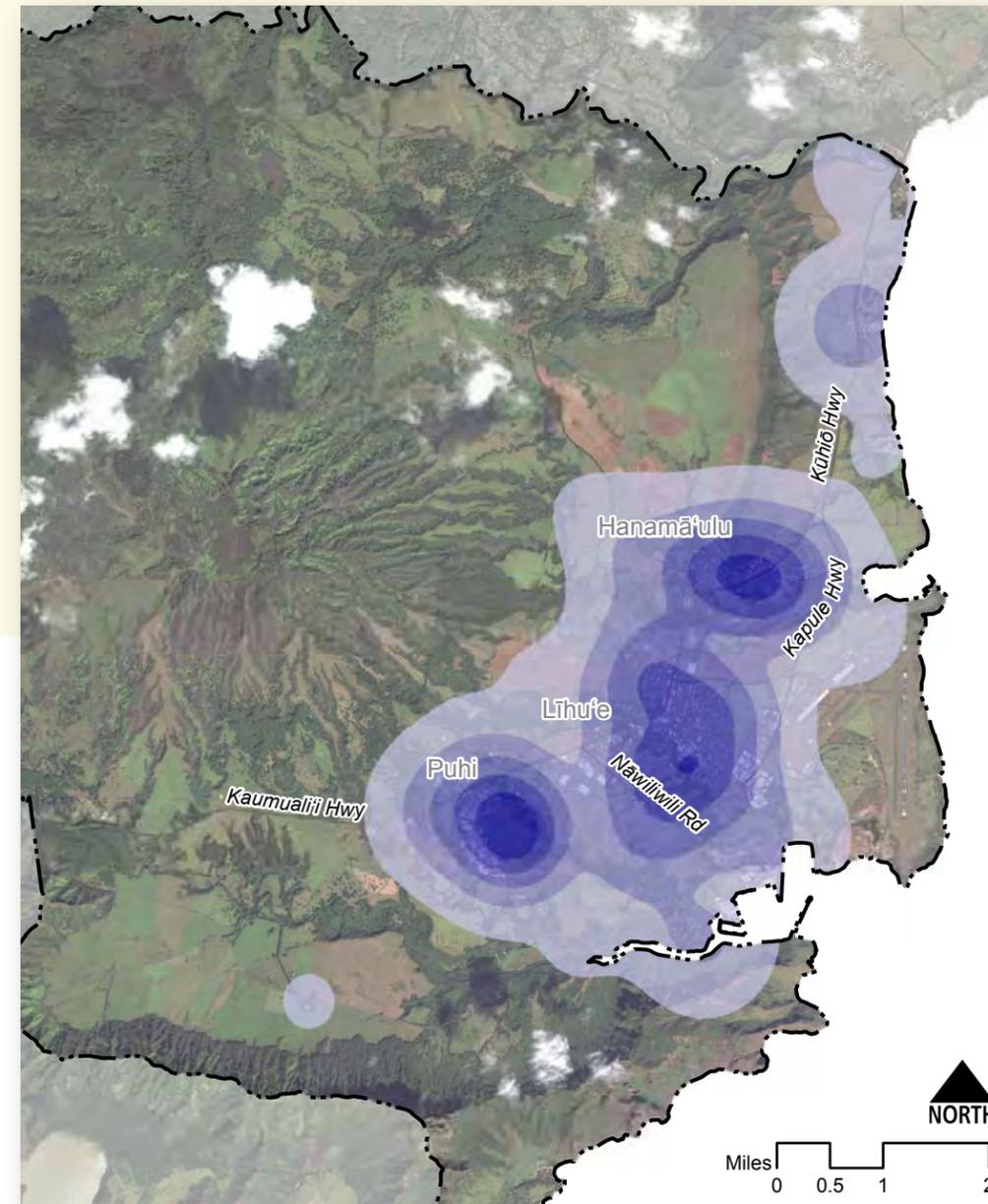
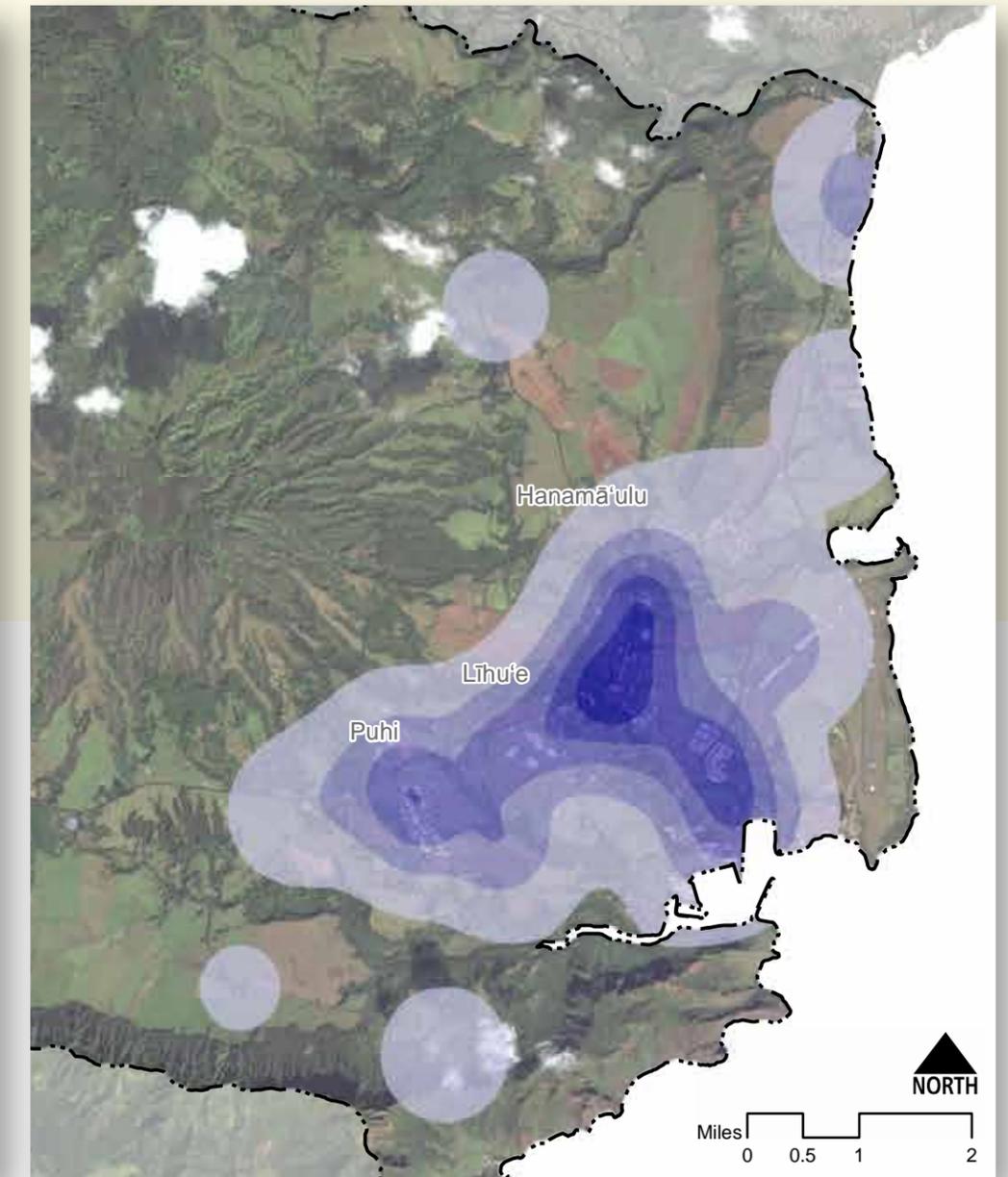
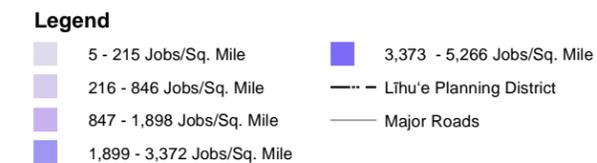
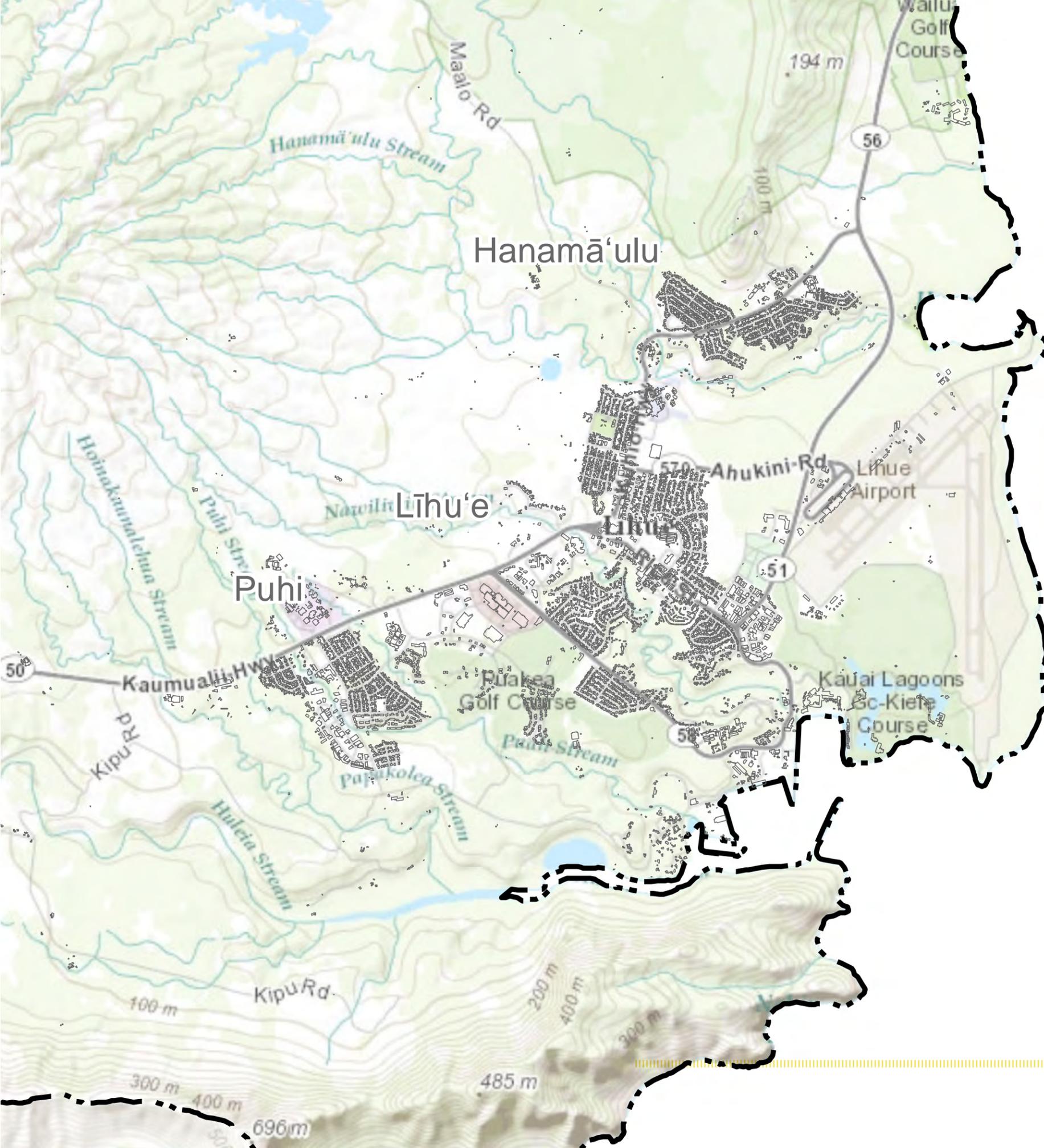


Figure 3-12 Employment Centers: Where People Work



Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, i-cubed, Earthstar Geographics, CNES/Airbus DS, USDA USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community





3.9.2 Buildings and Settlement Patterns

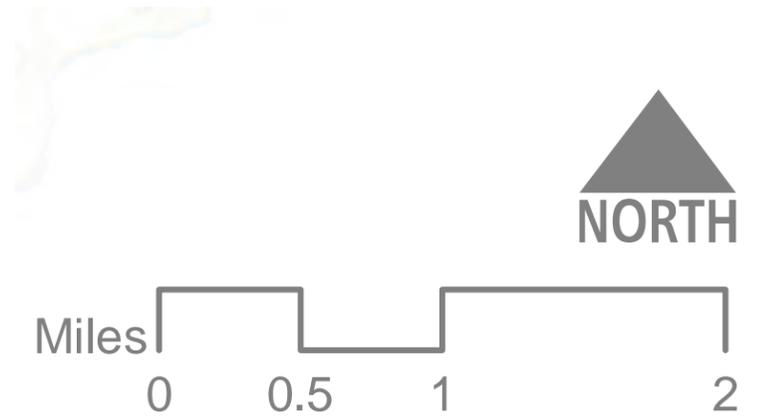
Buildings and settlements in the Līhu'e District are largely concentrated around the main communities of Līhu'e, Puhi, and Hanamā'ulu, as shown in Figure 3-13.

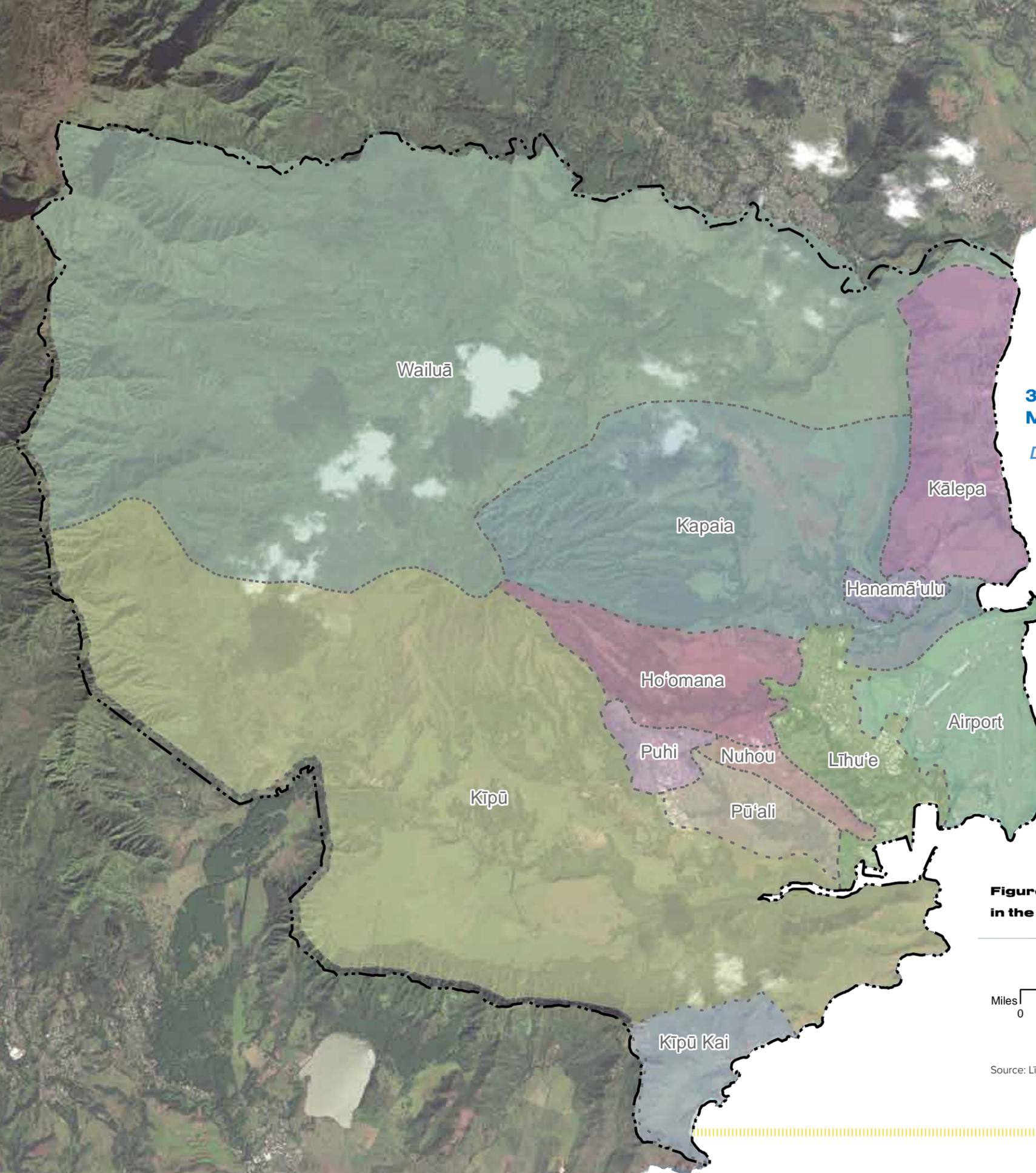
Figure 3-13 Location of Existing Buildings & Settlements

Legend

-  Building Footprints
-  Līhu'e Planning District

Service Layer Credits: Sources: Esri, HERE, DeLorme, TomTom, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, MapmyIndia, © OpenStreetMap contributors, and the GIS User





3.10 COMMUNITY DESCRIPTIONS

This section describes the important places in the Līhu'e District, describing their character, challenges, and opportunities. Figure 3-14 depicts the major communities and neighborhoods of the Līhu'e District.

3.10.1 Līhu'e (including Isenberg Mauka and Airport)

Description

Līhu'e is the county seat of Kaua'i and the island's major commercial and civic center. Līhu'e Town is bounded by the Hanamā'ulu and Nāwiliwili Gulches on the north and south, and by the shoreline and the Isenberg neighborhood along Kūhiō Highway on the east and west. Key commercial centers in Līhu'e town include the Civic Center District, Kūhiō Highway commercial strip, and portions of Rice Street. The following Sections describe the historic and present day development of those districts and surrounding neighborhoods.

Civic Center Historic District

The town developed along Haleko Road (north of Rice Street) and Rice Street, both of which are designated as historic roads. Two neighborhood centers formed along Haleko Road, which is the current Kūhiō Highway, and later along Rice Street. The Molokoa neighborhood encompasses the Civic Center District along Hardy Street. The historic County Building served as a cornerstone of initial development in that area, with development later infilling the area bounded by Rice Street, 'Eiwa Street and Hardy Street. In the late 1980's, the county purchased the Līhu'e Shopping Center to house county offices, which completed the current pattern of development for the neighborhood.

The Līhu'e Civic Center Historic District, listed on the National Register of Historic Places in 1981, is one of the most distinctive areas in town, with civic open spaces framed by historic buildings and streets. The formal lawn and architecture of the County Building, Annex, Courthouse, and adjacent Kaua'i Museum help to define the space. Haleko Shops, Isenberg Park, Bank of Hawai'i, Post Office, First Hawaiian Bank and Kaua'i Museum provide an attractive and modulating street edge approaching the County Building from the west along Rice Street, broken only by the existing Civic Center parking lot, which interrupts the civic scale and urban design character of the area.

Figure 3-14 Key Communities and Neighborhoods in the Līhu'e District



Source: Līhu'e Development Plan (1976)



The United States Post Office in Līhu'e.



Civic Center parking lot along Rice Street.

Civic Buildings within Līhu'e Town

In addition to the Līhu'e Civic Center Historic District described previously, there are a number of civic buildings located within the Līhu'e Town that are historically and culturally significant. These are described below.

The Historic County Building was constructed in 1913-14 and dedicated in May 1914. It is the longest operating county building in the State. The Historic County Building is located at 4396 Rice Street and currently houses the County Clerk office, Council member offices and Council Services. The building is also home to the Kaua'i Historical Society, which provides guided history tours and educational programs. The Elections Division is housed in the County Building Annex.

As the government hub of the island, most of the County agency offices are located in the core of Līhu'e Town at the Līhu'e Civic Center which includes Moikeha, Pi'ikoi and Kapule Buildings. Purchased by the County in 1989, these buildings were originally built in 1966 as the Līhu'e Shopping Center. Currently, a large portion of the Pi'ikoi Building is vacant due to the departure of Big Save grocery store.

The State Office Building is located at 3060 'Eiwa Street (picture at left). The three-story building houses branch offices for the State such as the Governor's Liaison,

Departments of Budget and Finance, Commerce and Consumer Affairs, Education, Hawaiian Home Lands, Taxation, Land and Natural Resources, Labor and Industrial Relations, and the University of Hawai'i College of Tropical Agriculture and Human Resources Extension Office. Limited parking is located underground.

The historic Līhu'e Courthouse is located at 3059 'Umi Street. Courthouse functions have now moved to the new Judiciary Complex near the airport, and the historic Courthouse building has been repurposed. The Judiciary Complex, named Pu'uhonua Kaulike (picture at right), is located on Kapule Highway, mauka of Līhu'e Airport near the Kaua'i Veterans Center. One wing houses administrative functions and court-user services, another wing six courtrooms and judicial chambers.

Other State-owned civic properties include the State Department of Health's Kaua'i District Office, also known as the Līhu'e Health Center and the former County of Kaua'i Līhu'e Police Station.

The Kaua'i Museum is a history and art museum located at 4428 Rice Street. It is comprised of two buildings, the Albert Spencer Wilcox Memorial Building and the William Hyde Rice Building. The Wilcox Memorial Building has a lava rock exterior, sloped roof, barrel



Kaua'i Museum Albert Spencer Wilcox Memorial Building



Kaua'i Museum with the County Building lawn and associated monument in the foreground



Kaua'i War Memorial Convention Hall

3.0 LĪHU‘E TODAY: NATURAL, BUILT, AND HUMAN ENVIRONMENT



State Office Building



Pu‘uhonua Kauliko Judiciary Complex

vaulted ceilings, original antique light fixtures, and a mezzanine with a balcony overlooking the first floor. It was placed on both the State and National Registers of Historic Places in 1979 (Site Number: 30-11-9344). The Rice Building is a boxy modernist structure, two-stories in height and clad with lava rock, adjacent to the Wilcox building.

The Kaua‘i War Memorial Convention Hall is an important landmark for Līhu‘e. This facility is often used for large events, meetings and seminars, including concerts and dance programs.



Kūhiō Hwy Commercial Center served as a hub for Līhu‘e Town and adjacent Isenberg and ‘Akahi-‘Elua Street neighborhoods.

Kūhiō Highway Commercial Strip

The Kūhiō Highway commercial strip has developed alongside the adjacent Isenberg and ‘Akahi-‘Elua Street neighborhoods and served as a hub for those populations. At the height of the plantation era in the late 1930’s, the west side of Kūhiō Highway (then Haleko Road) was predominantly plantation camps. Later in the 1960’s it was subdivided into lots with ranch style residential architecture.

The east side of Kūhiō Highway consists of commercial storefronts with neoclassical (e.g., Garden

Island Motors) and art deco (e.g., Līhu‘e Theater) architectural influences. The ‘Akahi-‘Elua Street neighborhood between Ahukini Street and Hardy Street has relatively large lots and the residential architecture styles of the homes remaining are of cottage, craftsman and prairie styles. Many have porte-cochere and porches with parking in the back and front lawns and hedges along the street to present a more formal front yard to the streets.

‘Akahi-‘Elua -‘Umi Street Neighborhoods

Most of the residential buildings along ‘Akahi and ‘Elua are gone. Those that remain are historic and representative of the building and landscaping styles of the 1930s and early 1940s. The remaining lots have been redeveloped with a mix of building types and styles, and most of the remaining homes have been converted into businesses. ‘Elua Street still retains its mostly residential character and has more original buildings than ‘Akahi Street. The potential of these neighborhoods lies in their proximity to existing commercial areas, the general street pattern, and neighborhood character.

Rice Street (between Kress Street and Kalena Street)

Rice Street between Kress and Kalena Street was developed as a retail center secondary to the Kūhiō Highway Commercial District. The area exhibits continuous store fronts along both sides of the street. The south side of Rice Street has some good examples of art deco architecture, including the old Kress Building and theater. Several of these buildings are historic. The district extends south towards the Nāwiliwili Gulch for two blocks and has good connectivity to Halenani, Malama, Hoala and Hardy Streets. The architecture here is a mix of building types, including one and two-story ranch residential structures, western store fronts with awnings, and light industrial metal warehouses.

Isenberg Mauka

Isenberg Mauka lies mauka of Līhu‘e Town, occupying a large area of land just beyond the Isenberg residential subdivision. Currently, much of Isenberg Mauka lies in open space or agricultural use. In the future, the Līhu‘e-Hanamā‘ulu Mauka Road could traverse the area. Because parts of Isenberg Mauka lie within a 10-minute walking distance from the Līhu‘e Core, Isenberg Mauka is recommended as a potential area for future residential development to support anticipated population growth in Līhu‘e.



'Akahi Street's original homes have relatively large lots (~100'x150'), hedges and front lawns presenting a formal frontage to the street.



Present-day 'Akahi Street includes a mix of building types, including former residences now converted into businesses.



The section of Rice Street between Kress Street and Kalena Street has good architectural character and was developed as a second retail center to the Kūhiō Highway commercial district.

Challenges and Opportunities

The Līhu'e Town Core is in need of renewal and revitalization if it is to fulfill its role in the vision for the Līhu'e District. Within the Līhu'e District, important functions have become distributed, which has weakened the Town Core area. Government offices have been dispersed and moved, many towards the airport area. The retail core has moved to Puhi with the regional mall and big box retailers. This dispersal of activity centers detracts from Līhu'e Town Core's vibrancy and attractiveness as a destination. With additional large developments like Wailani planned, it will be important to ensure two-way connectivity that facilitates movement between these large retail and residential destinations and the Līhu'e Town Core.

The vision of the Town Core Plan and Urban Design Plan are for a walking, well landscaped, attractive hub. This requires careful integration with the public transit system, safe bicycling routes, changed parking patterns, and improved sidewalks. It also requires destinations and basic services such as a supermarket.

The Town Core has potential for transitioning into a more vibrant and walkable environment. The core has a good structure of historic buildings, streets and blocks that can be augmented to allow for more pedestrian, bicycle and vehicular accessibility. Incremental increases in development intensity and infill can bring additional vibrancy to the center of Līhu'e. The existing infrastructure of streets and utilities combined with the existing retail and job centers provides a unique opportunity on the island to explore more intense development that can provide a mix of market rate and affordable housing in a less automobile dependent environment.

It has been a challenge to create more work force housing. Līhu'e Town Core, and Rice Street neighborhood in particular are excellent locations for this. But smaller sized parcels and current height and density restrictions limit the amount that can be done. Incentives for consolidation and relief of zoning height and density limits would be beneficial.

The Civic Center provides vital services and draws people in from the entire island. The physical form of the former shopping center and the limited activities, however, limit its true potential as a "third place" for the

community (i.e., a social gathering place away from the home or workplace). The Civic Center has the opportunity to provide more of a draw by programming the civic spaces with additional events that could include farmer's markets, movie festivals and parades. It will be important to overcome the need for parking in order to make these activities possible. In addition, the State's significant landholdings within Līhu'e could serve a key role in supporting the vision of the Līhu'e Community Plan. Coordination and planning between the State and County is key to achieving this.



3.10.2 Puhi, Pū‘ali, and Nūhou

Description

Puhi is the most recently developed community in the Līhu‘e District. It is located south and west of Nāwiliwili Gulch and has access to Līhu‘e Town along Kaumuali‘i Highway. Puhi is home to Kaua‘i’s major regional shopping center, Kukui Grove Center, as well as a large industrial park and big box retailers including Costco, making Puhi a commercial destination and employment center that experiences a large amount of daily commuter traffic from across the island. The area mauka of Kaumuali‘i Highway is a decidedly more open landscape, with expanses of green space and agricultural uses. This mauka area is home to the campuses of Island School and Kaua‘i Community College, as well as the historic Kilohana Plantation and railroad, a prominent attraction. Pū‘ali, also known as Hulemanu Plateau, is an expanse of open space between the Puhi area and Nāwiliwili (see Figure 3-14).

The land use character is suburban with predominantly single family residential developments, shopping mall and big box retail, cul-de-sac road systems, and large lot single family homes with golf course frontages. Overall, Puhi provides a diverse mix of uses, residential dwellings, light industrial, retail and education. With these established uses, Puhi is poised to remain a regional destination into the future, and also to experience residential growth to support employment and educational opportunities there.

Challenges and Opportunities

Walkability throughout Puhi is currently limited and can be improved upon through concentrating growth within a 10-minute walk of the existing center. Toward that end, there are opportunities to accommodate higher-density residential and some mixed use along Puhi Road near the intersection with Kaumuali‘i Highway, and potentially also in selective areas across the highway on the mauka side.

In parallel with increased residential density, more commercial development along the highway frontage

near Puhi Road in the near term would service KCC and the nearby residential neighborhoods. Increasing commercial and residential density in the vicinity of KCC also supports the vision of Puhi evolving into more of a “college town” to support current students and provide a draw for enrollment. Improvements are needed to provide better pedestrian access across Kaumuali‘i Highway.

Kukui Grove Shopping Center and surrounding retail and service areas provide an island-wide concentration of retail shopping, with most of the big box retail centers located within or around the shopping center. The nature of these retail centers requires high volumes of cars and easy access. These areas tend not to be very walkable or provide a mix of uses. There is limited opportunity for redevelopment in existing in-

dustrial and big box commercial areas, with the possible exception of some infill in areas surrounding Kukui Grove, or even an eventual repurposing of the shopping center to incorporate mixed use.

While residents of Puhi are able to meet many of their basic needs (employment, housing, food, education) in the immediate area, pedestrian and bicycle facilities are lacking. There is also a need for better connections to the Līhu‘e Town Core, which is currently accessed primarily by Kaumuali‘i Highway. This can be accomplished with a priority transit corridor and circulator service, and an expanded network of bike lanes and paths. The Līhu‘e-Hanamā‘ulu Mauka Road will also provide some traffic relief to the area, enabling an easier flow of local traffic between Līhu‘e and Puhi.



Kilohana Plantation was built in 1936 by sugar baron Gaylord Wilcox, and is now a working farm with small gauge railroad tours.



Kukui Grove Center is the island’s largest shopping center.



Single family residence in Puhi



Kaua‘i Community College Complex



Kālepa Village is a multi-family housing project by the County Housing Office. It is located on the edge of the village center in close walking distance to neighborhood commercial, school and park.

3.10.3 Hanamā'ulu

Description

Hanamā'ulu is a former plantation village and housing subdivision that lies between the Hanamā'ulu Gulch and Kālepa Ridge. Kūhiō Highway bisects the community and links it to Līhu'e Town, Puhi and Kapa'a. In 1877, Hanamā'ulu Mill became the second mill for Līhu'e Plantation. In the 1950's and 1960's, Līhu'e Plantation opened several subdivisions and offered them for sale to their workers. These subdivisions surround the village center and flank both sides of Kūhiō Highway.

The small village center was a cluster of plantation structures including the Hanamā'ulu Trading Company and post office, both of which were destroyed by fire

in 2012 along with several other businesses. Portions of these structures have since been rebuilt. The village center has several small businesses including a gas station, warehouses, a convenience store, park and elementary school, all within walking distance from its neighborhoods. A recent housing project called Kālepa Village is a workforce housing project that is done in plantation vernacular and is the only multi-family development in the vicinity.

Challenges and Opportunities

Hanamā'ulu is a bedroom community, with a large population (about 1,200 homes) but with very few commercial services accessible within walking distance. Density within the Hanamā'ulu Core is already creep-

ing up against zoning requirements and likely to continue increasing due to the concentration of larger lot housing there. The majority of the population drives to Līhu'e or Puhi for basic amenities such as groceries, and similarly to reach their places of business and schooling. The current situation belies Hanamā'ulu's history as a plantation camp, self-sufficient and compact, where everyone walked and frequented local businesses to meet daily needs. Hanamā'ulu Stream Gulch provides a natural division between Hanamā'ulu and the Līhu'e Town Core, and one that affords Hanamā'ulu an opportunity to maintain its own distinct character.

Hanamā'ulu's future is one that should meet the needs of this burgeoning community, providing amenities, improvements to existing parks, infrastructure, and commercial uses to support the needs of residents, and adequate connectivity and transportation options to provide access to the Līhu'e Town Core and planned mixed use center at Wailani. There is a need for increased commercial along the Kūhiō Highway frontage to serve the basic needs of the Hanamā'ulu community. Bus service and access to commercial areas and transit stops can be greatly improved by adding sidewalks and lighting along key routes. The Līhu'e-Hanamā'ulu Mauka Road could enable Kūhiō Highway to become more pedestrian and bicycle oriented, allowing for a small walkable center along its frontage in Hanamā'ulu.

The Hanamā'ulu Beach Park along Hanamā'ulu Bay is a quiet, scenic spot minutes from Kūhiō Highway. There are picnic areas and showers at this beach, which is suitable for swimming, fishing, and snorkeling. The Hanamā'ulu Stream runs into the ocean at this location. This is an ideal park for residents of Hanamā'ulu-Līhu'e to spend time relaxing and enjoying their community. However, for a number of years, the beach park has become a site for illegal dumping and criminal activity. The County, in coordination with the Hanamā'ulu Community Association, has organized efforts to "take back the beach" through clean up



Mauka of Kūhiō Highway in Hanamā'ulu



Hanamā'ulu Beach Park

events, community watch, and frequent police patrol. The County should continue to support and work with the Hanamā'ulu community to ensure that this beach park is clean and safe.

DR Horton's Kohea Loa (also called "Hanamā'ulu Triangle") project provides a site for expansion of the existing school, as well as an adjacent parcel that may be considered for a long-desired Community Center as a gathering place for residents. Permitting additional density within developed areas of the Hanamā'ulu Core could relieve existing pressure on those areas, and allowing for additional residential uses mauka of Kūhiō Highway provides space to grow. The County would need to upgrade sewer service and other supporting infrastructure as required to support growth there.