

As the twentieth century progressed, calls were also made to remedy the conditions of plantation workers. Beginning in the early 1900's, a series of strikes occurred across the Hawaiian Islands. Many of these strikes occurred as a result of inadequate wages, abusive managers, and unsanitary living conditions. Drawing upon testimony from former plantation workers, Takaki (1983) outlines how the plantation resembled a pyramid:

At the top of the slope was the big house, the home of the manager; below were the “nicer looking” homes of the Portuguese, Spanish, and Japanese lunas; then the “identical wooden frame houses of Japanese Camp;” and finally the “more run-down Filipino Camp.” Moreover, the organization of the housing hierarchy was “planned and built around its sewage system.” The concrete ditches that serviced the toilets and outhouses ran from the manager's house on the highest slope down to the Filipino Camp on the lowest perimeter of the plantation. [Takaki 1983:92]

The reinforcement of such social hierarchies did little to support the happiness and well being of workers, rather, they reinforced the plantation manager's power over the physical and political bodies of their laborers. However, managers of the Makee Sugar Plantation realized the necessity of maintaining stable and healthy living conditions for their workers. To ensure the success of the company, the Makee Sugar Plantation began a series of infrastructure improvements:

. . . in 1929 Makee made plans to build custom plantation homes. The “new” Kumukumu Camp was built, along with new wells, and a brand new sewer system. Work began May 1, 1929 on the building of the new camp houses equipped with outhouses and connected to a main conveyance sewer. In a letter dated August 28, 1929, noting the progress on the well drilling at Kumukumu, the Kumukumu well was the eighth on record for Makee, having obtained a depth of 300 feet; Well numbers 5, 6 and 7 were drilled over the period of February 21 to May 14, 1928 (Plantation Archives, UH, Manoa). [Drennan and Dega 2007:15]

Contemporaneously, the Lihue Plantation Company, in 1920, mapped out an extensive building program in order to centralize field laborers in the two villages of Līhu'e and Hanamā'ulu. Previously, houses were scattered all over the plantation, accommodating the German immigrants who were brought by the German management of those days to till the Līhu'e fields. These scattered homes were highly acceptable to the Germans, but those who succeeded them preferred to reside in communities. The management also found it easier supervising central camps rather than isolated dwellings. So, whenever possible, the outlying cottages were moved to Hanamā'ulu or Līhu'e (Honolulu Star Bulletin, 1920). A preference for centralized communities would continue well into the 1930's and later influencing the habitation patterns of the Makee Sugar Company's laborers.

In 1934, the Lihue Plantation Company absorbed the Ahukini Terminal & Railway Company and Makee Sugar Company (Condé and Best 1973:167) (Figure 29). The railway and rolling stock formerly owned by Makee Sugar Company became the Makee Division of the Lihue Plantation. At this time, besides hauling sugarcane, the railroad was also used to haul plantation freight including “fertilizer, etc. . . . canned pineapple from Hawaiian Canneries to Ahukini and Nawiliwili, pineapple refuse from Hawaiian Canneries to a dump near Anahola and fuel oil from Ahukini to Hawaiian Canneries Co., Ltd.” (Hawaiian Territorial Planning Board 1940:11). Former plantation workers and *kama 'āina* growing up in Kapa'a remember when the cannery would send

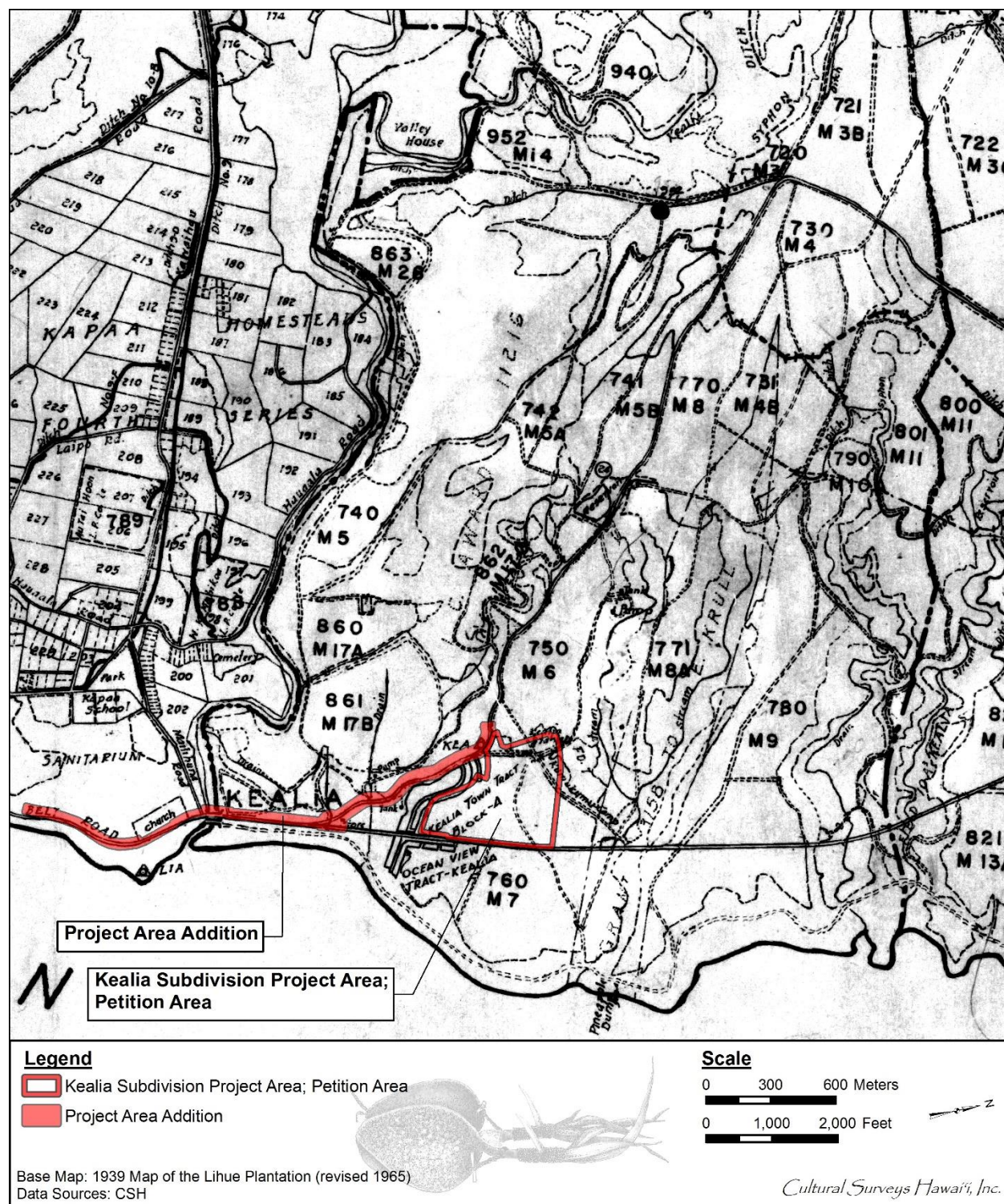


Figure 29. A portion of a 1939 Lihue Plantation field map (revised in 1965) showing “Kumukumu Camp” in the northwest corner of the Petition Area

their waste to the pineapple dump, a concrete pier just north of Kumukumu Stream (State Inventory of Historic Places [SIHP] # 50-30-08-789:H) by railroad. The structure is built over the water where the rail cars would dump the pineapple waste. The current would carry the waste to Kapa'a, which would attract fish and sharks (Bushnell et al. 2003).

4.3.3 The Pineapple Industry in Kapa'a

The pineapple industry, following successful harvests on the island of O'ahu, was subsequently expanded to the neighbor islands: "The pineapple plantation concept quickly spread to Kauai and Maui, perhaps because the already well-established sugar industry provided the near-ideal plantation model for those to whom it was not initially obvious" (Bartholomew et al. 2012:1392).

The early twentieth century witnessed the emergence of four companies within Hawai'i that would hold a monopoly on the pineapple industry well into the 1960s; these four companies were Hawaiian Pineapple Company founded by James Dole, Libby McNeil & Libby, "a major continental U.S. canner based in Chicago that became established in Hawaii in 1910," the California Fruit Canners Association, which acquired a Hawaiian pineapple canning company in 1911, and Maui Pineapple Company headed by Alexander & Baldwin (Bartholomew et al. 2012:1392; Hawkins 2011).

According to Bartholomew et al. (2012): "The first pineapple company on the island of Kauai was established in 1906. Over the years several additional companies were organized there, some by citizens of Japanese ancestry (1392)."

Additionally, firsthand accounts of "old Kaua'i" include descriptions of pineapple fields privately owned and operated by residents of Kapa'a Ahupua'a. Rita De Silva, in an editorial for *The Garden Island* newspaper, described the landscape of the *mauka* portions of Kapa'a Ahupua'a: "Pineapple fields were planted around Kapahi by private owners (some [Hawaiian] Fruit Packers' employees who sold the fruit back to the cannery, which also owned fields in Kapahi" (De Silva 2016).

Hawaiian Fruit Packers, founded in 1937 through the "reorganization of a company initially started by a group of ethnic Japanese growers," was the only Kaua'i cannery (located in Kapa'a on Kawaihau Road) to continue operations well into the 1960s (Bartholomew et al. 2012:1392; De Silva 2016). Stokeley-Van Camp (representing the merged Van Camp Packing Company and Stokely canned tomato company) bought stock in the company in 1939 and became the exclusive distributor for Hawaiian Fruit Packers' pineapple production (Auchter 1951; Bartholomew et al. 2012:1392).

In 1913, Hawaiian Canneries Company, Ltd. opened in Kapa'a at the site now occupied by Pono Kai Resort, just north of Waika'ea Canal (Cook 1999:56). A resident of Kapa'a described how the town "came alive" after the cannery opened (Fernandez 2009:48). Following the completion of their plantation contracts, the Japanese plantation workers moved into town and "opened mom and pop grocery stores" (Fernandez 2009):

Portuguese opened dairy farms in the hinterland or repair shops in Kapa'a. Former plantation laborers became farmers, raising pineapple and other crops for sale. Service businesses started: the slop-gatherer who came to homes to take the garbage as feed for his pigs, the fish monger selling fish on their street, the cattle rancher

who slaughtered cows and provided fresh meat to the market, the traveling wagon man hawking fresh fruits and vegetables. [Fernandez 2009:48]

Kapa‘a became “an integrated multi-racial town, containing an extraordinary mix of people living and working together in harmony” all due to the new cannery (Fernandez 2009:48). In 1923, Hawaiian Canneries Company, Ltd. purchased the approximately 8.75 acres of land they were leasing through the Hawaiian Organic Act (Hawai‘i Bureau of Conveyances, Grant 8248). At that time the cannery only contained four structures but by 1956, 1.5 million cases of pineapple were being packed. By 1960, 3,400 acres were in pineapple and the cannery employed 250 full-time and 1,000 seasonal workers (*Honolulu Advertiser*, 20 March 1960) (Figure 30 and Figure 31). In 1962, Hawaiian Canneries went out of business due to competition from canneries in other countries.

4.3.4 Keālia Town in the Late 1900s

The ground work for the formation of Keālia Town (and its unique culture and identity during the 1940s, 1950s, 1960s, and 1970s) was laid during the early days of the sugar industry. As a “corporate-dominated sugar economy” made significant headway within the Islands, it soon became apparent that the available workforce was inadequate to meet the demands of large scale sugar production (Takaki 1983:15). Historians of Hawai‘i’s labor history recall that by the middle of the nineteenth century, the population of Native Hawaiians was about one fourth of what it was during the late eighteenth century. The limited available workforce, coupled with culturally incongruous work, was posing a significant problem for sugar planters. The University of Hawai‘i’s Center for Labor Education and Research provides further historical context for labor shortages and the subsequent importation of foreign labor:

Native Hawaiians, who had been accustomed to working only for their chiefs and only on a temporary basis as a ‘labor tax’ or *‘Auhau Hana*, naturally had difficulty in adjusting to the back-breaking work of clearing the land, digging irrigation ditches, planting, fertilizing, weeding, and harvesting the cane, for an alien planter and on a daily ten to twelve hour shift. A song of the day captures the feelings of these first Hawaiian laborers:

<i>Pua Mana No</i>	Sure a Poor Man
<i>Nonoke au i ka maki ko,</i>	I labored on a sugar plantation,
<i>I ka mahi ko.</i>	Growing sugarcane.
<i>Ua ‘eha ke kua, kakahe ka hou,</i>	My back ached, my sweat poured,
<i>Poho, Poho.</i>	All for nothing.
<i>A ‘ai‘e au i ka hale ku‘ai,</i>	I fell in debt to the plantation store,
<i>A ‘ai‘e au i ka hale ku‘ai.</i>	I fell in debt to the plantation store,
<i>A noho ho‘i he pua mana no,</i>	And remained a poor man,
<i>A noho ho‘i he pua mana no.</i>	And remained a poor man,
<i>A ha‘alelo au I ka‘imi dala,</i>	I decided to quit working for money,
<i>Dala poho.</i>	Money to lose.



Figure 30. “Aerial View of Kapa‘a, Kauai, Hawaii, Looking Landward” ca. 1933 (Bushnell et al. 2003)



Figure 31. Kaua'i women working in the pineapple fields of Kapa'a (date known) (*Garden Island* 1 December 2010)

<i>E noho no e han ama ka la,</i>	Far better work day by day,
<i>Ka'ai o ka la.</i>	Grow my own daily food.
<i>Ia ha'i ka waiwai e lui ai,</i>	No more laboring so others get rich,
<i>Ia ha'i ka waiwai e lui ai,</i>	No more laboring so others get rich,
<i>E noho au he pua mana no,</i>	Just go on being a poor man,
<i>E noho au he pua mana no.</i>	Just go on being a poor man.

This resistance on the part of the Hawaiians to work for money, when the old style of working for themselves and their families suited them better, came to a head just a few years after the first sugar plantation opened at Koloa. In 1841 local Hawaiians walked off their jobs in the first recorded Hawaiian strike. Not actually organized into a union, the Hawaiian workers stayed out for just eight days to have their pay increased by about 2 cents an hour or 25 cents a day.

Though this strike was not successful, it showed the owners that the native Hawaiians would not long endure such demeaning conditions of work. Faced, therefore, with an ever diminishing Hawaiian workforce that was clearly on the verge of organizing more effectively, the Sugar planters themselves organized to solve their labor problems. [Center for Labor Education and Research n.d.]

With the outbreak of the American Civil War in 1864, the demand for and the price of sugar skyrocketed globally (Center for Labor Education and Research n.d.). As a result, commercial sugar production in Hawai'i dramatically increased, with planters quick to draw attention to their need for more field hands. The Kingdom of Hawai'i soon established a Bureau of Immigration to assist planters with the importation of foreign labor (Center for Labor Education and Research n.d.). The signing of the Sugar Reciprocity Treaty in 1876 once again spurred planters to seek labor from foreign shores; they "experimented with South Sea Islanders, Portuguese, Puerto Ricans, Koreans, Germans, Russians, Spaniards, Norwegians. . . Chinese [and Japanese]" (Center for Labor Education and Research n.d.). For commercial sugar to succeed, planters soon realized the need to establish a cheap, servile labor force "unable to organize and assert itself" (Center for Labor Education and Research n.d.). As the Committee on Labor of the Planters' Labor and Supply Company declared in 1883: ". . . the experience of sugar growing, the world over, goes to prove that cheap labor, which means in plain words, servile labor, must be employed in order to render this enterprise successful" (Alexander et al. 1883 cited by Center for Labor Education and Research n.d.).

Among those resorting to imported labor was the Makee Plantation. As one former Keālia resident recalled, "Makee Plantation, like other plantations, segregated each race into groups, having them live in a camp with their own race" (Kaua'i Historical Society n.d.:1) (Figure 13). Through segregation planters were able to "divide and rule," effectively discouraging any attempt to organize or unionize. The utilization of the "divide and rule" tactic may be inferred by the following recollections of one Keālia Camp resident, a daughter of John F. Barretto (a train operator for the Makee and Lihue Plantations):

The Japanese lived near Kealia river having their church & hall in the same area; along with their Bon Dance celebrations . . . Next to the Japanese were the Filipinos.

They had a hall for their celebrations also. Looking mauka towards cane fields were the Chinese (Pakes). . . There was a Spanish camp too!

. . . Kumukumu camp. Many Portuguese also lived there! The Portuguese had their celebrations such as Holy Ghost celebrations such as Holy Ghost Feasts, with Azorean & Madeiran dances in Kealia park; with an all Portuguese band, marching with their flags, where they came from. Services were held at St. Catherine's Catholic church in Kealia. . .

Another camp was Halaula. There were a mixture of races: Portuguese, Portuguese Ricans [*sic*], Japanese, Filipinos & Spanish! [Kaua'i Historical Society n.d.:1-7]

Mr. Barretto's daughter also recalled the plantation homes themselves, describing their layout and construction, in addition to notable features that would have been located near a home,

All homes were painted white wash in & out; green tar paper roof; T & G floor boards, 1x12 rough lumber for the walls. No ceilings. Up & down windows. Had a kitchen, where we washed our faces & brushed our teeth. Took a bath in the washhouse in a shower! It's where mom did her laundry! It had 1 window! The homes were comfortable enough to live in. Had enough ventilation; kept rain, wind & sun away! Sometimes our home had rats, mice, scorpions & centipedes crawling about! First outhouse {lua} was over an irrigation ditch; where sewage went into the ocean: where we fished, swam, surfed, picked opihi & pipipi. It had 2 {pukas} holes in them: 1 for big butts & the other for small butts. Later years, Board of Health made Kealia Plantation take away the luas across the ditch and put it into each lot. Only Bosses {lunas} had beautiful homes with inside bathrooms! Employee's homes had runny water in kitchen & wash house. We used lanterns! No electricity! About the 1930's electricity was installed. It had a long electric cord with a globe and switch (knob) to turn on & off. Homes had no ceilings! Our home had 3 bedrooms, parlor, kitchen, & dining room. Had a kerosene stove: where mom cooks her meals & baked Portuguese white & sweet breads [Figure 32]. Boiled her clothes before washing the clothes. Mom planted Kale (Portuguese cabbage) head cabbage, stringbeans - either bush or pole. Looked around community for poles. Found & used poles from koa trees! It served its purpose! Also planted Irish potatoes, green onion, parsley, watercress, pipinela (squash), some kind of herbs & kabasa. Mom also raised ducks, laying chickens & also hatched chicks. Sometimes she sold eggs. Sometime the laying chickens peck on the eggs & broke them; so, mom & some of us went to Kealia beach to pickup seashells. She mixed the chicken feed with the seashells & that did the trick! No more cracked eggs!

When Lihue Plantation took over Makee Plantation in 1934 many people moved from Kealia to Lihue! As Lihue Plantation needed these workers; Kealia's homes became empty. Lihue Plantation moved people from the Spaulding Monument, Halaula or Kumukumu areas to live in these empty homes. [Kaua'i Historical Society n.d.:1-7]

The recollections of Mr. Barretto's daughter also index a high degree of self-sufficiency. As plantation wages were often low and families large, many camp residents were required to



Figure 32. Remnant of Portuguese oven utilized for baking breads within lower Keālia Ahupua‘a, south of the current project area

supplement their diets with home-raised produce and livestock. A Keālia resident also recalls the ways in which food was “put on the table” by Keālia Camp’s residents:

My paternal grandparents: Francisco & Francisca Barretto & family raised wild pigs! Some of their sons were pig hunters! By doing so, it put more food on the table! Raised hunting dogs! They fished at Kealia landing & at the beach house! Also picked opiis [*opihi*] & pipi-pis [*pipipi*]. We ate eel, ‘o‘opu & pun tat [catfish], opae too! During the year they went to the beach house for a picnic & fishing! Beach House is in the outskirts of Kealia. Lihue Plantation; year’s ago built a beach home there for the bosses! By the time grandparents & families fished, swam there the home was gone! There was no sight of a home! It was a nice place to fish & a picnic! In Kealia our yards were fenced! My dad & brothers were also pig hunters. My brothers was the second generation of pig hunters! . . . They hunted from early morning until sometime in the evening! At first, they were not allowed to carry a rifle; later as the years went by they bought rifles. While dogs come[re]d the pig [one] of my brothers would killed it with a knife! Had a model Tor a Model A truck for hunting & fishing. . . Whoever went with my dad & brothers got a piece of meat. We didn’t have no refrigerator or freezer; so we improvised: the cut pieces of meat after it was cleaned & put Hawaiian salt from the ocean. . . [Kaua’i Historical Society n.d.:3]

The self-sufficiency of workers, or rather their ability to supplement “their own subsistence needs” also proved beneficial to planters, allowing them “to minimize both wages and production costs” (Takaki 1983:9). Despite cultivating crops of their own, plantation workers also visited the plantation store.

Keālia Store was located in a long building that contained a hardware department and a grocery department which also sold produce and fruits. Fish, meat, and pork were sold at Kealia Meat Market. Keālia Store also had an upstairs department where clothing was sewn and hemmed by a Japanese man. The United States Post Office was located within a section of Keālia Store. Next to Keālia Store was the gas station owned by Makee Plantation. The gas station sold gas and kerosene and had an air hose for car tires. Kerosene was provided to Keālia families free of charge (Kaua’i Historical Society n.d.:2-7). Previous archaeological studies (Dega and Powell 2006; Drennan 2007) record an old store and school as “the former Makee Sugar Company office (later as the Kealia School House and store),” noting its present designation as the “Kealia Kountry Store and Post Office. . . just north of the [Keālia Road and Kūhiō Highway] intersection. . . and still awaiting renovation.” (Drennan 2007:10).

During the 1940s, entertainment included visits to the movie theater. In a written reminiscence, Mr. Barretto’s daughter recalled visits to the movie theater for entertainment,

. . . on Sunday afternoons we footmobiled down Mailehune Rd. then Kuhio Hwy. to Kealia theatre to see a movie! Theatre was owned & operated by Fernandes family: owners of Roxy theatre at that time! Ruth Kano, her dad King Kano worked in the theatre. [Kaua’i Historical Society n.d.:1-7]

As the years progressed, community solidarity formed out of the many shared responsibilities and interests of plantation camp residents:

... Gradually, in the plantation camps, far away from their homelands, they created new communities. Over the years, they came to feel a love for the land, the *'aina*, and accepted Hawaii as a place to settle and raise their families. . . On the plantations, laborers developed a working-class culture and consciousness - an identity of themselves in relationship to the process of production. While Hawaiians, Chinese, Japanese, Koreans, Portuguese, Filipinos, and laborers of other nationalities retained their sense of ethnicity, many of them also felt a new class awareness. As they worked together in the fields and mills, as they built working class communities in their camps sharing their different ethnic foods and speaking pidgin English, and as they struggled together against the bosses on the picket lines, they came to understand the contribution they had made as workers to the transformation of Hawaii into a wealthy and profitable place. [Takaki 1983:179]

Community bonds, bonds forged by love for family and homeland, were strengthened upon the onset of World War II. During World War II, many young men from Keālia were drafted into the U.S. Armed Forces. While some of these young men were sent to Schofield Barracks on O'ahu for training, Keālia Town also made preparations for the possibility of war (Kaua'i Historical Society n.d.:3-7).

We were inoculated, had food & gas rations; everyone were distributed a gas mask!
 ... Had curfew! Blackened our windows so the light will not be seen from outside!
 There were no movies or celebrations at night! Each section of Kealia had a warden.
 ... Wardens walked along Kealia beach looking for any lights coming from the ocean from anywhere in the beach; for saboteurs & any lights coming from any homes! [Kaua'i Historical Society n.d.:3-7]

Following the attack on Pearl Harbor in 1941, all Japanese men were categorized as 4C (enemy alien), and thus could not serve in the United States military (Inahara 2005). Upon the announcement of the formation of the Americans of Japanese ancestry combat regiment, nearly 10,000 *nisei* (a native-born citizen of the United States whose parents were Japanese immigrants) men from Hawai'i volunteered for 3,000 positions within the combat team (Friends and Family of Nisei Veterans 2018). Among the very first to volunteer were *nisei* men from Keālia (Figure 33).

As the mid-century approached, a relative era of peace was ushered in, and many residents of Keālia returned to their lives as normal. The 1950s was a period of recovery and suburban and economic growth. It was also marked by many firsts in art as well as "inventions, and discoveries that would become symbolic of the 20th century as a time of looking forward" (Rosenberg 2018). The promise of material prosperity, home ownership, or some form of the "American residential experience" (Jackson 1985:6) seemed ever more attainable. Keālia, an outlying residential area during the 1950s, was typified by single-family homes on small plots of land. Oftentimes these homes were situated very close to one another. Although situated some way from the center of plantation or urban activity, many families decided to maintain a permanent residence in Keālia. Within a Keālia reminiscence, the prominent families of Keālia were identified:

On Kealia Rd. & a dirt road lived the Ito's, Watanabe's, Wakuta's, Manuel Arruda's, Joe Goveia's & others . . . About ½ mile there were other homes: Salsedo's, Balbino's, Ceasar Augusto's, William & Lucy Freitas & family, Celesino Augusto & family, Antonio & Angelica Augusto's, Manuel Ornella's, Balbino's



Figure 33. “First man to have applied for voluntary induction at local board 2, Lihue, Kauai, Hawaii when formation of the AJA [Americans of Japanese ancestry] combat regiment was announced[.] Tatsuo Tsuruda, twenty-four, of Kealia [a clerk at the Lihue Plantation Company] was also one of the first in the territory to take his physical examination. . .” [United States Office of War Information 1943]

wife Mariana & family, the Martin's family & last was the Duarte's family! Eventually all the people from Halaula were moving to Kealia flats; my sister Lucy and William Freitas & family including all the rest of the families living in Halaula later moved to Kealia! . . . Some others that lived in Kealia: Ibia's, Pascua's, Aringorayan's, Dela Cruz's, Deligdig's, Takashiro's, Kubo's, Baldonado's, Soma's, Migia's, Furumoto's, Yamaguchi's, Yamane's, Arinaga's, Wada's, Hashimoto's & Asunsion. [Kaua'i Historical Society n.d.:2]

The proximity of the plantation hospital or dispensary also allowed residents to remain within their local area for basic goods and services. Within the Keālia reminiscence, "Kealia Hospital" is described in detail:

Kealia hospital was a U-Shape brown building. Cousin Mary Rodrigues & Bert Aqui worked there! Dr. Bill Belfor was the physician in charge at Kealia hospital! Arinaga's home now was once Dr. Belfor's home! Bert Aqui's home was at Kealia bluff. Whenever a lady in the community gives birth; a member of the family takes the Information to Kealia Hospital: giving parents' names, ages, where they work, name of child, birthdate & birth place, male or female, roughly the weight & length & whether child were born alive or dead! These are some of the questions answered at that time! When anyone in Kealia passed away; Makee & Lihue Plantations made a wooden (coffin) for the poor people to be buried in. Also dug hole {puka} & covering it, was done by plantation workers. People couldn't afford it! This is one of the things Makee & Lihue Plantations did for their workers & families! [Kaua'i Historical Society n.d.:2-3]

Entertainment, especially for children, was another key element of life within the plantation camps. The daughter of John F. Barretto recalled life in the camp as a young child, describing home made toys and games in the local park:

In the park I played with my younger brother & sisters, cousins & the McKeague's children: played soft ball & hide & seek! We never had any disagreements. Had community celebrations there also! Other games played were: yoyo's, 1 & 5 holes with agates {marbles}, tops, ka rope: single & double, Jacks, kite flying! Yoyos were made by each child from empty spool thread containers: strings were from the rice bags. Used cooked rice for glue! Tops also was made by the boys who played with it - strings were from rice bags also. On the dirt road in front of our home: the boys made a circle on the road & put at least 1 top in the middle: the object was to knock out the top in the middle of the circle. Sometimes they would spin the top to see if any boy could put it in the palm of their hand. . . We played Tarzan, Jane & cheeta in the tall koa trees during our school vacations! Made our own slingshots! We shot at birds in the trees; but not at each other or at homes! We would get it with the belt. . . Our cousins & my brother Mack, sister Hilda & I swam in the mill's waste water stream. . . [Kaua'i Historical Society n.d.:2]

On Sunday, 28 October 1951, Lihue Plantation began its annual practice of giving train rides to children. The plantation treated nearly 1,000 children to three train rides after firing up the boiler of its semi-retired locomotive No. 4, which normally pulled two flat cars used to haul sugar, pineapple, and other freight to and from the port at Ahukini. Children from Līhu'e left the train

station by the mill, rode past the airport, Hanamā‘ulu Beach and Marine Camp to the Wailua Bridge and then returned. At Hanamā‘ulu, children boarded the flat cars and departed the Hanamā‘ulu Office to Waipouli and went back. The third train made its way from Keālia along the shoreline to Anahola and back to Keālia. In 1952, around 1,200 Kaua‘i children experienced Lihue Plantation’s train rides. And the following year, on Monday, 28 December 1953, locomotive No. 4 hauled some 2,000 children between Kapa‘a and Keālia and between Līhu‘e and Hanamā‘ulu. Lihue Plantation continued to give train rides to children until at least 1955. Ginger (Beralas) Soboleski discussed a train ride she took with her father, Al Beralas, a Lihue Plantation employee in 1955:

Right across from the Lihue Mill was a plantation camp. On Sunday mornings people would go to that camp to board a Lihue Plantation sugar train for a ride in its empty cane cars. I rode on that train once as a little girl. The cane cars had chains on the sides to hold sugarcane. We would board the cars, hold onto those chains, and the locomotive would start, and we would slowly journey north on the tracks, over the trestle above Hanamāulu Beach, and all the way up to Marine Camp. Then the locomotive would chug back to the Lihue Mill. What fun! [Soboleski 2018]

Lihue Plantation was the last plantation in Hawai‘i to convert from railroad transport to trucking (Condé and Best 1973:167). “By 1957 the company was salvaging a part of their plantation railroad, which was being supplanted by roads laid out for the most part on or close to the old rail bed” (Condé and Best 1973:167). By 1959, the plantation had completely converted over to trucking. The Cane Haul Road is thought to date to the late 1950s and follows the alignment of the old railroad until just before the end of the bike path near ‘Āhihi Point.

Although recollections of Keālia in the 1940s, 1950s, and 1960s recall a vibrant multi-ethnic community, population numbers within the community were steadily declining for nearly 30 years. The slow dispersal of Keālia Town following the incorporation of Makee Sugar Company into Lihue Plantation in the 1930s was largely to blame. Many of the plantation workers bought property of their own and moved out of plantation camps. The plantation camps that bordered Kūhiō Highway were disbanded in the 1980s. The Lihue Plantation began to phase out in the last part of the twentieth century. In 1997, the entire *ahupua‘a* of Keālia was sold off in an effort to downsize Amfac’s landholdings. Because Keālia was the most distant from the Lihue Plantation sugar mill, it was considered the least profitable (*Honolulu Advertiser*, 7 July 1997). The Lihue Plantation completely folded at the end of the twentieth century.

Section 5 Previous Archaeological Research

Previous archaeological studies conducted within and in the vicinity of the Petition Area are depicted on Figure 34. Previous archaeological studies conducted within and in the vicinity of the project area addition (sewer line installation project area) are depicted on Figure 35. All relevant archaeological studies are summarized in Table 5. Previously identified historic properties within and in the vicinity of the Petition Area are depicted on Figure 36. Previously identified historic properties within and in the vicinity of the the project area addition (sewer line installation project area) are depicted on Figure 37. All previously identified historic properties are discussed in Table 6. A synopsis of prior studies in the vicinity follows.

5.1 Early Studies in the Vicinity of the Petition Area and Project Area Addition (Sewer Line Installation Project Area)

5.1.1 Bennett 1931

The first attempt at a comprehensive archaeological survey of Kaua'i was undertaken by Wendell Bennett of the Bishop Museum during the 1930s. It should be noted that Bennett's work was conducted after commercial sugarcane cultivation and other historic activities had destroyed or damaged many cultural resources. Also, most of the cultural resources documented by Bennett were relatively easy to access, conspicuous, and obvious. In the vicinity of Keālia Ahupua'a, Bennett's report identified Site 111, a "ditch, south of the Keālia Valley, inland," described as a "large, simple dirt ditch, about 6 feet in width and of varying depths which is traditionally referred to as a Hawaiian ditch" (Bennett 1931:128). Bennett also discussed the taro terraces within the small valleys in the foothills of Kapa'a (Bennett 1931). Bennett also noted (but apparently did not locate) Site 112, described as "Kawelomamaia heiau, said to have been located where the Kawelomamaia stream runs into the sea north of Keālia" (Bennett 1931:129). Bennett recorded no sites within Keālia Ahupua'a itself.

5.2 Recent Archaeological Studies in the Vicinity of the Petition Area and Project Area Addition (Sewer Line Installation Project Area)

5.2.1 Folk and Hammatt 1991

Folk and Hammatt (1991) documented the first of these inadvertent burial finds from SIHP # 50-30-08-1851 in 1991 and noted the presence of historic artifacts and traditional Hawaiian midden in the vicinity. They also noted the extensive disturbance from sand mining, which was responsible for uncovering the remains. They suggested "it is possible that the burials . . . are directly associated with the Land Commission Awardees" whose parcels were located in the immediate vicinity (Folk and Hammatt 1991:2). They recommended "further activity at the sand mining site should be restricted" and stated the area "should be left to vegetate naturally as is already occurring. . ." As "all of the human bone observed was fragmented and disarticulated," it was not possible to determine whether the remains were pre-Contact or post-Contact or whether they were Native Hawaiian (Folk and Hammatt 1991:2).

5.2.2 Kikuchi and Remoaldo 1992

In 1992, Kikuchi and Remoaldo (1992) completed Volume I of a survey of the cemeteries of

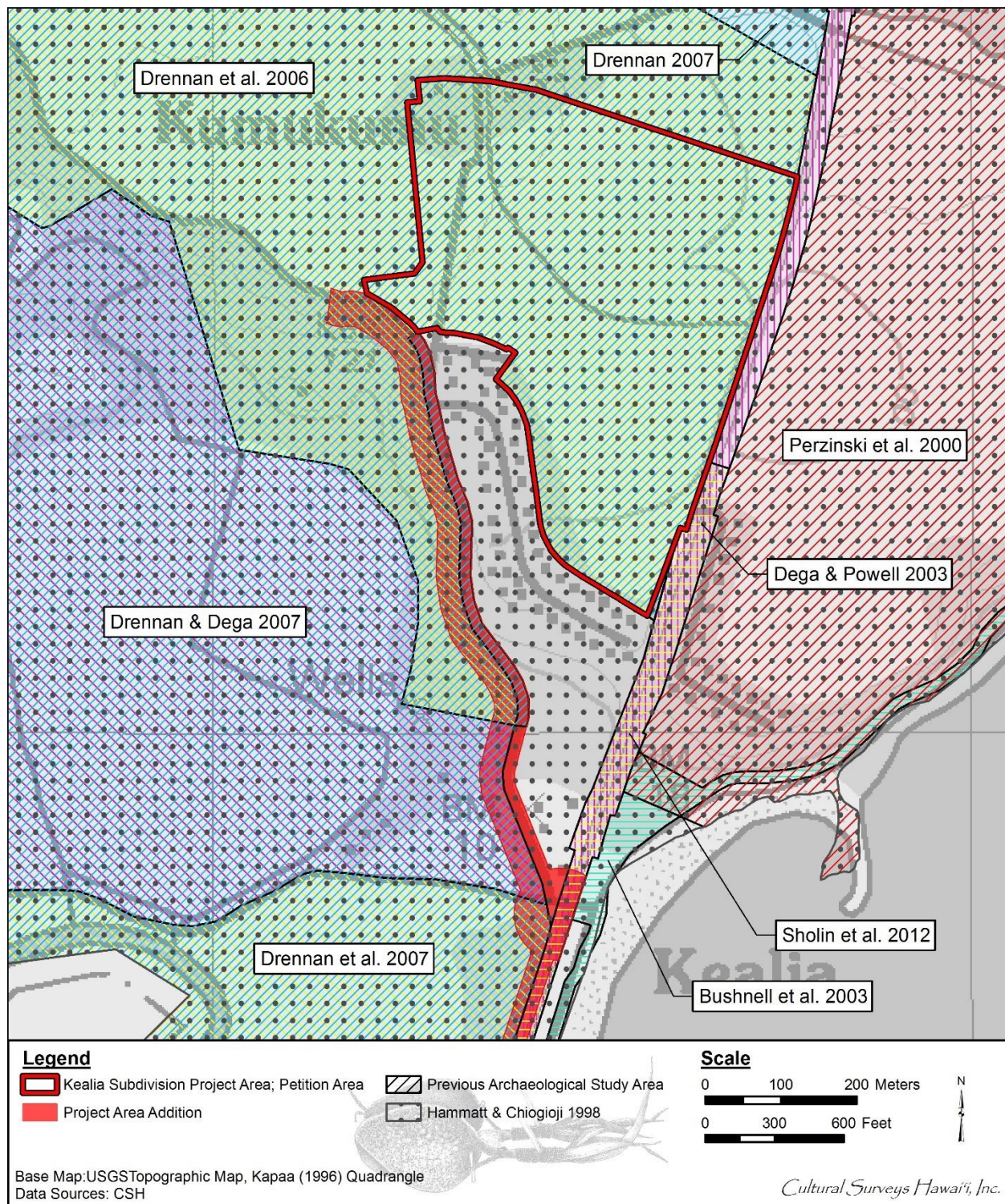


Figure 34. Previous archaeological studies conducted within and in the immediate vicinity of the Petition Area

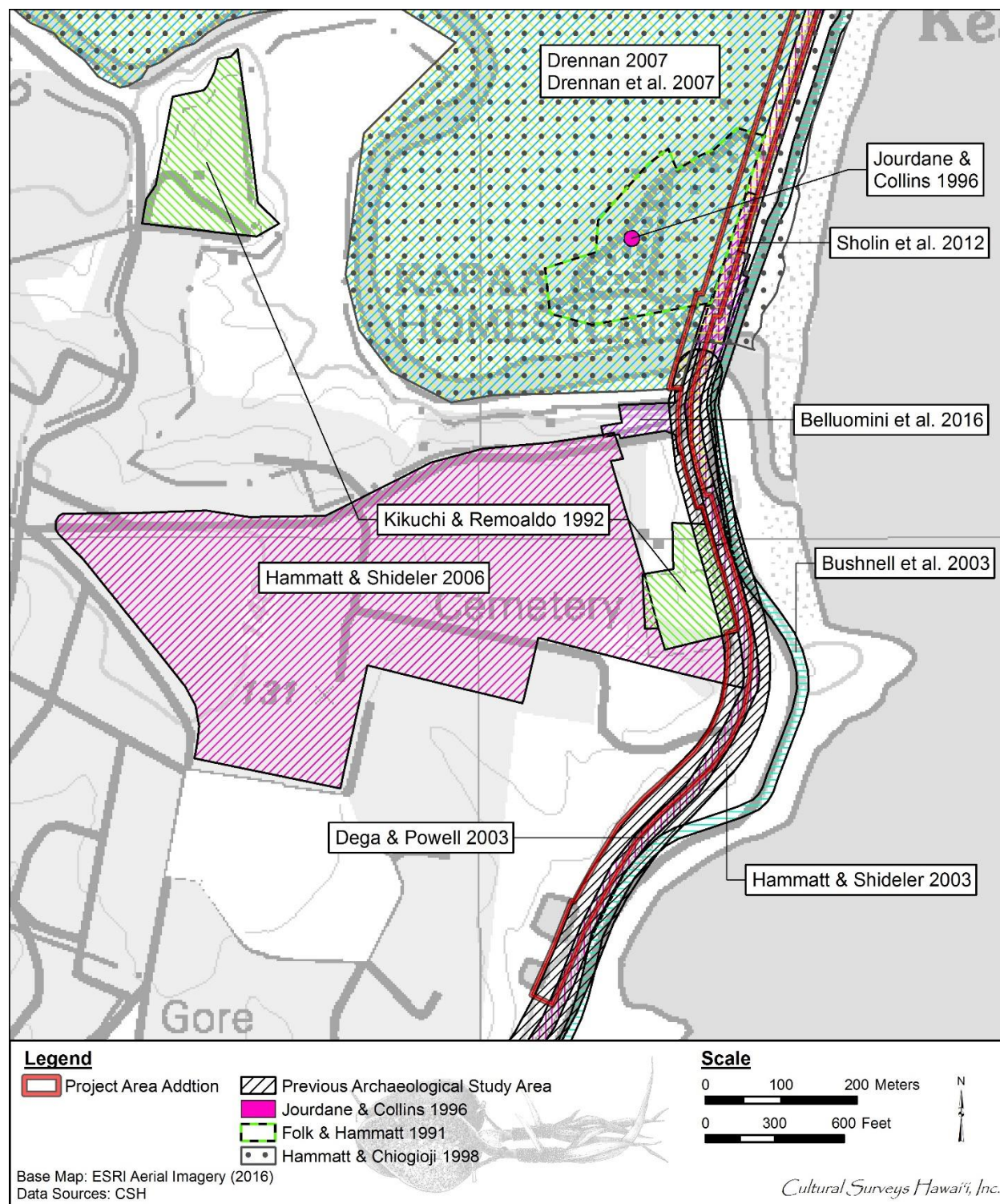


Figure 35. Previous archaeological studies conducted within and in the vicinity of the project area addition (sewer line installation project area)

Table 5. Previous archaeological studies within and in the immediate vicinity of the project area (including the Petition Area)

Reference	Type of Study	Location	Results (SIHP # 50-30-08 ****)
Bennett 1931	Archaeology of Kaua'i	Island-wide	Discusses terracing and irrigation ditches located along Kapa'a Stream
Handy and Handy 1972	Native planters study	Archipelago-wide	Emphasizes agricultural production rather clumped along Keālia side of Kapa'a Stream seaward of its confluence with Keālia Stream
Ching 1982	Archaeological reconnaissance	Kekaha, Kīpū, and Kumukumu, TMKs: [4] 1-2-002:001, 009, 021, 040; 3-4-006:012; and 4-7-004:01	No significant findings, however, wild taro noted growing near stream as well as other vegetation (banana, <i>haole koa</i> , java plum, lily <i>wai</i> [water lilies], monkey pod, guava, <i>laua'e</i> , swordtail fern, African tulip, <i>he'e</i> ["octopus tree"]) and assorted grasses and bushes
Folk and Hammatt 1991	Archaeological inventory survey (recorded as an archaeological assessment)	Bend of Kapa'a River, just inland of Kūhiō Hwy	Burial finds (SIHP # -1851); noted presence of historic artifacts and traditional Hawaiian midden in vicinity; also noted extensive disturbance from sand mining
Komori 1993	Burial report	Palikū (Kuna) Beach, "Donkey Beach"	Burial find, SIHP # -1899
Jourdane and Collins 1996	Burial report	Bend of Kapa'a River	Identified additional disarticulated human remains associated with SIHP # -1851
Hammatt and Chiogioji 1998	Archeological reconnaissance survey and assessment	6,690.9 acres within Keālia Ahupua'a	No cultural resources identified within vicinity of project area
Perzinski et al. 2000a	Archaeological inventory survey	300-acre <i>makai</i> parcel at Keālia, TMK: [4] 4-7-004:006	Identified SIHP # -0789 within vicinity of project area including Cane Haul Rd (SIHP # -0789: Feature A), Keālia Landing (SIHP # -0789: Feature B), and a dynamite storage bunker (SIHP # -0789: Feature C)

Reference	Type of Study	Location	Results (SIHP # 50-30-08 ****)
Bushnell, Mann, Borthwick, Bush, Tulchin, Shideler, and Hammatt 2003	Archaeological inventory survey	Proposed Kapa'a–Keālia bike path, Kapa'a and Keālia Ahupua'a	Identified three new cultural resources within vicinity of project area including a buried cultural layer with an associated human burial (SIHP # -2074), Old Kauai Belt Hwy bridge foundation (SIHP # -2075), and a possibly modern petroglyph (SIHP # -2076); identified a new sub-feature of SIHP # -0789: Fea. A, Kapa'a Stream Cane Haul Rd Bridge (SIHP # -0789: Fea. A, Sub-Fea. 1)
Dega and Powell 2003	Archaeological monitoring	Kūhiō Hwy from Moloa'a through Hanamā'ulu	No cultural resources identified within vicinity of project area
O'Hare et al. 2003	Burial treatment plan	Keālia Ahupua'a, TMK: [4] 4-7-004:001	Burial treatment plan for SIHP # -2074 (not included on Figure 34)
Drennan et al. 2006	Archaeological inventory survey, Phase I	Portion of 2,008-acre property in Keālia Ahupua'a, TMKs: [4] 4-7-003:002 por. and 004:001 por., part of Keālananai Development project	No cultural resources identified within vicinity of project area
Drennan 2007b	Executive summary report on archaeology	All of 2,008-acre property in Keālia Ahupua'a, TMKs: [4] 4-7-003:002 por. and 004:001 por., part of Keālananai Development project	Summary report of Keālananai Development project including all four phases of project; 261 archaeological sites identified within vicinity of project area

Reference	Type of Study	Location	Results (SIHP # 50-30-08 ****)
Drennan and Dega 2007a	Archaeological inventory survey, Phase II	Portion of 2,008-acre property in Keālia Ahupua'a, TMKs: [4] 4-7-003:002 por. and 004:001 por., part of Keālananai Development project	Six new plantation-era historic properties identified within vicinity of project area including railroad rails and foundations (SIHP # -7015), sugarcane plantation infrastructure including a metal tank, structural supports, cart tracks, and foundations (SIHP # -7017), irrigation ditches, sluice gates, and a bridge (SIHP # -7018), a bridge, foundations, and irrigation pipes (SIHP # -7019), concrete foundations and a culvert (SIHP # -7020), and bridge/transportation infrastructure, a culvert and drainage pipes (SIHP # -7021).
Drennan and Dega 2007b	Archaeological inventory survey, Phase IV	Portion of 2,008-acre property in Keālia Ahupua'a, TMKs: [4] 4-7-003:002 por. and 004:001 por., part of Keālananai Development project	Total of 37 new historic properties comprised of 66 features identified within vicinity of project area; historic properties identified consisted of plantation-era findings and/or historic (SIHP #s -1115 through -1118, and -1120 through -1135 with sub-feature designation when needed); SIHP #s -1119 (terrace and upright) and -1136 (traditional petroglyph) are pre-Contact and/or historic
Drennan et al. 2007	Archaeological inventory survey, Phase III	386 acres in Keālia Ahupua'a, TMKs: [4] 4-7-003:002 por. and 004:001 por., part of Keālananai Development project	Six historic properties identified within vicinity of project area including plantation-era concrete staircase (SIHP # 7034), plantation-era staircase (SIHP # -7035), plantation-era concrete foundation, and brick and mortar structure (SIHP # -7037), human burials, burial pit outline and fire pit (SIHP # -7040), plantation-era red brick and concrete wall/foundation (SIHP # -7041), and Keālia Historic Town Complex (SIHP # -7042)

Reference	Type of Study	Location	Results (SIHP # 50-30-08 ****)
Sholin et al. 2012	Archaeological monitoring	Keālia Beach Corridor at Kūhiō Hwy	Reidentified two historic properties: SIHP #s -884, a cultural deposit and -7034, a concrete staircase, and identified five new historic properties: SIHP #s -2161, a secondary deposit with associated human remains; -2162, a secondary and primary deposit with associated human remains; -2163, a fire-pit feature; -2165, a cultural deposit; and -2166, a fire pit feature
Belluomini et al. 2016	Archaeological inventory survey	Kapa‘a Stream Bridge, TMKs: [4] 4-6-014:024 por., 033 por., 090 por., 092 por. Kūhiō Hwy and Mailihuna Rd ROW; TMK: [4] 4-7-003:001 por., and 4-7-008:042 por. Kūhiō Hwy ROW	Historic properties identified included two newly identified historic properties (SIHP # -2278 [Kapa‘a Stream Bridge], and SIHP # -2279 [plantation era water control complex]), as well as two previously documented historic properties (SIHP #s -0789A Sub-Fea. 1 [remnant portion of the original Keālia Bridge], and -2075 [historic bridge foundation])

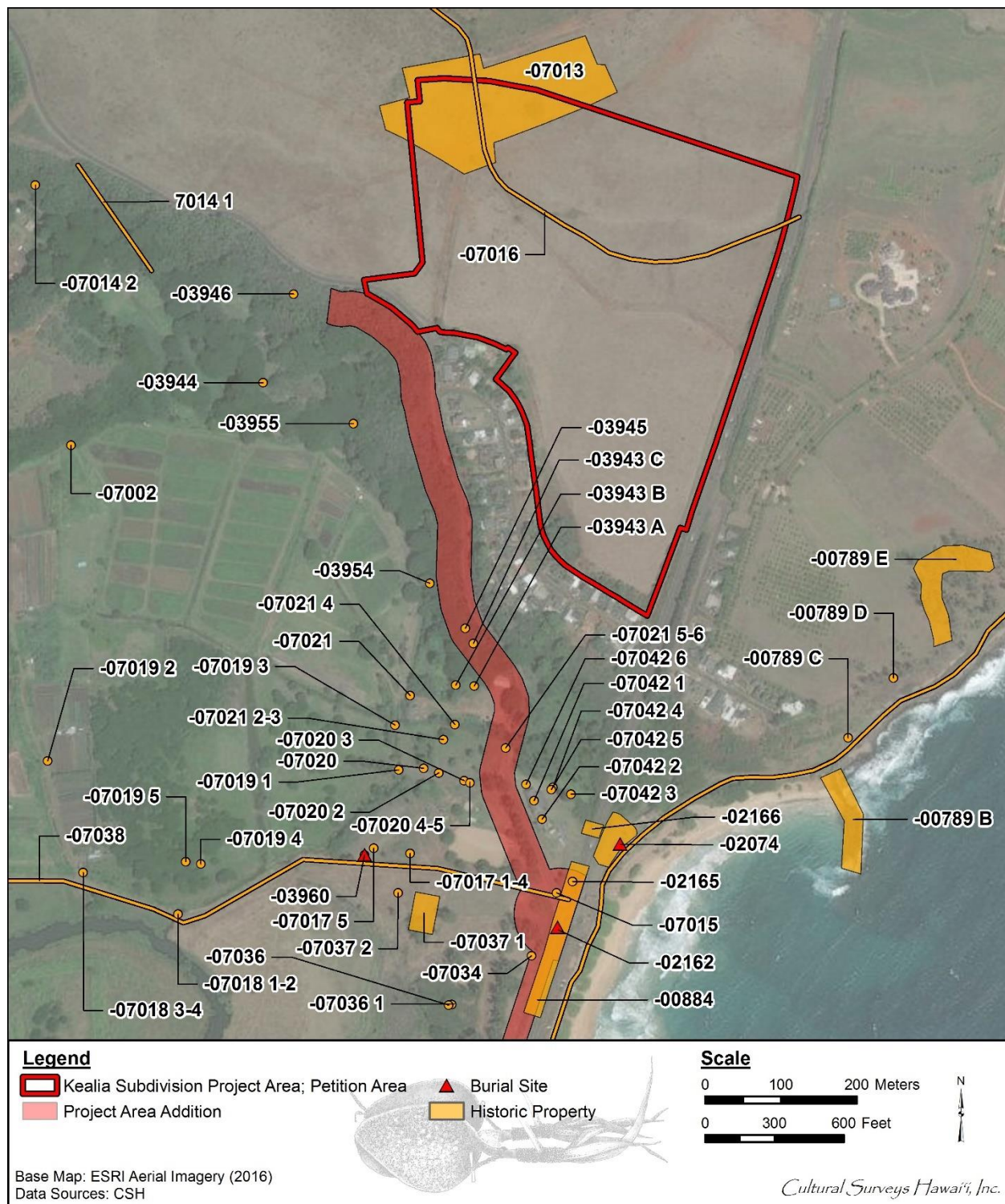


Figure 36. Previously identified historic properties within and in the immediate vicinity of the Petition Area

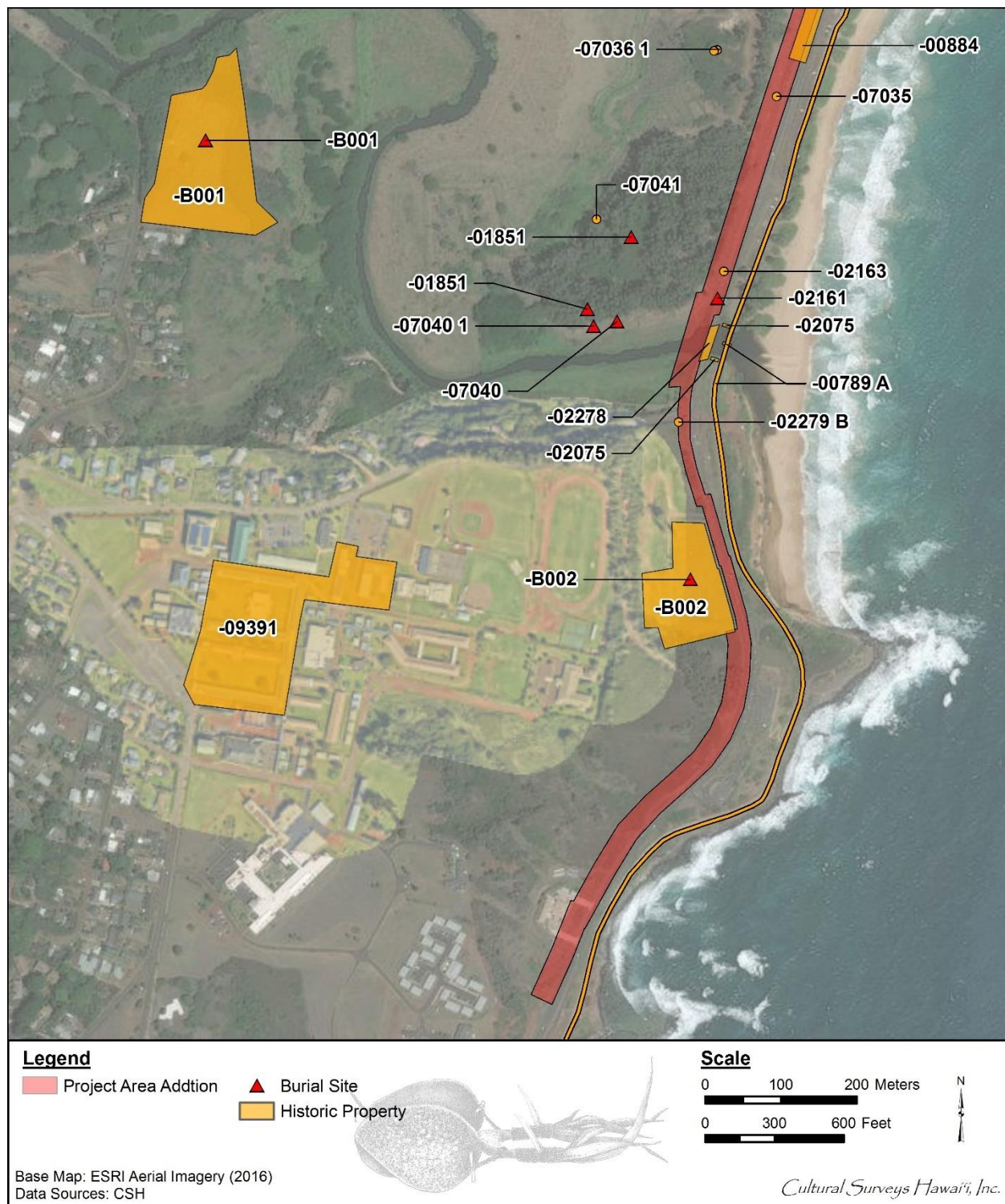


Figure 37. Previously identified historic properties within and in the vicinity of the project area addition (sewer line installation project area)

Table 6. Previously identified historic properties within and in the immediate vicinity of the project area (including the Petition Area)

SIHP # 50-30-08****	Site Type/Name	Reference
-B001	Historic cemetery	Kikuchi and Remoaldo 1992
-B002	St. Catherine's Cemetery	Kikuchi and Remoaldo 1992; Hammatt and Shideler 2006
-00789a	Cane Haul Road	Perzinski et al. 2000a; Bushnell, Mann, Borthwick, Bush, Tulchin, Shideler and Hammatt 2003; Belloumini et al. 2016
-00789b	Keālia Landing	Perzinski et al. 2000a; Bushnell, Mann, Borthwick, Bush, Tulchin, Shideler and Hammatt 2003
-00789c	Dynamite Storage Bunker	Perzinski et al. 2000a; Bushnell, Mann, Borthwick, Bush, Tulchin, Shideler and Hammatt 2003
-00789d	Sem-circular terrace	Perzinski et al. 2000a
-00789e	Plantation-era terraces	Perzinski et al. 2000a
-00884	Pre-Contact human remains	SHPD communication; Bushnell, Mann, Borthwick, Bush, Tulchin, Shideler and Hammatt 2003; Sholin et al. 2012
-01851	Dune site with human burials, historic artifacts and pre-Contact midden deposit	Jourdane and Collins 1996; Folk and Hammatt 1991
-02074	Buried cultural layer and associated human burial	Bushnell, Mann, Borthwick, Bush, Tulchin, Shideler and Hammatt 2003; O'Hare et al. 2003
-02075	Old Kaua'i Belt Hwy bridge foundation	Bushnell, Mann, Borthwick, Bush, Tulchin, Shideler and Hammatt 2003; Belloumini et al. 2016
-02161	Cultural deposit with associated human remains	Sholin et al. 2012
-02162	A secondary and primary cultural deposit with associated human remains	Sholin et al. 2012
-02163	Fire pit	Sholin et al. 2012
-02165	Cultural deposit	Sholin et al. 2012
-02166	Fire pit	Sholin et al. 2012

SIHP # 50-30-08****	Site Type/Name	Reference
-02278	Bridge (Kapa'a Stream Bridge)	Belloumini et al. 2016
-02279b	Culvert	Belloumini et al. 2016
-03943	Historic complex of a remnant concrete staircase, concrete telephone pole, and a concrete foundation with a slab walkway	Drennan et al. 2006
-03944	Alignment	Drennan et al. 2006
-03945	Alignment	Drennan et al. 2006
-03946	Well/Cistern	Drennan et al. 2006
-03954	Concrete and basalt boulder bridge	Drennan et al. 2006
-03955	Bridge	Drennan et al. 2006
-03960	Burial	Drennan and Dega 2007a
-07002	Wall (cement and basalt cobble)	Drennan and Dega 2007a
-07013	"New Kumukumu Camp" (defunct)	Drennan and Dega 2007a
-07014	Cement column pipe supports and concrete columns	Drennan and Dega 2007a
-07015	Railroad rails and foundation	Drennan and Dega 2007a
-07016	Railroad complex	Drennan and Dega 2007a
-07017	Sugar cane plantation infrastructure including a metal tank, structural supports, cart tracks, and foundations	Drennan and Dega 2007a
-07018	Irrigation ditches and sluice gates, and a plantation era bridge	Drennan and Dega 2007a
-07019	Plantation era bridge, foundations, and irrigation pipes	Drennan and Dega 2007a
-07020	Concrete foundations and culvert	Drennan and Dega 2007a
-07021	Bridge/transportation infrastructure, a culvert, and drainage pipes	Drennan and Dega 2007a
-07034	Concrete staircase	Drennan et al. 2007; Sholin et al. 2012
-07035	Staircase	Drennan et al. 2007
-07036	Plantation era concrete block and basalt, mortar and brick structure	Drennan et al. 2007
-07037	Concrete foundation, and brick and mortar structure	Drennan et al. 2007
-07038	Railroad path	Drennan et al. 2007

SIHP # 50-30-08****	Site Type/Name	Reference
-07040	Human burials, a burial pit outline, and a fire pit	Drennan et al. 2007
-07041	Red brick and concrete wall/foundation	Drennan et al. 2007
-07042	Keālia historic town complex	Drennan et al. 2007
-09391	Kapa'a School	Hammatt and Shideler 2006; Hawai'i Register of Historic Places

Kaua'i. A total of two cemeteries are located within the vicinity of the sewer line installation project area. An historic cemetery (SIHP # -B001) is located far southwest of the Petition Area. A portion of St. Catherine's Cemetery (SIHP # -B002) is located immediately adjacent to the sewer line installation project area.

5.2.3 Jourdane and Collins 1996

In 1996, Jourdane and Collins of the SHPD staff documented the second inadvertent human burial from the same sandy deposits in the bend of the Kapa'a River (also SIHP # -1851). The remains were apparently discovered by a Mrs. Gaines while she was "walking through the old Kealia Plantation Camp searching for bottles" (Jourdane and Collins 1996:1). The remains were also found in an area disturbed by extensive sand mining, seemingly quite close to the remains reported by Folk and Hammatt (1991). The remains documented by Jourdane and Collins were similarly fragmented and of unknown specific provenience, ethnicity, and age. The report noted:

This area has been extensively disturbed by sand mining after the plantation camp was abandoned. Aerial photos taken in 1971 show that extensive development had occurred in this area and shows the plantation camp housing and associated roads. [Jourdane and Collins 1996:1]

5.2.4 Hammatt and Chiogioji 1998

In 1998, CSH completed an archaeological reconnaissance survey and assessment for a 6,690.6-acre portion of Keālia Ahupua'a. The survey found areas located within floodplains of Kapa'a and Keālia streams were previously inhabited by traditional Hawaiians. Much of the area surveyed was former plantation land considered to be of little archaeological concern. The study also suggests the area known as Keālia Beach is likely void of archaeological sites associated with traditional Hawaiian activities due to sugarcane being planted up to the shoreline and the shoreline being modified for a cane haul road (Hammatt and Chiogioji 1998). A study of Hawaiian traditional customs and practices for the Keālia Ahupua'a accompanied the reconnaissance and survey assessment (Hammatt and Shideler 1998).

5.2.5 Perzinski et al. 2000a

In 2000, CSH completed an archaeological inventory survey (AIS) and subsurface testing of the approximately 300-acre Keālia *makai* parcel. Three historic properties were identified: SIHP # -0789, plantation era infrastructure and structures; SIHP # -0790, World War II structure and remnants; and SIHP # -1899, burials (Perzinski et al. 2000a). In the same year, CSH was contracted to develop a burial treatment plan for SIHP # -1899 (Perzinski et al. 2000b) for the burials identified during the AIS as well as the SHPD investigation of the inadvertent findings in 1992 (Komori 1993).

5.2.6 Bushnell, Mann, Borthwick, Bush, Tulchin, Shideler, and Hammatt 2003

In 2003, CSH conducted an AIS for the Kapa'a-Keālia bike and pedestrian path. Five newly identified sites (SIHP #s -2074 through -2078) and a new sub-feature of SIHP # -0789 (Feature A, Sub-Feature 1) were documented (Bushnell, Mann, Borthwick, Bush, Tulchin, Shideler, and Hammatt 2003). SIHP # -0789: Feature A, Sub-Feature 1 is identified as the *makai* Kapa'a Stream Bridge for the Cane Haul Road and SIHP # -2075 is identified as the highway bridge foundation for the *mauka* Kapa'a Stream Bridge. SIHP # -2074 included a buried cultural layer and associated

human burial. A CIA for the Kapa'a-Keālia bike and pedestrian path accompanied the AIS (Bushnell, Shideler, and Hammatt 2003). CSH completed a burial treatment plan for SIHP # -2074. The remains were discovered during subsurface testing along the coast where restroom facilities were to be built and a burial treatment plan was recommended for SIHP # -2074 (O'Hare et al. 2003).

5.2.7 Dega and Powell 2003

In 2003, Scientific Consultant Services (SCS) completed archaeological monitoring during Phase I of the Kaua'i Rural Fiber-optic Duct Lines project. A portion of the study is located within the vicinity of the current project (Segment 17) extending along the western shoulder of Kūhiō Highway along the hills and plateaus toward Anahola. There were no significant findings (Dega and Powell 2003:25).

5.2.8 O'Hare et al. 2003

In August 2002, CSH conducted an archaeological inventory survey (Bushnell et al. 2003) and a cultural impact assessment (Hammatt and Shideler 1998) for the proposed Kapa'a to Keālia Bike and Pedestrian Path project. The inventory survey included surface and subsurface investigations along the proposed path and at two coastal areas selected for restroom facilities. During the inventory survey, a cultural stratum with an associated pre-Contact Hawaiian burial (minimum number of individuals [MNI]:1) was identified. This cultural layer and burial were designated as SIHP # -2074. The O'Hare et al. (2003) report was prepared as a burial treatment plan for the human remains associated with SIHP # -2074.

5.2.9 Hammatt and Shideler 2003

In November 2003, CSH conducted an archaeological assessment to evaluate the potential impacts to archaeological resources of the proposed Kūhiō Highway Improvements (Kapa'a Relief Route) Project. A literature review and field work were carried out, with fieldwork primarily focused on the Wailua River valley. Six sites were identified, and potential impacts associated with the proposed Kūhiō Highway Improvements were evaluated. CSH identified potential impacts to view planes and burials:

The most critical concern is suggested to be the potential impact to the viewplanes of the Wailua Complex of Heiau (designated Site 50-30-08-502). While a re-alignment of Kūhiō Highway might not directly impact these five discontinuous properties, there would appear to be the potential of impact to view-planes of this National Historic Landmark. State Parks has commented that: "The view corridors. . . should be open and clear." The DLNR is on record as vigorously opposing any future development in the area that would threaten buffers and view corridors surrounding Malae Heiau. . . After the Wailua Complex of Heiaus viewplane issue, the second greatest archaeological concern for this project is suggested to be potential impact to human remains. Three concentrations of human burials have been documented along the proposed routes (all along the existing Kūhiō Highway alignment): 1) in Waipouli/Kapa'a, 2) in the vicinity of the Coco Palms, and 3) in the vicinity of Wailua Golf Course. The present route of Kūhiō Highway (K -7) through Waipouli/Kapa'a Town appears the most likely area for burial disturbance among the proposed road corridor segments. No increased burial sensitivity is

associated with more inland routes. . . As a generalization, significant archaeological resources (other than those included in the Wailua Complex of Heiau) are more likely to be encountered in the sandy deposits at the coast than further inland. [Hammatt and Shideler 2003:i]

5.2.10 Drennan et al. 2006

In 2007, SCS conducted four phases of an AIS in the Keālia Ahupua'a, Phase I (Drennan et al. 2006), Phase II (Drennan and Dega 2007a), Phase III (Drennan et al. 2007), and Phase IV (Drennan and Dega 2007b). During Phase I, 15 new sites were identified and documented. Nine were associated with the plantation era, one site appeared to be associated with traditional Hawaiian practices (habitation and/or agriculture), and the remaining five are interpreted as traditional Hawaiian agricultural sites that continued to be used during the plantation era (Drennan et al. 2006:29). The newly identified sites were designated as SIHP #s -3943 through 3957.

5.2.11 Hammatt and Shideler 2006

In 2006, CSH conducted a brief field inspection at Kapa'a High School for the installation of new water lines. The study found low potential for cultural resources within the Kapa'a High School property due to the extensive grading. The study also observed a baseball field, large track, and undeveloped area serving as a large buffer between the St. Catherine's Cemetery (SIHP # -B002) and the high school's structures (Hammatt and Shideler 2006).

5.2.12 Drennan and Dega 2007a

During Phase II, 30 new historic properties comprised of 82 features were identified. The newly identified sites were designated as SIHP #s -3959 and -3960, human burials, and SIHP #s -7000 through -7027 (Drennan and Dega 2007a:ii).

5.2.13 Drennan et al. 2007

During Phase III, 19 new historic properties were identified comprised of 93 features. The newly identified sites were designated as SIHP #s -7028 through 7046. SIHP #s -7028 and -7040 contained human burials (Drennan et al. 2007:ii).

5.2.14 Drennan and Dega 2007b

During Phase IV, 37 new historic properties comprising 66 features were identified. The newly identified sites were designated as SIHP #s -1100 through -1136. A report was written in 2007 summarizing the archaeology conducted in the four phases of the proposed Keālanani project including subsurface testing (Drennan 2007b). Using the geomorphic model formulated by Dega and Powell in 2003 during the monitoring work, and later refined in 2005 (Dega et al. 2005), Drennan concluded Zone III was the primary zone of historical utilization based on previous archaeological studies and subsurface testing conducted during the four phases of the project. SCS wrote an advance archaeological data recovery plan (DRP) in 2007 specifically to recover further samples for SIHP # -3959, a habitation site and surface documentation of headstones for SIHP # -7028, an historic cemetery (Drennan 2007a). SCS also wrote a preservation plan for multiple historic properties: SIHP #s -7027, a railroad bridge; -7028, a historic cemetery; -7043, Spalding Monument; -1120 Feature 2 is a petroglyph of an English name and an image interpreted as a boat; and lastly -1136, a pre-Contact petroglyph (Drennan and Dega 2007c). The current project area is located in the Phase I.

5.2.15 Drennan 2007b

In 2007, SCS produced an executive summary of AIS work on a 2,008-acre parcel in Keālia. Survey work was divided into four phases, Makee/Kumukumu Phase I, Makee/Kumukumu Phase II, Makee/Kumukumu Phase III, and Makee/Kumukumu IV, and was carried out from May 2006 to April 2007. Fieldwork resulted in the identification, recordation, and documentation of 101 new archaeological sites comprised of 261 total features (Drennan 2007b:1). Drennan provided the following summary of project-wide feature types:

Of the 261 total archaeological features, 81 were related to water transportation and/or storage, 25 were linear transportation features, 41 were affiliated with *kuleana* and/or historic habitation sites, 34 were related to agriculture (rock terraces and mounds), 9 were part of the Makee sugar mill and/or plantation camps, and 71 features were part of the eight Preservation sites. . . The majority of the features recorded during the Project were related to water transportation and storage (e.g. ditches, tunnels, sluice gates, culverts, reservoirs, cisterns), which constituted 81 of the 261 total archaeological features; many of these features have been functional from historic through Plantation Era and into modern times (1778 to post-1950s). [Drennan 2007b:1]

Drennan noted that approximately 90% of the sites encountered during survey work were related to the functioning of the sugar plantation from 1885 until 1934 (2007b:10). Utilizing data from their survey work, Drennan also analyzed a geomorphic model for the coastal zone of east Kaua'i (Dega and Powell 2003) to investigate settlement patterns (Drennan 2007b:13). Four zones were identified as contributing to traditional and historic economies, however, Zones II and III were of particular note for their frequency of archaeological sites related to traditional habitation and resource extraction activities (Drennan 2007b:15). In describing Zone II, Drennan noted the following:

This zone composes the coastal plain or back beach environment. The latter term alludes to the formation of interdune deposits. Both Zone I and Zone II primarily consist of calcareous sand beaches derived from the decomposition of coral and seashells. These sandy deposits and associated coralline basements occur far inland in some areas, a symptom of the Holocene high sea stand occurring between c. 5,500 years ago and lasting until about 2,000 years ago (Fletcher and Jones 1996:639). It is frequently within this sandy, back beach area that significant archaeological resources related to permanent habitation and burials are found. [Drennan 2007b:14]

Zone III, located near sea level but removed from the coastal inland of Zone II, also remained a favored site for agricultural production:

This zone is characterized as 'marsh land,' or somewhat ponded areas that are approximately equal in elevation to sea level yet retain more terrigenous characteristics. Zone III often consists of slightly depressed areas amenable to water and soil catchment. This marsh land does contain some sandy sediment, but alluvial silts and clays dominate soil matrices. It is within Zone III that *lo'i* agriculture was suggested to have been practiced during traditional times (see Creed et al. 1995). Later, these lands were filled and utilized for rice cultivation and for Kealia, sugar

cane. Zone III contrasts brilliantly with Zone II in that it provides a near coastal alternative for agricultural production normally only afforded at much more inland locations. Permanent residents of the near coastal environment (Zone II in particular) could practice both intensive agriculture while gathering resources from an immediately adjacent ecological zone. It is this situational affordability at the interface of two dynamic environmental zones that allowed for Zone II occupation. [Drennan 2007b:14]

Within their Executive Summary, it was recommended that data recovery work occur within the 2,008-acre parcel. SCS subsequently prepared a DRP for SIHP # -3959, located in LCA 10907:2 and SIHP # -7028 (an historic cemetery). The DRP was primarily focused on conducting additional archaeological research at historic or plantation-era sites rather than those associated with traditional Hawaiian activity. Testing was to occur at SIHP # -3959 (*kuleana* and/or historic habitation site) in order to recover additional samples and determine special use areas within the site. For SIHP # -7028, headstones located within the historic cemetery were to be recorded in order to facilitate transnational identification and identify practices of the plantation era (Drennan 2007a:16).

5.2.16 Sholin et al. 2012

In 2012, T.S. Dye & Colleagues, Archaeologists, Inc. conducted archaeological monitoring at Keālia Beach corridor transmission line along Kūhiō Highway. During monitoring two historic properties, SIHP #s -884, a cultural deposit, and -7034, a concrete staircase, were reidentified. Five new historic properties were discovered and documented: SIHP #s -2161, a secondary deposit with associated human remains; -2162, a secondary and primary deposit with associated human remains; -2163, a fire-pit feature; -2165, a cultural deposit; and -2166, a fire pit feature. The inadvertent human remains were reinterred near the Keālia Beach corridor (Sholin 2012:1).

5.2.17 Belluomini et al. 2016

In 2016, CSH conducted an archaeological inventory survey for the Kapa'a Stream Bridge Replacement project. During the AIS, two previously documented historic properties were reidentified: SIHP #s -0789A Sub-Feature 1, the remnant portions of the original Keālia Stream Bridge Crossing, and -2075, the remnant abutments of the former Kaua'i Belt Road. Two new historic properties were discovered and documented: SIHP #s -2278, the Kapa'a Stream Bridge, and -2279, a water control complex consisting of an earthen ditch (Feature A) and the remnant of a culvert (Feature B) (Belluomini et al. 2016).

5.2.18 Kamai and Hammatt 2017

In 2017, CSH conducted a literature review and field inspection for the proposed Keālia Subdivision project (this study is not pictured on Figure 34 or included within Table 5). The inspection focused on the entire 53.361-acre (22-hectare) parcel. The project area traversed the entire proposed subdivision starting from the northwest corner. The pedestrian survey was accomplished through systematic sweeps spaced 10 to 15 m apart due to the low vegetation. Historic properties observed within the project area are features associated with the "New Kumukumu Camp" and an old road (SIHP #s -07013 and -07016) (Drennan et al. 2006).

Five newly identified features were given temporary CSH numbers (CSH-1 through CSH-5). CSH-1 through CSH-4 appear to have been associated with SIHP # -07013. The five features are

associated with plantation-era infrastructure and plantation-era water control efforts. During the fieldwork effort, surface remains of SIHP # -07016 were not identified. Due to the purpose of the study for the current project, descriptions for the identified historic properties remain very general.

Section 6 Community Consultation

6.1 Introduction

Throughout the course of this assessment, an effort was made to contact and consult with NHOs, agencies, and community members including descendants of the area, in order to identify individuals with cultural expertise and/or knowledge of the *ahupua‘a* of Keālia. CSH initiated its outreach effort in April 2017 through letters, email, telephone calls, and in-person contact. CSH completed its initial outreach effort in February 2018. CSH initially attempted to reach 34 individuals and agencies. The organizations consulted include OHA, the Kaua‘i and Ni‘ihau Island Burial Council (KNIBC), the SHPD (Burial Sites Specialist and History and Culture Branch), Queen Deborah Kapule Hawaiian Civic Club and the Kaua‘i Council of Hawaiian Civic Clubs (via the Association of Hawaiian Civic Clubs), and community members of Kawaihau District.

Upon receipt of comments from the public comment period for the DEIS, CSH was notified of concerns regarding the documentation of Keālia’s plantation history during the 1950s, 1960s, and 1970s. The Wailua-Kapa‘a Neighborhood Association recommended the following:

- a) The Kealia Town Tract has its own history and cultural identity, yet none of the four individuals who were interviewed were residents of Kealia Town Tract.
- b) There is significant history and culture associated with the immigrant groups and settlement patterns around the Makee Sugar Plantation operating in Kealia. However, details about nearby New Stable Camp and Amberry Camp (those closest to Kealia Town Tract) were not included.
- c) The historic property of New Kumukumu Camp (defunct) SIHP # 50-30-08-07013 may have few remaining artifacts, but there is a wealth of information to be gained through interviews with *kama‘āina* residents of Kealia Town Tract with knowledge of the study area.
- d) During the time of Makee Sugar Plantation, Mr. Furumoto’s home was built in 1922 and his neighbor’s home was built in 1917; Mr. Yamaguchi’s home was built in 1937. Mr. Arinaga can provide additional suggestions of those *kama‘āina* to interview.
- e) One of the most important plantation structures in Kealia Town Tract was the Kealia Dispensary which formerly stood where Mr. J. Freitas’ parcel is located. Research and oral accounts about the Dispensary should be provided from these *kama‘āina* residents.
- f) Stories of the “night marchers” on Kealia Road are not uncommon and should be documented.
- g) The archaeological literature review and field inspection report for this project seems inadequate as it relies heavily on previous studies focused on a much larger area, far beyond the petition area. The petition area is part of a prior AIS (Drennan et al. 2006) for 2,000 acres.

h) New research and reconnaissance through interviews with longtime *kama 'āina* residents of Kealia Town Tract should take place and include information, customs and practices of the Kealia town residents during the 1950s, 1960s and 1970s, the decades which were overlooked.

CSH reinitiated consultation in July 2018, reaching out to those individuals recommended by the Wailua-Kapa'a Neighborhood Association. Furthermore, CSH also reached out to additional individuals known to have once been affiliated with Lihue Plantation. CSH completed additional outreach, per the Wailua-Kapa'a Neighborhood Association's recommendations in October 2018.

6.2 Community Contact Letter

Letters (Figure 38 and Figure 39) along with a map and an aerial photograph of the project were mailed with the following text:

At the request of Helber Hastert and Fee (HHF) Planners and on behalf of Keālia Properties, LLC, Cultural Surveys Hawai'i Inc. (CSH) is conducting a Cultural Impact Assessment (CIA) for the proposed Keālia Subdivision, Keālia Ahupua'a, Kawaihau District, Kaua'i Island, TMKs: [4] 4-7-009:001 and 002. The project area is approximately 50 acres (including drainage detention basins). The project area is depicted on a portion of the 1996 Kapa'a U.S. Geological Survey (USGS) topographic quadrangle and a 2013 aerial photograph (Figures 1 and 2).

The proposed Keālia Subdivision project will consist of a 235-lot residential subdivision. Residential lots will range from 5,600 square feet to 7,300 square feet. The project will be built to County subdivision standards and will include water and wastewater improvements, drainage improvements and underground electric utilities. The proposed Keālia Subdivision project will be adjacent to an existing 36-lot subdivision which was built in the 1950s. The property is currently designated within State and County agricultural districts, and will require an amendment to the State Land Use District Boundary and County Zoning District, followed by a County subdivision approval.

The purpose of this CIA is to gather information about the project area and its surroundings through research and interviews with individuals that are knowledgeable about this area in order to assess potential impacts to the cultural resources, cultural practices, and beliefs identified as a result of the planned project. We are seeking your *kōkua* (assistance) and guidance regarding the following aspects of our study:

- General history and present and past land use of the project area.
- Knowledge of cultural sites- for example, historic sites, archaeological sites, and burials.
- Knowledge of traditional gathering practices in the project area, both past and ongoing.
- Cultural associations of the project area, such as *mo'olelo* and traditional uses.

Cultural Surveys Hawai'i, Inc.
Archaeological and Cultural Impact Studies
Hallett H. Hammatt, Ph.D., President



P.O. Box 1114

Kailua, Hawai'i 96734

Ph: (808) 262-9972

Fax: (808) 262-4950

Job code: KEALIA 3bbeauchan@culturalsurveys.comwww.culturalsurveys.com

April 2017

Aloha,

At the request of Helber Hastert and Fee (HHF) Planners and on behalf of Keālia Properties, LLC, Cultural Surveys Hawai'i Inc. (CSH) is conducting a Cultural Impact Assessment (CIA) for the proposed Keālia Subdivision, Keālia Ahupua'a, Kawaihau District, Kaua'i Island, TMKs: [4] 4-7-009:001 and 002. The project area is approximately 50 acres (including drainage detention basins). The project area is depicted on a portion of the 1996 Kapa'a U.S. Geological Survey (USGS) topographic quadrangle and a 2013 aerial photograph (Figures 1 and 2).

The proposed Keālia Subdivision project will consist of a 235-lot residential subdivision. Residential lots will range from 5,600 square feet to 7,300 square feet. The project will be built to County subdivision standards and will include water and wastewater improvements, drainage improvements and underground electric utilities. The proposed Keālia Subdivision project will be adjacent to an existing 36-lot subdivision which was built in the 1950s. The property is currently designated within State and County agricultural districts, and will require an amendment to the State Land Use District Boundary and County Zoning District, followed by a County subdivision approval.

The purpose of this CIA is to gather information about the project area and its surroundings through research and interviews with individuals that are knowledgeable about this area in order to assess potential impacts to the cultural resources, cultural practices, and beliefs identified as a result of the planned project. We are seeking your *kōkua* and guidance regarding the following aspects of our study:

- **General history as well as present and past land use of the project area**
- **Knowledge of cultural sites which may be impacted by future development of the project area—for example, historic and archaeological sites, as well as burials.**
- **Knowledge of traditional gathering practices in the project area, both past and ongoing.**
- **Cultural associations of the project area, such as *mo'olelo* and traditional uses.**
- **Referrals of *kūpuna* or elders and *kama'āina* who might be willing to share their cultural knowledge of the project area and the surrounding *ahupua'a* lands.**

Figure 38. Community consultation letter, page one

-
- **Any other cultural concerns the community might have related to Hawaiian cultural practices within or in the vicinity of the project area.**

In advance, we appreciate your assistance in our research effort. If you are interested in participating in this study, please contact Brittany Beauchan at bbeauchan@culturalsurveys.com or by phone at (808) 262-9972. **We kindly ask for your response by, May 19, 2017.**

Mahalo nui loa,

Brittany Beauchan
Cultural Researcher

Figure 39. Community consultation letter, page two

•Referrals of *kūpuna* or elders and *kama‘āina* who might be willing to share their cultural knowledge of the project area and the surrounding *ahupua‘a* lands.

•Any other cultural concerns the community might have related to Hawaiian cultural practices within or in the vicinity of the project area.

In most cases, two or three attempts were made to contact individuals, organizations, and agencies.

In November 2018, CSH was notified by HHF Planners regarding a portion of the project area that was not previously considered during earlier work on the CIA. Due to the addition of a sewer line and various other off-site infrastructure and utility improvements, CSH was prompted to reinitiate consultation to notify the community of these project area changes. Accordingly, this project area addition prompted CSH to broaden the study to also include the *ahupua‘a* of Kapa‘a. As part of a good faith effort, CSH expanded its contact list to also include community members of Kapa‘a Ahupua‘a. CSH attempted to reach 64 individuals and organizations as part of this renewed outreach effort. All individuals who had participated in CSH’s *kama‘āina* interviews (Section 6.4) were also contacted by phone regarding the project area addition. Letters along with USGS maps and aerial photographs of both the original (current Petition Area) and the new project area were mailed with the following text (Figure 40 through Figure 42):

In 2017 and 2018, Cultural Surveys Hawai‘i (CSH) at the request of Helber Hastert and Fee (HHF) Planners and on behalf of Keālia Properties, LLC, reached out to the communities of Keālia and Kapa‘a regarding a cultural impact assessment (CIA) for the proposed Keālia Subdivision, Keālia Ahupua‘a, Kawaihau District, Kaua‘i, TMKs: [4] 4-7-009:001 and 002. We would once again like to thank the community for their assistance and for sharing their valuable *mana‘o* on this project. However, in recent weeks, CSH has been notified regarding a portion of the project area that was not previously considered during our earlier work on the CIA. This area is depicted in the attached figures (please refer to Figure 1 and Figure 2 noting “Original Project Area; now identified as ‘Petition Area’” and Figure 3 and Figure 4 noting “Revised Project Area as of January 18, 2019” to observe the changes to the project area). Please note that the proposed project will still include the development of a 235-lot residential subdivision on a 53.4-acre site in Keālia (i.e., the Petition Area), in addition to construction of off-site infrastructure and utility improvements to support the subdivision.

The petition for a State Land Use District boundary amendment is limited to the original 53.4-acre site, which will be referred to in the CIA as the “Petition Area.” Proposed off-site improvements associated with the development of the residential subdivision are not part of the Petition Area. However, these improvements will be identified as part of the project area for the CIA. Potential impacts to cultural resources, cultural practices, and beliefs identified as a result of the planned project will be evaluated for the entirety of the project area.

The original project area (the current Petition Area) included approximately 53.4 acres; the new project area, however, will include the Petition Area in addition to 21.3 acres for associated infrastructure and utility improvements. The new project

Cultural Surveys Hawai'i, Inc.
Archaeological and Cultural Impact Studies
Hallett H. Hammatt, Ph.D., President



P.O. Box 1114

Kailua, Hawai'i 96734

Ph: (808) 262-9972

Fax: (808) 262-4950

Job code: KEALIA 3

bbeauchan@culturalsurveys.com

www.culturalsurveys.com

January 2019

Aloha mai kāua,

In 2017 and 2018, Cultural Surveys Hawai'i (CSH) at the request of Helber Hastert and Fee (HHF) Planners and on behalf of Keālia Properties, LLC, reached out to the communities of Keālia and Kapa'a regarding a cultural impact assessment (CIA) for the proposed Keālia Subdivision, Keālia Ahupua'a, Kawaihau District, Kaua'i, TMKs: [4] 4-7-009:001 and 002. We would once again like to thank the community for their assistance and for sharing their valuable *mana'o* on this project. However, in recent weeks, CSH has been notified regarding a portion of the project area that was not previously considered during our earlier work on the CIA. This area is depicted in the attached figures (please refer to Figure 1 and Figure 2 noting "Original Project Area; now identified as 'Petition Area'" and Figure 3 and Figure 4 noting "Revised Project Area as of January 18, 2019" to observe the changes to the project area). Please note that the proposed project will still include the development of a 235-lot residential subdivision on a 53.4-acre site in Keālia (i.e., the Petition Area), in addition to construction of off-site infrastructure and utility improvements to support the subdivision.

The petition for a State Land Use District boundary amendment is limited to the original 53.4-acre site, which will be referred to in the CIA as the "Petition Area." Proposed off-site improvements associated with the development of the residential subdivision are not part of the Petition Area. However, these improvements will be identified as part of the project area for the CIA. Potential impacts to cultural resources, cultural practices, and beliefs identified as a result of the planned project will be evaluated for the entirety of the project area.

The original project area (the current Petition Area) included approximately 53.4 acres; the new project area, however, will include the Petition Area in addition to 21.3 acres for associated infrastructure and utility improvements. The new project area now totals approximately 74.7 acres within both Keālia and Kapa'a Ahupua'a. We would like to inform you of these changes, and kindly ask again for your *kokua* and guidance with the following:

- **General history as well as present and past land use of the project area**
- **Knowledge of cultural sites that may be impacted by future development of the project area—for example, historic and archaeological sites, as well as burials**
- **Knowledge of traditional gathering practices in the project area, both past and ongoing**
- **Cultural associations of the project area, such as *mo'olelo* and traditional uses**

Figure 40. Community consultation letter regarding the addition of a sewer line and various other off-site infrastructure and utility improvements, page one

CIA for the Proposed Keālia Subdivision Project

Page 2

- Referrals of *kūpuna* or elders and *kama'āina* who might be willing to share their cultural knowledge of the project area and the surrounding *ahupua'a* lands
- Any other cultural concerns the community might have related to Hawaiian cultural practices within or in the vicinity of the project area

The Proposed Action will still involve the development of a residential subdivision consisting of approximately 235 lots ranging in size from about 5,600 square feet (sq ft) to 7,300 sq ft. The project will now also include installation of utility infrastructure (e.g., drinking water, drainage, wastewater, electrical power, and telecommunications systems) and transportation improvements to serve each subdivided parcel. The subdivision plan includes two detention basins, located on the far south and far north ends of the Project Area, totaling 5.86 acres. The southern detention basin is 4.32 acres in size and will provide park/green space for active and passive recreation. It will also serve as a buffer with the neighboring subdivision on Ka'ao Road. The detention basin on the north will be steep (due to the basin's smaller size) and will not be usable for recreation. Access to the subdivision would be via Keālia Road from its intersection with Kūhiō Highway. A roundabout entrance to the subdivision is proposed on Keālia Road. All traffic on Keālia Road, including through traffic continuing past the subdivision, will be routed through the roundabout.

A roundabout entrance to the subdivision is proposed in order to provide a safe and efficient central nexus for all adjoining subdivision roads. Proposed subdivision roads connecting to the roundabout will be "Collector" roads as defined by county road standards. Collector roads have a 56-ft right of way (ROW) and 40-ft wide pavement. There are two (2) Collector roads proposed for this project, totaling about 2,455 linear ft. One of the Collector roads will run in the north-south direction and the other Collector road will run in the east-west direction.

The majority of the roads within the proposed subdivision will be "Minor" roads as defined by county road standards. Minor roads have a 44-ft ROW and 20-ft wide pavement. There are nine (9) Minor roads proposed for this project, totaling about 9,220 linear ft. Three (3) Minor roads will traverse the north-south direction and six (6) will traverse in the east-west direction.

Currently, there is an old cane haul road entry to the property located on Kūhiō Highway. The road is currently gated and unused. This access point will be eliminated, and no direct vehicle access onto Kūhiō Highway will be allowed from the proposed subdivision, as mandated by the State of Hawai'i Department of Transportation (HDOT).

The County of Kaua'i has indicated that improvements to the two-lane Keālia Road are needed to accommodate the increase in vehicular traffic associated with the project, and that the improvements shall be in accordance with the county's Complete Streets Policy. Improvements are proposed to approximately 2,650 linear ft of Keālia Road, extending from the Hopoe Road intersection to the Kūhiō Highway intersection:

- Widening the existing ROW from 40 ft to 56 ft
- Reconstructing the roadway pavement from two vehicular lanes each approximately 9 ft wide to two vehicular lanes each approximately 10 ft wide

Figure 41. Community consultation letter regarding the addition of a sewer line and various other off-site infrastructure and utility improvements, page two

CIA for the Proposed Keālia Subdivision Project

Page 3

- 5-ft wide paved road shoulders on each side of the travel lanes for roadway drainage and bicycle use
- Green space between paved road shoulder and proposed sidewalk
- 5-ft wide concrete sidewalk for pedestrians

At the intersection of Keālia Road and Kūhiō Highway, a roundabout will be constructed to mitigate the increase in traffic due to the project, and to improve intersection safety. Two alternative designs for this intersection were considered: a traffic signal and a single-lane roundabout. The roundabout was identified by the County of Kaua'i as their preferred alternative.

A new sanitary sewer main will be needed from the Petition Area to a lift station along Kūhiō Highway, and then to an existing municipal sewer manhole near the Kaiakea Fire Station, nearly 1 mile away. A new sewer pump station will be constructed.

Once again, if these changes have in any way changed your *mana'o*, please do not hesitate to contact Brittany Beauchan at (808) 262-9972 or (email: bbeauchan@culturalsurveys.com).

Me ka ha'aha'a,

Cultural Surveys Hawai'i Inc.
Archaeological and Cultural Impact Studies
P.O. Box 1114
Kailua, Hawai'i 96734 Ph.: (808) 262-9972

Figure 42. Community consultation letter regarding the addition of a sewer line and various other off-site infrastructure and utility improvements, page three

area now totals approximately 74.7 acres within both Keālia and Kapa‘a Ahupua‘a. We would like to inform you of these changes, and kindly ask again for your *kokua* and guidance with the following:

- **General history as well as present and past land use of the project area**
- **Knowledge of cultural sites that may be impacted by future development of the project area—for example, historic and archaeological sites, as well as burials**
- **Knowledge of traditional gathering practices in the project area, both past and ongoing**
- **Cultural associations of the project area, such as *mo‘olelo* and traditional uses**
- **Referrals of *kūpuna* or elders and *kama‘āina* who might be willing to share their cultural knowledge of the project area and the surrounding *ahupua‘a* lands**
- **Any other cultural concerns the community might have related to Hawaiian cultural practices within or in the vicinity of the project area**

The Proposed Action will still involve the development of a residential subdivision consisting of approximately 235 lots ranging in size from about 5,600 square feet (sq ft) to 7,300 sq ft. The project will now also include installation of utility infrastructure (e.g., drinking water, drainage, wastewater, electrical power, and telecommunications systems) and transportation improvements to serve each subdivided parcel. The subdivision plan includes two detention basins, located on the far south and far north ends of the Project Area, totaling 5.86 acres. The southern detention basin is 4.32 acres in size and will provide park/green space for active and passive recreation. It will also serve as a buffer with the neighboring subdivision on Ka‘ao Road. The detention basin on the north will be steep (due to the basin’s smaller size) and will not be usable for recreation. Access to the subdivision would be via Keālia Road from its intersection with Kūhiō Highway. A roundabout entrance to the subdivision is proposed on Keālia Road. All traffic on Keālia Road, including through traffic continuing past the subdivision, will be routed through the roundabout.

A roundabout entrance to the subdivision is proposed in order to provide a safe and efficient central nexus for all adjoining subdivision roads. Proposed subdivision roads connecting to the roundabout will be “Collector” roads as defined by county road standards. Collector roads have a 56-ft right of way (ROW) and 40-ft wide pavement. There are two (2) Collector roads proposed for this project, totaling about 2,455 linear ft. One of the Collector roads will run in the north-south direction and the other Collector road will run in the east-west direction.

The majority of the roads within the proposed subdivision will be “Minor” roads as defined by county road standards. Minor roads have a 44-ft ROW and 20-ft wide pavement. There are nine (9) Minor roads proposed for this project, totaling about

9,220 linear ft. Three (3) Minor roads will traverse the north-south direction and six (6) will traverse in the east-west direction.

Currently, there is an old cane haul road entry to the property located on Kūhiō Highway. The road is currently gated and unused. This access point will be eliminated, and no direct vehicle access onto Kūhiō Highway will be allowed from the proposed subdivision, as mandated by the State of Hawai'i Department of Transportation (HDOT).

The County of Kaua'i has indicated that improvements to the two-lane Keālia Road are needed to accommodate the increase in vehicular traffic associated with the project, and that the improvements shall be in accordance with the county's Complete Streets Policy. Improvements are proposed to approximately 2,650 linear ft of Keālia Road, extending from the Hopoe Road intersection to the Kūhiō Highway intersection:

- Widening the existing ROW from 40 ft to 56 ft
- Reconstructing the roadway pavement from two vehicular lanes each approximately 9 ft wide to two vehicular lanes each approximately 10 ft wide
- 5-ft wide paved road shoulders on each side of the travel lanes for roadway drainage and bicycle use
- Green space between paved road shoulder and proposed sidewalk
- 5-ft wide concrete sidewalk for pedestrians

At the intersection of Keālia Road and Kūhiō Highway, a roundabout will be constructed to mitigate the increase in traffic due to the project, and to improve intersection safety. Two alternative designs for this intersection were considered: a traffic signal and a single-lane roundabout. The roundabout was identified by the County of Kaua'i as their preferred alternative.

A new sanitary sewer main will be needed from the Petition Area to a lift station along Kūhiō Highway, and then to an existing municipal sewer manhole near the Kaiakea Fire Station, nearly 1 mile away. A new sewer pump station will be constructed.

6.3 Community Contact Table

Below in Table 7 are names, affiliations, dates of contact, and comments from NHOs, individuals, organizations, and agencies contacted for this project. Results are presented below in alphabetical order.

Table 7. Results of community consultation

Community Member	Affiliation	Comments
'Aha Pūnana Leo o Kauai	Hawaiian Language School	Letter and figures sent via USPS on 18 April 2017 Letter and figures sent via USPS on 10 May 2017 Letter and figures depicting revised project area sent via USPS on 4 February 2019 Letter and figures depicting revised project area sent via USPS on 15 February 2019
Ahuna, Dan	Office of Hawaiian Affairs (OHA); Represents the islands of Kaua'i and Ni'ihau as an OHA Trustee	Letter and figures sent via email on 15 May 2017 Letter and figures depicting revised project area sent via email on 5 February 2019
Aiu, Danita	Chairperson, Kaua'i Historic Preservation Review Commission (KHPRC)	Letter and figures sent via USPS on 18 April 2017 Letter and figures sent via USPS on 10 May 2017 Letter and figures depicting revised project area sent via USPS on 4 February 2019 Letter and figures depicting revised project area sent via USPS on 15 February 2019 On 20 February 2019, Ms. Aiu reached out to CSH via telephone. She identified a sand dune located before Hauaala Road, near the intersection of Hauaala Road and Keālia Road. Culturally rich sediments are located <i>mauka</i> of Kūhiō Highway. She noted a potential to encounter burials during ground disturbing activities. She also expressed concern about the proximity of the sewer pipeline to St. Catherine's cemetery. She expressed concern for the maintenance of the church's private property and that a five-foot setback should be maintained. She also expressed concern about project-related construction potentially

		blocking access to the cemetery grounds from Kūhiō Highway.
Aiwohi, Nathan	Principal of Kapa'a Middle School	Letter and figures depicting revised project area sent via USPS on 4 February 2019 Letter and figures depicting revised project area sent via USPS on 15 February 2019
Ako, Uncle Valentine	<i>Kupuna; Kama 'āina</i> of Kapa'a	Letter and figures sent via USPS on 18 April 2017 Letter and figures sent via USPS on 10 May 2017 Mr. Ivan Ako, son of Valentine Ako (90 yrs old), left a voice message on 12 May 2017 responding to the letter for his father. He informed CSH that he has some questions from his father about "what [we] mean by past history, and current cultural practices" outlined in the letter. Mr. Ivan Ako informed CSH he has returned to Hawai'i to look after his father Valentine. He advised that although his father is hard of hearing, he is very much active. Mr. Ivan Ako would also like to participate, along with his father, to assist with questions that his father may not hear correctly. Interview scheduled for 25 May 2017. Interview conducted 25 May 2017. CSH met with Uncle Valentine Ako on 29 August 2017 to edit his interview summary. Uncle Valentine Ako approved his interview summary on 29 August 2017. Letter and figures depicting revised project area sent via USPS on 4 February 2019 Letter and figures depicting revised project area sent via USPS on 15 February 2019 CSH reached out to Mr. Ivan Ako via telephone on 12 March 2019. CSH left a message inquiring into whether the addition of the sewer line project area had impacted Mr. Valentine Ako's <i>mana 'o</i> .
Albao, Liberta	President of the Queen Deborah Kapule Hawaiian Civic Club (referred by OHA)	Letter and figures sent via email on 9 June 2017 Letter and figures depicting revised project area sent via USPS on 4 February 2019

		Letter and figures depicting revised project area sent via USPS on 15 February 2019
Alu Like – Kaua'i		Letter and figures depicting revised project area sent via USPS on 4 February 2019 Letter and figures depicting revised project area sent via USPS on 15 February 2019
Arinaga, Clayton and Kalei	Kealia Tract Resident with knowledge of 1950's, 1960's, and 1970's plantation history and customs	<p>CSH reached out via telephone on 25 July 2018. CSH left a message for Mr. Arinaga. Letter and figures sent via USPS on 26 July 2018. CSH noted the following to Mr. Arinaga:</p> <p><i>. . . CSH has prepared a DRAFT cultural impact assessment (CIA) for the proposed Keālia Subdivision, Keālia Ahupua'a, Kawaihau District, Kaua'i, TMKs: [4] 4-7-004:001. We are currently revising this CIA. As part of this effort, we are attempting to follow up on comments received during the Draft EIS comment period. Specifically, we are hoping to consult with kama 'āina residents of Keālia Tract to identify and document customs and practices conducted in the plantation camps during the 1950's, 1960's, and 1970's. . .</i></p> <p>CSH reached out via mail, email, and telephone on 13 August 2018. CSH attempted to leave a voice message, but was notified that Mr. Arinaga's mailbox was full. On 1 September 2018, CSH visited the Arinaga home to hand deliver the letter and figures and discuss CSH's scope of work for the CIA. Mrs. Kalei Arinaga confirmed receipt of the letter and figures. Mrs. Arinaga briefly discussed the plantation history of Keālia, noting the presence of a possible plantation cemetery. Mrs. Arinaga also shared concerns regarding the DEIS. She commented on lack of studies on the local infrastructure and roadways and if such infrastructure can support the proposed subdivision population. Mrs. Arinaga also expressed concern in regard to the lack of discussion within the DEIS of Keālia's pre-Contact and early post-Contact history. Mrs.</p>

		<p>Arinaga stated that CSH could send her via email a list of questions for the CIA.</p> <p>CSH reached out to Mrs. Arinaga via email and telephone on 4 September 2018 regarding the CIA. CSH provided a copy of the draft CIA for her review and a list of questions (see Appendix H).</p> <p>CSH followed up with Mrs. Arinaga via text message on 5 September 2018 for confirmation of her email address.</p> <p>Mrs. Arinaga replied via text message on 5 September 2018:</p> <p><i>. . . I just got too busy. I will review your email tonight and get back to you. Take care. Email is correct.</i></p> <p>CSH reached out to Mrs. Arinaga on 17 September 2018:</p> <p><i>Just checking in. I'm updating the report this week, and just wondering if you had a chance to get to the questions? If you have had a chance to answer some of the questions, I've gone ahead and attached an Authorization and Release Form. The Authorization and Release Form really is to make clear that your comments/mana'o will be made part of the public record. You have the right to edit/redact as you see fit. We generally provide these for face to face interviews, and since you are drafting your own comments/responses, it may not be as relevant in this situation. However, I have attached it to this email in any case.</i></p> <p>CSH did not receive a response back.</p> <p>Letter and figures depicting revised project area sent via USPS on 4 February 2019</p> <p>Letter and figures depicting revised project area sent via USPS on 15 February 2019</p>
Asquith, Adam	<i>Kalo</i> farmer (<i>mahi'ai</i>) at Keālia Farm; Kauai Taro Company	<p>Joined Mr. Richard Kauai during his interview on 23 May 2017. Mr. Richard Kauai's interview was conducted at Keālia Farm, where Mr. Asquith is the farm manager.</p> <p>CSH followed up with Mr. Asquith via email on 1 June 2017.</p> <p>Letter and figures sent via email on 1 June 2017</p>

		Letter and figures depicting revised project area sent via email on 5 February 2019
Banquel, Ricardo and Magnolia	<i>Kama'āina</i> and former residents of both Kumukumu and Keālia Camps	<p>CSH reached out to Mrs. Magnolia Banquel on 15 August 2018. Interview tentatively scheduled for 25 August 2018 at Keālia Beach with Mr. and Mrs. Banquel. Due to threat of Hurricane Lane, interview cancelled and rescheduled. Interview rescheduled for 1 September 2018. Interview conducted on 1 September 2018. Interview summary approved via telephone on 4 October 2018.</p> <p>Letter and figures depicting revised project area sent via USPS on 4 February 2019</p> <p>Letter and figures depicting revised project area sent via USPS on 15 February 2019</p> <p>CSH reached out to Mrs. Magnolia Banquel via telephone on 12 March 2019. Ms. Banquel noted her concerns about the location of the sewer line, close to the areas with sandy soils or beach sand. Due to this location, there is a greater likelihood of encountering burials during ground disturbing activities. Mrs. Banquel also articulated a concern about construction material, if the sewer pipe line will be made out of metal as this material will deteriorate in coastal areas.</p>
Buckley, David	SHPD - Kaua'i Island Lead Archaeologist	Letter and figures depicting revised project area sent via email on 5 February 2019
Bushnell, Andy	<i>Kama'āina</i> ; former history professor at Kaua'i Community College; Kapa'a homestead resident	<p>Letter and figures depicting revised project area sent via USPS on 4 February 2019</p> <p>Letter and figures depicting revised project area sent via USPS on 15 February 2019</p>
Carvalho, Bernard Sr.	<i>Kama'āina</i>	<p>CSH reached out via telephone on 24 April 2017, Mr. Carvalho indicated he did not wish to participate in the study.</p> <p>Letter and figures depicting revised project area sent via USPS on 4 February 2019</p> <p>Letter and figures depicting revised project area sent via USPS on 15 February 2019</p>
Ching, Milton	<i>Kama'āina</i>	Letter and figures sent via USPS on 18 April 2017

		<p>Letter and figures sent via USPS on 10 May 2017</p> <p>Letter and figures depicting revised project area sent via USPS on 4 February 2019</p> <p>Letter and figures depicting revised project area sent via USPS on 15 February 2019</p>
Chong, Herman, Jr.	Descendant of P. Chong (referred by Aunty Beverly Muraoka)	<p>Letter and figures sent via USPS on 18 April 2017</p> <p>Letter and figures sent via USPS on 10 May 2017</p> <p>Letter and figures depicting revised project area sent via USPS on 4 February 2019</p> <p>Letter and figures depicting revised project area sent via USPS on 15 February 2019</p>
Crabbe, Kamana'opono	OHA Chief Executive Officer (Ka Pouhana)	<p>Letter and figures sent via USPS on 10 May 2017</p> <p>Dr. Crabbe replied to CSH via letter on 10 May 2017. A letter was also forwarded to Kaliko Santos via email:</p> <p><i>The Office of Hawaiian Affairs (OHA) is in receipt of your letter dated April 2017 letter, initiating consultation and seeking comments ahead of a cultural impact assessment (CIA) for the proposed Keālia Subdivision project located in Keālia, what looks to be old sugarcane fields.</i></p> <p><i>OHA notes that even in heavily disturbed areas such as those parcels utilized for sugar cane cultivation, intact cultural deposits and resources, including ancestral human burials have been discovered beneath tilled areas.</i></p> <p><i>OHA recommends consultation be initiated with Liberta Albao—president of the Queen Deborah Kapule Hawaiian Civic Club, Jerry Nakasone—kama'aina from the Keālia plantation camp area, and Puanani Rogers – Ho'okipa Network-Kaua'i.</i></p> <p><i>Thank you for the opportunity to comment.</i> (see Appendix A)</p> <p>Letter and figures depicting revised project area sent via USPS on 4 February 2019</p> <p>Letter and figures depicting revised project area sent via USPS on 15 February 2019</p>

Fisher, Melissa	Kaua'i Watershed Alliance	Letter and figures depicting revised project area sent via USPS on 4 February 2019 Letter and figures depicting revised project area sent via USPS on 15 February 2019
Franklin, Carol	Descendant of Antone Arrude	Letter and figures depicting revised project area sent via USPS on 4 February 2019 Mail returned on 13 February 2019, unable to forward Letter and figures depicting revised project area sent via USPS on 15 February 2019 Mail returned on 28 February 2019, unable to forward
Freitas, Gerald	<i>Kama'āina</i>	Letter and figures sent via USPS on 24 April 2017 Mail returned; no mail receptacle, unable to forward. Letter and figures depicting revised project area sent via USPS on 4 February 2019 Letter and figures depicting revised project area sent via USPS on 15 February 2019 Mail returned; no such number, unable to forward.
Freitas, Jerome	<i>Kama'āina</i> (referred by Kenneth Ponce)	Mr. Freitas reached out to CSH via telephone on 24 May 2017. He informed CSH that Mr. Kenneth Ponce had told him to call, and suggested posting ads in the newspaper. He suggested it would be a good idea to reach out to as many individuals as possible, and that he would be willing to participate in a large, sit down gathering. Letter and figures depicting revised project area sent via USPS on 4 February 2019 Letter and figures depicting revised project area sent via USPS on 15 February 2019
Furumoto, Clyde	Kealia Tract Resident with knowledge of 1950's, 1960's, and 1970's plantation history and customs	Letter and figures sent via email on 25 July 2018; CSH noted the following to Mr. Furumoto: <i>... CSH has prepared a DRAFT cultural impact assessment (CIA) for the proposed Keālia Subdivision, Keālia Ahupua'a, Kawaihau District, Kaua'i, TMKs: [4] 4-7-004:001. We are currently revising this CIA. As part of this effort, we are attempting to follow up on comments received during the</i>

		<p><i>Draft EIS comment period. Specifically, we are hoping to consult with kama'āina residents of Keālia Tract to identify and document customs and practices conducted in the plantation camps during the 1950's, 1960's, and 1970's.</i></p> <p>Letter and figures sent via USPS on 26 July 2018.</p> <p>CSH reached out via mail, email, and telephone on 13 August 2018. CSH left a voice message for Mr. Furumoto.</p> <p>CSH attempted to visit Mr. Furumoto's home in Keālia Tract on 1 September 2018 to hand deliver the letter and figures and explain the scope of work for the CIA. CSH met Ms. Colleen Furumoto, Mr. Furumoto's sister.</p> <p>Letter and figures depicting revised project area sent via USPS on 4 February 2019</p> <p>Letter and figures depicting revised project area sent via USPS on 15 February 2019</p>
Garcia, Herbert and Evelyn	<i>Kama'āina</i> ; former plantation workers (referred by Moana Palama)	<p>CSH reached out via telephone on 24 April 2017. Speaking to Mr. Herbert Garcia, he provided CSH with his address to forward letter and figures.</p> <p>Letter and figures sent via USPS on 24 April 2017</p> <p>Letter and figures sent via USPS on 10 May 2017</p> <p>Letter and figures depicting revised project area sent via USPS on 15 February 2019</p>
Greene, Linda and Philip	<i>Kama'āina</i>	<p>Letter and figures depicting revised project area sent via USPS on 4 February 2019</p> <p>Letter and figures depicting revised project area sent via USPS on 15 February 2019</p>
Hamada, Daniel	Principal of Kapa'a High School	<p>Letter and figures depicting revised project area sent via USPS on 4 February 2019</p> <p>Letter and figures depicting revised project area sent via USPS on 15 February 2019</p>
Hashimoto, Thomas	Kaua'i representative, Aha Moku Advisory Committee	Letter and figures depicting revised project area sent via email on 5 February 2019
Hoomanawanui, Kauanoe M.	Burial Site Specialist, SHPD (Hawai'i and Kaua'i)	<p>Letters and figures sent via email on 18 April 2017</p> <p>Letter and figures sent via email on 15 May 2017</p>

		Letter and figures depicting revised project area sent via email on 5 February 2019
Ho'opii 'Ohana	<i>Kama'āina</i>	Unable to locate email or mailing address in 2017. Located a mailing address in February 2019. Letter and figures depicting revised project area sent via USPS on 4 February 2019 Letter and figures depicting revised project area sent via USPS on 15 February 2019
Hopman, Arius	Artist (referred by the Kaua'i Historical Society)	CSH reached out via telephone on 5 May 2017 and left a message. Letter and figures sent via USPS on 8 May 2017. Letter and figures depicting revised project area sent via USPS on 4 February 2019 Letter and figures depicting revised project area sent via USPS on 15 February 2019 Mail returned on 16 February 2019
Kaneakua, William	<i>Kama'āina</i>	Mr. Kaneakua previously participated in an interview with CSH for the Bushnell et al. (2002) report. Letter and figures sent via USPS on 29 April 2017 Letter and figures sent via USPS on 10 May 2017
Kano, Yoshida "Dimples"	<i>Kupuna</i>	Letter and figures sent via USPS on 9 June 2017 Mrs. Yoshida Kano reached out via telephone on 28 June 2017, notifying CSH that she is willing to help out or provide information. She added, however, that most of the former Keālia plantation workers have since passed on. Letter and figures depicting revised project area sent via USPS on 4 February 2019 Letter and figures depicting revised project area sent via USPS on 15 February 2019
Kauai Council of Hawaiian Civic Clubs	Association of Hawaiian Civic Clubs	Letter and figures sent care of Association of Hawaiian Civic Clubs. Letter and figures sent via USPS on 18 April 2017 Letter and figures sent via email on 15 May 2017

		Letter and figures depicting revised project area sent via USPS on 4 February 2019 Letter and figures depicting revised project area sent via USPS on 15 February 2019
Kaua'i Historical Society		Letter and figures sent via USPS on 18 April 2017 The Kaua'i Historical Society responded via email, providing CSH with scanned documents regarding the history of Keālia, links to historic plantation and government maps, and links to finding aids (see Appendix B). CSH replied via email on 2 May 2017 thanking the Kaua'i Historical Society for their guidance and assistance. Letter and figures depicting revised project area sent via USPS on 4 February 2019 Letter and figures depicting revised project area sent via email on 5 February 2019 Letter and figures depicting revised project area sent via USPS on 15 February 2019
Kauai, Richard	<i>Kama'āina</i> of Keālia; lives on <i>kuleana</i> parcel in the valley	CSH reached out to Mr. Kauai via telephone on 24 April 2017. Mr. Kauai agreed to participate in the interview, requested CSH call in mid-May to set up a formal interview. He provided CSH with his address to forward letter and figures. Letter and figures sent via USPS on 24 April 2017. Interview scheduled for 23 May 2017. Interview conducted on 23 May 2017. Interview summary approved over telephone on 30 January 2018. Letter and figures depicting revised project area sent via USPS on 4 February 2019 Letter and figures depicting revised project area sent via USPS on 15 February 2019 CSH reached out to Mr. Richard Kauai via telephone on 12 March 2019. CSH left a message inquiring into whether the addition of the sewer line project area had impacted Mr. Kauai's <i>mana'o</i> .
Ka U'i O Ka 'Āina Cultural Center		Letter and figures depicting revised project area sent via USPS on 4 February 2019

		Mail Returned on 8 February 2019 Located new address; letters and figures sent care of Kumu Leilani Rivera Low Letter and figures depicting revised project area sent via USPS on 15 February 2019
Kaye, Kaulana	<i>Kama'āina</i>	Letter and figures sent via email on 18 April 2017 Letter and figures sent via email on 15 May 2017 Letter and figures depicting revised project area sent via email on 5 February 2019
Kealoha, Keone	Mālama Kaua'i	Letter and figures depicting revised project area sent via USPS on 4 February 2019 Letter and figures depicting revised project area sent via USPS on 15 February 2019
Kekua, Kumu Kehaulani	Kauai Heritage Center/Ka'ie'ie Foundation; Halau Palaihiwa o Kaipuawai	Letter and figures sent via USPS on 18 April 2017 Letter and figures sent via USPS on 10 May 2017 Letter and figures depicting revised project area sent via USPS on 4 February 2019 Mail Returned on 8 February 2019 New address located; Letter and figures depicting revised project area sent via USPS on 15 February 2019
Kon, Arlene	Formerly affiliated with the Native Hawaiian Education Council; <i>Kama'āina</i>	Letter and figures sent via email on 18 April 2017 Letter and figures sent via email on 15 May 2017 Letter and figures depicting revised project area sent via email on 5 February 2019 Email bounced back on 5 February 2019 Letter and figures depicting revised project area sent via USPS on 15 February 2019
Kuloloia, Jason	Principal of Kapa'a Elementary School	Letter and figures depicting revised project area sent via USPS on 4 February 2019 Letter and figures depicting revised project area sent via USPS on 15 February 2019
Machado, Bernard	<i>Kama'āina</i> and former resident of Keālia Camp	CSH reached out to Mr. Machado via telephone on 14 August 2018 to explain the scope of work for the CIA and express an interest to learn about Keālia's plantation history during the '50's, 60's, and 70's. He

		<p>noted that he had knowledge of an old plantation cemetery that had been largely forgotten about.</p> <p>CSH reached out to Mr. Machado via telephone on 17 August 2018 to attempt to schedule a tentative meeting date for the weekend of 24-25 August 2018.</p> <p>Mr. Machado noted his times of availability and to call him when on Kaua'i.</p> <p>Due to threat of Hurricane Lane, all travel to Kaua'i cancelled.</p> <p>CSH attempted to reschedule an interview with Mr. Machado for the following week.</p> <p>CSH reached out to Mr. Machado on 31 August 2018; due to scheduling conflicts, unable to schedule an in-person interview for 1 September 2018.</p> <p>CSH reached out to Mr. Machado via telephone on 14 September 2018 regarding a telephone interview and mailing of letter and figures. Mr. Machado noted that he did not want any paperwork sent to his house; he also clarified that remains from the plantation cemetery had been moved to St. Catherine's Cemetery.</p> <p>CSH reached out to Mr. Machado via telephone on 19 September 2018.</p> <p>CSH reached out to Mr. Machado via telephone on 1 October 2018.</p> <p>Letter and figures depicting revised project area sent via USPS on 4 February 2019</p> <p>Mail returned on 8 February 2019</p>
Makanani, Mabel	<i>Kama'āina</i> of Kapa'a	<p>Letter and figures depicting revised project area sent via USPS on 4 February 2019</p> <p>Letter and figures depicting revised project area sent via USPS on 15 February 2019</p>
McClure, Daphne	<i>Kama'āina</i> of Kapa'a	<p>Letter and figures depicting revised project area sent via USPS on 4 February 2019</p> <p>Letter and figures depicting revised project area sent via USPS on 15 February 2019</p>
Milnes, Les	County Planning Inspector	<p>Letter and figures sent via USPS on 18 April 2017</p> <p>Letter and figures sent via USPS on 10 May 2017</p>

		<p>Letter and figures depicting revised project area sent via USPS on 4 February 2019</p> <p>Mail returned on 8 February 2019</p> <p>New address located; Letter and figures depicting revised project area sent via USPS on 15 February 2019</p>
Muraoka, Beverly	<i>Kupuna; kumu hula</i> (retired); Halau Ka Lei Kukui Hawaii	<p>Letter and figures sent via USPS on 18 April 2017</p> <p>Letter and figures sent via USPS on 10 May 2017</p> <p>Mrs. Muraoka replied via letter on 15 May 2017:</p> <p><i>Thank you for your letter dated April 2017 regarding Kealia Properties, LLC, CSH and Helber Hastert and Fee (HHF) Planners for a CIA for a proposed Subdivision, TMK: 4-4-7-9-001 and 002.</i></p> <p><i>I confess that my background and/or knowledge of this subject discussed herein are limited to the following:</i></p> <p><i>The proposed site may have been used for sugar cane and, therefore, may include irrigational ditches, 'auwais, and other used water systems by the early settlers;</i></p> <p><i>The site may also possess high content of chemicals used for fertilizer, rodent control and mosquito sprays.</i></p> <p><i>Gathering of plants, leaves for medicine, and the like, may have been used by the old-timers but may not be available as was then thus, a botanist or horticulturalist should be consulted if these still can be found e.g. popolo, laukahi, 'uhaloa, etc.</i></p> <p><i>The site may also be in line of the 'night marchers' from Mt. Makaleha to Kealia Beach. [Night marchers, also identified as huaka'i po or oi'o (spirit ranks), are often referenced in many tales; spirits were said to "return to the scenes they knew on earth in the form in which they appeared while alive" (Beckwith 1970:164). The timing of their visits were generally confined to "certain sacred nights to visit the sacred places, or to welcome a dying relative" and lead their spirit to the land of Pō (Beckwith 1970:164)]</i></p>

		<p><i>Most of the kupuna and/or elders of the Kealia I grew up with are now deceased; however, I give the following names for your contact. They are the Ho'opii family, Herman Chong family, and the only person (in her 90's) would be former Realtor, Dimples Kano.</i></p> <p><i>As always, I would be pleased if any future comments for this project be allowed that may be impacted upon it, it may be granted to me.</i></p> <p><i>I noticed via the maps submitted the Halaula Reservoir is in direct path to the project. Please ensure no other project like the Kaloko Dam ever occurs. This includes the Kumukumu Stream. (see Appendix C)</i></p> <p><i>Again, I offer this limited knowledge in hope that ALL aspects are discussed thoroughly that the people may benefit therefrom.</i></p> <p>Letter and figures depicting revised project area sent via USPS on 4 February 2019</p> <p>Letter and figures depicting revised project area sent via USPS on 15 February 2019</p>
Nakasone, Jerry	<i>Kama'āina</i> from the Keālia Plantation Camp area; cowboy that participates in riding events in Līhu'e	<p>Unable to locate an email or mailing address; Located a mailing address in January 2019</p> <p>Letter and figures depicting revised project area sent via USPS on 4 February 2019</p> <p>Letter and figures depicting revised project area sent via USPS on 15 February 2019</p>
Oi, Tommy	Former land surveyor	<p>Letter and figures sent via email on 18 April 2017</p> <p>Email bounced back</p> <p>Letter and figures sent via USPS on 10 May 2017</p> <p>Letter and figures depicting revised project area sent via USPS on 4 February 2019</p> <p>Letter and figures depicting revised project area sent via USPS on 15 February 2019</p>
Ornellas, Jerry	Expert, founder and president of East Kaua'i Water Cooperative	<p>Mr. Ornellas previously participated in an interview with CSH for the Bushnell et al. (2002) report</p> <p>Letter and figures sent via USPS on 18 April 2017</p>

		<p>Letter and figures sent via USPS on 10 May 2017</p> <p>Letter and figures depicting revised project area sent via USPS on 4 February 2019</p> <p>Letter and figures depicting revised project area sent via USPS on 15 February 2019</p>
Oshiro, Dino	Recommended by Noa Nakasone of OHA as a possible contact for information regarding Keālia's plantation history; owner of Sonflower Florist & Gifts in Kapa'a Town	<p>CSH reached out to Mrs. Oshiro via telephone to explain the project and the scope of work for the CIA. Mrs. Oshiro informed CSH that she did not have much historical information on Keālia, however, she recalled that Dr. Cockett's medical office was located at the dispensary at the top of the road, and that she would visit the dispensary for medical appointments.</p> <p>Letter and figures depicting revised project area sent via USPS on 4 February 2019</p> <p>Letter and figures depicting revised project area sent via USPS on 15 February 2019</p>
Ponce, Kenneth, Jr.	<i>Kama'āina</i> ; descendant of Pedring and Crescencia Ponce	<p>Letter and figures sent via USPS on 18 April 2017</p> <p>Letter and figures sent via USPS on 10 May 2017</p> <p>Interview scheduled for 22 May 2017</p> <p>Interview conducted 22 May 2017</p> <p>Interview summary approved over telephone on 22 August 2017</p> <p>Letter and figures depicting revised project area sent via USPS on 4 February 2019</p> <p>Letter and figures depicting revised project area sent via USPS on 15 February 2019</p> <p>CSH reached out to Mr. Kenneth Ponce via telephone on 12 March 2019. CSH left a message inquiring into whether the addition of the sewer line project area had impacted Mr. Ponce's <i>mana'o</i>.</p>
Prigge, Joseph Jr.	<i>Kama'āina</i>	<p>Mr. Prigge previously participated in an interview with CSH for the Bushnell et al. (2002) report</p> <p>Letter and figures sent via USPS on 29 April 2017</p> <p>Letter and figures sent via USPS on 10 May 2017</p>

		Letter and figures depicting revised project area sent via USPS on 4 February 2019 Letter and figures depicting revised project area sent via USPS on 15 February 2019
Rapozo, George "Keoki"	<i>Kama'āina</i>	Letter and figures depicting revised project area sent via USPS on 4 February 2019 Letter and figures depicting revised project area sent via USPS on 15 February 2019
Reis, Timothy	Cultural practitioner and <i>mahi'ai</i> in Keahapana (Keapana) Valley, Keālia Ahupua'a; relative of the Bray 'Ohana	Mr. Timothy Reis reached out to CSH via email on 5 June 2017: <i>I recently was made aware of a request for information, regarding a residential development project in the Kealia area. I am a farmer in the Keahapana Valley. I farm on parcel number 470030090000, with permission of Kenneth Bray through his daughters Chenoa Bray, Cholena Bray and Ginger Bray [copied on email correspondence].</i> <i>On this property is a spring which feeds a taro patch which historically fed the Kauai Ohana.</i> <i>This message is to serve as notice to you of the Bray Ohana's interest in this area and the concern that the aproposed development could have on their cultural practices and those of their descendants.</i> <i>The source of water needed for the proposed 200+ homes could affect the aquifer that is the source of the spring on the property we farm.</i> <i>We request that you provide us with evidence that proves the proposed project will not negatively impact our cultural practices.</i> <i>If you have any questions or require additional information, please let me know.</i> CSH replied via email on 15 June 2017, requesting a telephone number to discuss the CIA further. Mr. Reis replied via email on 15 June 2017, providing the telephone number of Ms. Cholena Bray. CSH reached out to Mr. Reis via email on 17 November 2017:

		<p><i>. . . We are attempting to round out our CIA for the Kealia Subdivision project. I was hoping that we may be able to set up a formal sit-down interview with you. CSH's cultural advisor, Mr. Aulii Mitchell (copied on this email) will also be in attendance. We were hoping to visit Kaua'i sometime near the end of this month or beginning of December, and perhaps meet with you during this period? CSH reached out to Mr. Reis via telephone on 16 November 2017.</i></p> <p><i>Mr. Reis replied via email on 17 November 2017:</i></p> <p><i>. . . As a reminder, I originally contacted you to notify you of the use of a spring that I felt could be impacted by the proposed development. I am the Hoaaaina and was authorized to make contact in order represent and protect the land owner's interest. We requested proof that the approx. 2 million gallons a month (10,000 gallons x 200 homes) or 24 million gallons a year needed for the proposed project would not negatively impact our cultural practices. I recognize that what I am requesting may be beyond your company's responsibility. I and the land owner would be willing to meet with you and your company to discuss our established cultural practices in the Keahapana Valley. I have copied the land owner on this email. CSH followed up with an email clarification on 17 November 2017:</i></p> <p><i>E kala mai, I sent the last email a bit prematurely, as I'm still trying to work out schedules, and determine who among my colleagues will be assisting me on Kaua'i. I will update you once I determine this. Please do not disregard the last messages, as we would like to follow up with you, per your request made in testimony before the LUC. I would just like to reiterate that we are hoping to set up a formal interview, to round out the CIA, and address your comments as presented before the LUC. I want to also take the time to explain the role of CSH as it</i></p>
--	--	---

		<p><i>pertains to the CIA. The proposed Keālia Subdivision project is subject to State environmental law that requires assessing impacts to the natural environment and cultural practices. To meet this requirement, project proponents must retain neutral third party consultants to conduct studies related to this compliance process. CSH has been asked to conduct this study and reach out to the community. The purpose of our outreach efforts is twofold: to inform the community of the proposed project, and to identify, through consultation with knowledgeable individuals in the community, ongoing or past cultural practices occurring or that have occurred within the project area. Through community consultation, CSH can evaluate potential adverse effects on the cultural practices and cultural resources of the community and State. This is in compliance with Act 50 of State law. As outlined in Act 50, CSH is limited to only “identify[ing] and address[ing] effects on Hawaii’s culture, and traditional and customary rights” (State of Hawai‘i Act 50 2000). As we our still gathering information on cultural practices, in relation to the proposed project, it is extremely difficult to comment on potential negative effects to cultural practices at this time. Also, as of this time, an engineering report, evaluating the existing water system and proposed water system, is being drafted. This report will be included within the Draft EIS, available for review through the OEQC website. The consultant would also like to provide you with a hardcopy letter notifying that an EIS Preparation Notice has been drafted. Generally, this prep notice informs the public that an EIS is being drafted, what will be included within the EIS, and ways in which the public can speak to the project. Is it possible to receive a mailing address so we can send you relevant information as it becomes available? Or would you prefer correspondence to occur over email?</i></p>
--	--	---

		<p><i>Currently, I am available November 27, 2017 and December 1, 2017. Do any of these dates potentially work for you and your family?</i></p> <p>Mr. Reis replied via email on 6 December 2017 to coordinate a meeting time and provide a mailing address.</p> <p>CSH replied via email on 6 December 2017 to schedule an interview date.</p> <p>Mr. Reis replied via email on 7 December 2017 to confirm an interview date.</p> <p>CSH replied via email on 8 December 2017 confirming an interview for 21 December 2017.</p> <p>Interview scheduled for 21 December 2017.</p> <p>Mr. Reis reached out to CSH via email on 12 December 2017 to confirm interview location.</p> <p>CSH replied via email on 13 December 2017: <i>Would it be possible to meet you at the farm property and/Or visit the spring? If that's not possible, please let us know of any location that is most convenient for you.</i></p> <p>Mr. Reis replied via email on 18 December 2017:</p> <p><i>I would love to meet at our property, but it may not be safe. The property is under the canopy of a massive Monkepod Tree. The tree has termites and there are dead limbs that fall, usually when the wind blows. I would be more than happy to provide you with photos of our taro patch and the spring. We could meet at Kealia Beach, in the area of the subject properties, at one of pavilions. If the weather is bad we could meet at a coffee house.</i></p> <p>CSH replied via email on 19 December 2017 to confirm interview location at Keālia Beach Pavilions.</p> <p>Interview conducted on 21 December 2017 at Keālia Beach Pavilions.</p> <p>Mr. Reis reached out to CSH via email regarding his interview summary on 19 February 2018:</p> <p><i>After reading the attached Summary, I think you did an excellent job in documenting our</i></p>
--	--	--

		<p><i>correspondences. For the record, we might disagree on some aspects of “native tenant” vested rights and the process in which they were exercised, but that is to be expected due to the complexity associated with this topic in relation to our current situation. In closing, I agree with the information provided in the Summary with the exception of the topic noted above.</i></p> <p>CSH replied via email on 19 February 2018 asking which section Mr. Reis disagreed with, and if he would like these edited or removed from his summary.</p> <p>CSH reached out via telephone on 20 February 2018 to confirm if Mr. Reis would like anything edited or removed from his summary.</p> <p>Mr. Reis replied via email on 28 February 2018:</p> <p><i>No, you don't need to change anything in your Summary. I believe you have accurately documented correspondences and the land tenure system, as it is commonly understood. For the record, I needed to disagree with with the “native tenant” analysis based on the current interpretation.</i></p> <p>Interview summary approved via email on 28 February 2018</p> <p>Letter and figures depicting revised project area sent via USPS on 4 February 2019</p> <p>Letter and figures depicting revised project area sent via email on 5 February 2019</p> <p>Letter and figures depicting revised project area sent via USPS on 15 February 2019</p> <p>CSH reached out to Mr. Timothy Reis via telephone on 12 March 2019. CSH left a message inquiring into whether the addition of the sewer line project area had impacted Mr. Reis' <i>mana'o</i>.</p>
Rivera, Larry	<i>Kama'āina</i> ; Musical Director of Coco Palms Hotel	<p>Letter and figures depicting revised project area sent via USPS on 4 February 2019</p> <p>Mail returned on 13 February 2019, unable to forward.</p> <p>Letter and figures depicting revised project area sent via USPS on 15 February 2019</p>

		Mail returned 21 February 2019, unable to forward.
Rodgers, Puanani	<i>Kama'āina</i> ; Ho'okipa Network	Letter and figures sent via USPS on 18 April 2017 Letter and figures sent via USPS on 10 May 2017
Rodrigues, Hinano	Cultural Historian/Acting History and Culture Branch Chief, DLNR-State Historic Preservation Division-Maui	Letter and figures sent via email on 18 April 2017 Mr. Rodrigues replied via email on 19 April 2017: <i>The point of a CIA is solicit, obtain, document and discuss whether or not a project will have an impact on cultural practices in the project area. In order to make that determination, you must first determine whether or not there was a cultural or traditional practice in the past, is it ongoing, and if not, will there be a negative effect in the future. All that said, the most effective and efficient method would be to seek out people who currently live in the area. Canvassing the neighborhood is the ideal start.</i> <i>I've included my Kaua'i Burial Site Specialist in this response in case she has anything to contribute. She not only works there, she was raised there. Aloha no.</i> Letter and figures depicting revised project area sent via email on 5 February 2019
Rossi-Fukino, Pualiiliimaikalani	Instructor, Hawaiian Studies, Kaua'i Community College	Letter and figures depicting revised project area sent via USPS on 4 February 2019 Letter and figures depicting revised project area sent via USPS on 15 February 2019
Santos, Kaliko	Community Outreach Coordinator, OHA; Nā Kuleana o Kānaka 'Ōiwi	Letter and figures sent via email on 18 April 2017 Letter and figures sent via USPS on 10 May 2017 Letter and figures depicting revised project area sent via USPS on 4 February 2019 Letter and figures depicting revised project area sent via USPS on 15 February 2019
Say, Barbara	<i>Kupuna</i>	Letter and figures sent via USPS on 18 April 2017

		<p>Letter and figures sent via USPS on 10 May 2017</p> <p>Letter and figures depicting revised project area sent via USPS on 4 February 2019</p> <p>Letter and figures depicting revised project area sent via USPS on 15 February 2019</p>
Smith, Kamealoha Hanohano	Board President of Kaiaulu Papaloa	<p>Mr. Kamealoha Hanohano Smith reached out to CSH, on behalf of Kaiaulu Papaloa representing members of the Kealia Community, on 7 June 2017:</p> <p><i>My name is Kamealoha Smith and I am the current Board President of Kaiaulu Papaloa. Kaiaulu Papaloa is now working with some Kealia Community members to address the Kealia Proposed Subdivision. The group wrote a letter and this letter is attached (see Appendix D). This is in response to the Cultural Surveys CIA letter to request for information.</i></p> <p><i>Please feel free to contact me. . . if you have any questions. We look forward to speaking to you in the near future. An original will be sent through mail today for your records.</i></p> <p>CSH replied on 7 June 2017:</p> <p><i>I am sending confirmation of my receipt of your email and the attached letter. I will reach out again sometime early next week to discuss the details and/or pose any questions. I am still processing this information, and want to make sure that I have taken the time to carefully review it, and have developed a thorough understanding of the information that you and the hui have presented. Mahalo for sharing this with me.</i></p> <p>Kamealoha Smith on behalf of Kaiaulu Papaloa representing members of the Keālia Community, notified CSH via email on 12 June 2017 of the following:</p> <p><i>. . . there will be a change in regards of the person you will be working with in our community. I will be passing this kuleana on to an extremely qualified individual in our community. Once its official, I will have him contact you. I work as the Community Liaison for Rural/Indigenous Development.</i></p>

		<p>Kamealoha Smith on behalf of Kaiaulu Papaloa representing members of the Keālia Community, sent a follow up letter on 17 June 2017. The letter included new contact information and additional community concerns (see Appendix E):</p> <p><i>This is a follow up to our letter of 7 June 2017.</i></p> <p><i>As a reminder, our Hui is a group of native Hawaiians, including the kupuna, with ties and interests in Kealia. Kai'ulu [sic] is a nonprofit organization which has been selected by the Hui to communicate their interests on this matter. They have chosen this vehicle because they fear reprisal from the land manager and its contractors. Kai'ulu [sic] will remain the buffer between the hoa'aina and the landowner at this point, but the direct point of contact will now be Timothy Reis. . . Written correspondence can go to the Kai'ulu [sic] address below.</i></p> <p><i>On another note, it is our understanding that you, and/or, the landowner have been in contact with State DLNR-SHPO on Kauai regarding this issue. This is of great concern because the current land manager for the Kealia property and development has familial relationships within this department. This is an obvious conflict of interest, compromises good faith discussions, and jeopardizes the process' compliance with State law.</i></p> <p><i>Can you please confirm who you have spoken with regarding this issue so that we understand who is now involved in what we had hoped could be a private discussion.</i></p> <p>Dr. Hallett Hammatt, on behalf of CSH, replied via email and USPS on 10 July 2017 (see Appendix F):</p> <p><i>We would like to explain the role of Cultural Surveys Hawaii (CSH). The proposed Keālia Subdivision project is subject to State environment law that requires assessing impacts to the natural environment and cultural practices. To meet this requirement,</i></p>
--	--	--

		<p><i>project proponents must hire neutral third party consultants to conduct studies related to this compliance process. CSH has been hired to prepare a Cultural Impact Assessment (CIA) and a Literature Review and Field Inspection (LRFI) for the subject parcel. It is CSH's responsibility to conduct an objective study, to gather information from concerned community members, and to compile the information gathered into a report that becomes part of the public record. Through the consultation process, as well as the public's review of completed studies, the public has an opportunity to speak to this project.</i></p> <p><i>As part of our CIA it is standard practice for us to contact people in the community, as well as key stakeholders (including the government and its appropriate agencies). As part of this process, we also reach out to the Office of Hawaiian Affairs (OHA), the Kaua'i and Ni'ihau Island Burial Council, and the State Historic Preservation Division (SHPD) (Burial Sites Specialist and History and Culture Branch). The purpose of our outreach efforts is twofold: to inform the community of the proposed project, and to identify, through consultation with knowledgeable individuals in the community, ongoing or past cultural practices occurring or that have occurred within the project area. Through community consultation, CSH can evaluate potential adverse effects on the cultural practices and cultural resources of the community and State. This is in compliance with Act 50 of State law. As outlined in Act 50, CSH is limited to only 'identify[ing] and address[ing] effects on Hawaii's culture, and traditional and customary rights' (State of Hawai'i Act 50 2000). CSH can only go so far as to identifying 'significant effects,' and recommending mitigating actions based directly on stakeholder comments.</i></p>
--	--	---

		<i>In order for us to remain neutral third parties, we cannot directly advocate for, or represent the hui or represent the landowner in any way. CSH cannot act as a mediator between the Keālia Hui and the landowner, nor can we actively participate in mitigation.</i>
Solis, Kaahiki	Cultural Historian (O'ahu, Kaua'i, and Ni'ihau)	Letter and figures sent via email on 18 April 2017 Ms. Solis replied via email on 19 April 2017; CSH replied via email on 19 April 2017. Letter and figures depicting revised project area sent via email on 5 February 2019
Trugillo, William	Ka Leo o Kaua'i	Letter and figures depicting revised project area sent via USPS on 4 February 2019 Letter and figures depicting revised project area sent via USPS on 15 February 2019
Vasquez, Stanley	<i>Kama'āina</i>	CSH reached out via telephone on 24 April 2017. CSH left a voice message.
Vidinha, Wayne Reverend	Ke Akua Mana Church	Letter and figures sent via USPS on 18 April 2017 Letter and figures sent via USPS on 10 May 2017 Letter and figures depicting revised project area sent via USPS on 4 February 2019 Letter and figures depicting revised project area sent via USPS on 15 February 2019
Wichman, Randy	Executive Director, Kaua'i Historical Society	Letter and figures sent via USPS on 18 April 2017 Letter and figures sent via USPS on 10 May 2017 Letter and figures depicting revised project area sent via USPS on 4 February 2019 Letter and figures depicting revised project area sent via USPS on 15 February 2019
Wichman, Victoria	Chair, Kauai Historic Preservation Commission	Letter and figures depicting revised project area sent via USPS on 4 February 2019 Letter and figures depicting revised project area sent via USPS on 15 February 2019
Yap, Keith	Vice-Chair, Kaua'i Island Burial Council	Letter and figures sent via email on 18 April 2017 Letter and figures sent via email on 15 May 2017

6.4 *Kama‘āina* Interviews

The authors and researchers of this report extend our deep appreciation to everyone who took time to speak and share their *mana‘o* and *‘ike* with CSH whether in interviews or brief consultations. We request that if these interviews are used in future documents, the words of contributors are reproduced accurately and in no way altered, and that if large excerpts from interviews are used, report preparers obtain the express written consent of the interviewee/s.

Interviews were conducted in accordance with federal and state laws and guidelines with individuals knowledgeable of the general history, present and past land use, traditional gathering practices (both past and ongoing), and cultural sites of the Petition Area and Keālia Ahupua‘a. In some instances, discussion of Kapa‘a Ahupua‘a also occurred. It should be noted that the use of “project area” within the following interview summaries is synonymous with “Petition Area.” The following analysis of *kama‘āina* interviews is intended to facilitate the identification of potential impacts to cultural resources, ongoing cultural practices, and/or cultural sites within the Petition Area or its immediate vicinity. As the current CIA involves the study of both Keālia and Kapa‘a Ahupua‘a in its entirety, CSH recognizes the importance of discussing cultural resources, cultural practices, and cultural sites outside of the Petition Area and the sewer line installation project area.

6.4.1 Summary of Kenneth Ponce Interview

CSH interviewed Mr. Kenneth Ponce on 22 May 2017 at the Courtyard Kaua‘i in Kapa‘a, on the island of Kaua‘i, for the proposed Keālia Subdivision project.

Mr. Kenneth Ponce was born and raised in the Kapa‘a and Keālia area of Kaua‘i. He is the son of Mr. Antonio and Margaret Ponce, and the grandson of Mr. Pedro and Cresencia Ponce, former sugar plantation workers and early entrepreneurs within the Keālia area. Mr. Ponce is of Japanese-Filipino ancestry, and is a retiree of the Kaua‘i Fire Department.

Mr. Ponce, a *kama‘āina* of Keālia, recalled the days of his youth; he spoke of the many hours spent surfing and fishing at Keālia Beach, hunting pheasant in the *mauka* lands of Keālia, watching chicken fights at Kumukumu Camp, and bathing at Waipahe‘e Falls. Today, Mr. Ponce resides with his family in Kapahi.

CSH inquired into his family’s connection to the *ahupua‘a* of Keālia. Mr. Ponce explained that his family’s connection to the *ahupua‘a* was established through the plantation experience. Keālia as well as nearby Kapa‘a, were once thriving plantation towns. His grandparents, Pedro and Cresencia Ponce, arrived on Kaua‘i in the early 1920s, brought as laborers to work in the cane fields.

The genesis of Hawai‘i’s unique *kama‘āina* culture can be traced back to these populations of multi-ethnic working class people drawn together by the plantation experience. Workers like Pedro and Cresencia Ponce, “helped create the changes that saw Big Five control over Hawaii give way to multi-ethnic participation in a more democratic society” (Taniguchi in Nishimoto et al. 1984:Foreword). Pedro and Cresencia met during the territory-wide Filipino plantation strike of 1924 (Nishimoto et al. 1984:107).

Pedro was first assigned to Hanamaulu Plantation, where he did *kālai*, or cutting of sugar cane. Just prior to the strike, he was given the job of irrigation ditchman, supervising nine co-workers near Wailua Falls. In 1924, Pedro decided to join the

strike and moved to the Kapaa strike camp located in the Hee Fat building. He solicited food donations from nonstrikers and earned needed money planting coconut trees on private land.

At Kealia Plantation, Cresencia worked briefly as a laundress, then as a plantation laborer, stripping and bundling sugar cane leaves. She later joined her sister at the Kapaa strike camp where she became acquainted with Pedro. [Nishimoto et al. 1984:107]

Following the strike, Pedro and Cresencia married; they were determined to begin their life together off the plantation. Mr. Ponce commented that during this time, his grandparents relocated to Mailihuna Road (south of the current project area). Their move to the rural, yet tightly knit community of Keālia provided them with a unique entrepreneurial opportunity. Pedro Ponce noticed that both Keālia and Kapaʻa Town lacked a barbershop. With skills acquired in the Philippines as a young boy, Pedro Ponce founded his own barbershop. The dynamics of the barber shop, where a “man having a shave, with a razor to his neck, creates a place of delicacy, of gentleness, of absolute trust” (*Economist* 2017; Ellams 2016), allowed for a high degree of intra-community socialization. The barbershop, as both hub and newsroom, allowed for Mr. Ponce to know “almost everybody” in the Kapaʻa and Keālia communities.

Mr. Ponce held fond memories of his grandmother, Cresencia Ponce. Cresencia was known throughout Kauaʻi as a practioner of *hilot* (ancient Filipino art of healing or traditional midwife). Mr. Ponce commented that she had used her gift to heal many people on the island. Women often sought Cresencia during difficult or complicated pregnancies. Cresencia was particularly skilled at fixing a baby that was “*huli*” (head-up breech position) or turned improperly in the ‘*ōpū* (womb). Women struggling to conceive also sought out his grandmother; after she touched them they were able to conceive. His grandmother, a devout Catholic, believed her healing power “came from God and that it would be wrong to profit from it” (Nishimoto et al. 1984:108). In 1978, both Pedro and Cresencia were interviewed for *Hanahana: An Oral History Anthology of Hawaii's Working People* (Nishimoto et al. 1984). Cresencia described the history of her healing abilities in detail:

This thing started when I was only thirteen or fourteen years old. I didn't like to take it on myself because I was still a child, but my parents wanted me to do it. My father said to me, ‘Ning, I think you have been chosen by the Lord. You can help your own family and help others.’

You see, my father was a healer. He was really very skillful. He never went to school like doctors, of course, but he was an excellent doctor.

He would bring different roots and grasses home, wash them off, and clearly label them so that he would have medicines available for any kind of sickness. And the medicines would sometimes be applied to the outside of the body and sometimes, boiled with water and drunk.

Mr. Ponce commented that his grandmother also gathered and utilized plants for her healing practice; these plants were generally grown on the Ponce Family's lands. Regarding his family's land holdings, Mr. Ponce commented that “their [his grandparents] home overlooked Keālia Beach, and they owned several parcels of land *mauka* of Keālia Beach.” In 1958, Mr. Ponce moved into a home right next door to his grandparents.

Mr. Ponce described to CSH what it was like growing up in Keālia in the early 1960s. The community of Keālia was quite small, with limited development and rural infrastructure. He noted, “There were no stop lights when I grew up here, there was no nothing. Just the main highway, just Kūhio Highway was in existence.” However, the area was occupied by numerous plantation-style homes, as well as a subdivision. He explained,

[The subdivision] was built in the early 1950s. So, it was built. I remember this when I was a kid. But, you see this is the upper elevation. There was another Keālia Camp on the lower [elevation], right across from the bridge. There [were]. . . maybe hundreds of homes.

Despite many families making their home in Keālia, Mr. Ponce recalled the relative isolation of the area. He and his friends would often have the beach all to themselves.

Growing up there, we used to walk down Keālia Beach whenever we could. My grandparents used to fish, also down Keālia, so we used to fish. I used to go with my friends, summertime, whenever we could, to go body surfing and boogie boarding. We’d make our own plywood boogie boards and we’d stay there the whole day. It was just me and my friends and nobody else. Yes, the whole day.

Mr. Ponce also identified Kapa‘a Stream as a freshwater resource southeast of Keālia Beach. Mr. Ponce commented that this stream is occasionally confused as “Keālia River” by some local residents. This mistake may be attributed to the fact that Kapa‘a Stream forms a portion of the southern boundary of Keālia Ahupua‘a. However, the smaller Keālia Stream does share headwaters with Kapa‘a Stream; both originate from Pu‘u Eu, a peak in the Anahola Mountains.

Mr. Ponce would often fish with his grandmother in Kapa‘a Stream. They generally sought out ‘o‘opu (freshwater goby), a favored eating fish for his grandmother. *Pāpio* (bluefin trevally) and *ulua* (giant trevally) were also caught near the mouth of Kapa‘a Stream. Freshwater ‘ōpae (shrimp) were also collected from the stream and used as bait. Mr. Ponce also recalled picking ‘opihi (limpet) at Keālia Beach. Mr. Ponce revealed that fish had once been plentiful in the waters off Keālia, particularly *pāpio*.

CSH inquired into traditional agricultural practices in the area, asking if Kapa‘a Stream was also utilized to irrigate *lo‘i kalo* (taro patches). Mr. Ponce shared that the area was predominately sugarcane, and that taro was not cultivated while he was growing up. However, he did note that taro is grown in portions of Keālia today. CSH asked if there were any additional freshwater resources within the project area. Mr. Ponce commented,

Yeah, just below here, just below Keālia Road, this is a stream. I believe there’s also a spring here, and on the other side is Kapa‘a Stream . . . I know there’s water, because I used to go back here all the time, I guess it used to intersect with Kapa‘a Stream also. I know there’s water coming down here, yeah, and I know this is level, then it goes down. They might have water down here, but I know when it rains the water goes down here, and the water goes out to the ocean. But on this flat area, I don’t know, other than having the plantation bring in the water through all the irrigation ditches. I don’t remember up there [having a flowing] stream. It’ll be down on the slope side.

CSH asked if these waters were being used to irrigate farmland, or if former sugarcane lands had been converted to farmlands; Mr. Ponce shared that “it is called Keālia Farms, and I believe there’s a gentleman leasing a lot of acreage back in this area.”

While discussing potential *mauka* resources, Mr. Ponce shared that he and his father would hunt for pheasant in the upland areas. Although the lands belonged to the sugar plantation, they were allowed to hunt in the area. Mr. Ponce recalled,

My father and I, when I was growing up, there were no gates, and we’d spend hours and hours hunting in all these lands. We’d traverse this whole area. We’d come back for lunch and then go out again. This was all just our backyard, and we’d go from *makai* to *mauka*, and hunt for hours and hours. The whole weekend we’d be gone. . . we’d use all the plantation, cane field roads. That’s how we went and did our hunting. The cane fields would go up all the way against the mountain side so we’d just go up to the bottom of all these beautiful mountains. It’s just very beautiful. The access was all open. Now, it’s all closed; back when I was growing up in this area, we could just traverse the whole Keālia area. It was unreal, it was amazing.

. . . my father and I used to hunt pheasants, and we used to keep the feathers, and we used to eat the meat. My mom used to cook the pheasants. . . We gave [the feathers] to our relatives to make *leis* on O‘ahu. So, they’d make hat bands [*lei humu papa*]. My dad was also a taxidermist. He was self-taught, and he taught himself to mount the pheasants that he shot. He also mounted pheasants that people shot and brought over.

In pointing out the areas where he and his father had hunted, Mr. Ponce shared that a stable and a plantation camp were once located in the Kumukumu area of Keālia: “. . . see, up this road [pointing to an aerial image of the project area]? Up in this area? They kept mules for the plantation in the stables. There were also plantation homes in the area. It was called Kumukumu Camp.”

He commented on the demographics of the individuals living in the camp and the Keālia area, “We had a lot of Portuguese families around us, a few Filipinos, very few Filipinos, Japanese, Hawaiians, we had a few Hawaiian families. Large families that had twenty kids.”

He also recalled a hall located on the north side of the Kapa‘a Stream there. The hall (now demolished) was a space for the plantation workers to hold events:

Now that I remember, right across Kūhio Highway, right at the end of the camp, next to Keālia River [Kapa‘a Stream] there was a hall, and we’d have parties there. It was like a town hall. It was super cool, we’d have parties there. Whenever people celebrated a birthday or whatever, we’d have a party there. . . there was a roadway just past Keālia Bridge, just past the bridge heading north, there’d be a sharp left turn to get to the hall.

Filipino cultural practices also continued to occur in the area of Kumukumu Camp.

Next to where they kept the mules, I was saying there were homes next to the stable, they also had chicken fights. So, my father and I, we’d be there every weekend, back in the ‘50s, ‘60s, ‘70s, ‘80s. Yeah, I believe ‘80s, and we’d go fight chicken.

I used to tag along with my dad, in that area, in that camp, was mostly Filipino families. Yes, I guess it was mostly '60s and '70s when it was really a big thing going up there and going to the chicken fights with my dad.

It was a cultural thing that Filipinos brought over from the Philippines. My grandparents also were at the chicken fights, so they'd be there with us too. My grandmother, and my grandfather.

CSH inquired if Mr. Ponce had ever seen any cultural sites, or if he had been shown *wahi pana* in the *mauka* portions of Keālia, near Kumukumu. He noted that he was never informed of any cultural sites such as *heiau*, and never encountered any cultural sites while visiting the *mauka* areas of Keālia. However, he did recall the *wahi pana* known as Waipahe'e Falls. He shared with CSH his memories of this storied place.

In his youth, Mr. Ponce was contracted to work in the private pineapple fields. He mentioned that in those days, all the old timers had 20-acre tracts of land that were purchased in the early '60s. These tracts were once located up Kawaihau Road, up in the Kapahi area, where the old pineapple cannery once stood. In 1957, the pineapple canning industry in Hawai'i peaked, and "of the Kauai companies, only Hawaiian Fruit Packers (HFP), which was formed in 1937 by the reorganization of a company initially started by a group of ethnic Japanese growers, survived into the 1960s" (Bartholomew et al. 2012). While recalling the cannery, he shared that the leftover pineapple cuttings were dumped into the waters off Keālia, further *makai* of the proposed subdivision. Mr. Ponce himself worked in the Kawaihau Road cannery, as well as the private fields. After a long and hot day of work, Mr. Ponce and his friends would reward themselves with a visit to Waipahe'e Falls. He described the event,

. . . Waipahe'e Falls is a natural slide, and we'd go up there constantly, after we'd pick pineapple. Summer time, I'd be working in the pineapple fields, and we'd go up there, that was our recreation, because there was no McDonald's, there was no Burger King, there was nothing there, except the mom and pop stores. No stop lights, no nothing.

That was our treat to go up there, and swim up at the falls, and slide down the falls. . . it's very, very beautiful. . . it's way up in the mountains, so it's just *uluhe* [false staghorn fern; *Dicranopteris linearis*], *awapuhi* [shampoo ginger; *Zingiber zerumbet*].

Prior to concluding the interview, CSH inquired if Mr. Ponce was aware of any burials that may be impacted by the proposed project. He commented that he had never seen any burials uncovered by either human or natural disturbance in the area. CSH asked Mr. Ponce if he had any additional concerns or recommendations regarding the proposed project. He commented that he personally does not believe the project will impact any view planes, including views of Kalale'a, Waipahe'e, and/or Makalea. He concluded by stating that he does not believe the project will have any cultural impacts:

Actually, when I saw this project I had a good feeling about it. Because what they're doing is extending part of the existing subdivision. Like I said, I don't think it will impact anything. . . when I looked at it, I felt good about it, that somebody had a

good idea to put a subdivision next to an existing subdivision. Right now, it's out of the *tsunami* (tidal wave) zone, so I think it's an asset.

6.4.2 Summary of Kupuna Valentine Ako Interview

CSH interviewed Kupuna Valentine Ako and his son Ivan Ako on 25 May 2017 at his home in Kapa'a, Kaua'i. Known affectionately as "Uncle Val," Kupuna Ako was born in 1926 in Hōlualoa, on Hawai'i Island. He has resided in Kapa'a, Kaua'i for over 50 years, and moved to the island shortly after his marriage to Elizabeth Ka'onohi Johnson. Together they raised four children: Blanche (Kepola), Valerie (Nani), Ivan (Kaho'onani), and Julie (Mamo) in their home at Wailua House lots on Makani Road. They also have numerous grandchildren and great-grandchildren. Kupuna Ako was a curious child, and made it a point to ask questions and learn from the *kūpuna* around him about Hawaiian cultural practices, beliefs, and resources. He is knowledgeable about old fishing practices, *wahi pana*, and the traditional way of life which respects the environment, as well as numerous *mo'olelo* regarding Hawaiian culture, history, and its people.

Kupuna Ako began the interview by sharing his *mana'o* regarding the proposed Keālia Subdivision project. Kupuna Ako was especially concerned about potential subsurface finds. He stated that finds may consist of traditional Hawaiian cultural material, including burials. He recommended that both developers and on-site workers be aware of, and take care of any *iwi kūpuna* or *imu* (underground oven) found. He stated, "My *mana'o*, that should you folks develop, or come across *iwi* [bones], *iwi* and *imu*. You know our *kūpuna* never had anything to do their cooking in [such as pots]; they did all their underground cooking. You're going to find all those *imu*."

Years of learning and work experience have allowed Kupuna Ako to develop an understanding of proper burial protocol. He shared with CSH two personal *mo'olelo*. These *mo'olelo* recounted the significant events that shaped his understanding of how to properly care for human remains. His first *mo'olelo* related his experience in helping to recover the bodies of over 10,000 fallen soldiers from the Battle of Guadalcanal.

The Battle of Guadalcanal was fought from 7 August 1942 to 9 February 1943, and was the first prolonged Allied campaign in the Pacific Theater. The battle was fought across the southern Solomon Islands of Guadalcanal, Florida, and Tulagi. Following the 1941 attack on Pearl Harbor, the Solomon Islands became a focus for both Allied forces and the Empire of Japan. The islands were strategically situated at the center of vital shipping lanes in the Pacific. After a long and bloody campaign, with casualties numbering nearly 30,000 (7,100 casualties for Allied forces and 19,200 casualties for Imperial Japan), Guadalcanal was finally won by Allied forces. Kupuna Ako recalled,

[Beginning in 1947], I was in the Solomon Islands for over two and a half years. You know, it was unique, and they did it [in] secret. There were 700 non-violent prisoners in O'ahu Prison. They made a deal with those prisoners, if they go to Guadalcanal and be stevedores, to transport all those bodies, they [would] agree [to commute their sentences]. So, for two and a half years we were down there. They had a camp for them, and they had 140 Filipinos to exhume the bodies. Over 10,000 [bodies]. It was so sad you know. I used to go down there, and the embalmers they get all [the] caskets, they get [a] Navy blanket. They find [a] dog tag, [but] no more

head, so they roll it all up, and put it inside the casket. So, I was down there and we exhumed all that.

Kupuna Ako's second *mo'olelo* recalled his time spent as a construction supervisor for the historic Coco Palms Hotel. In 1978, Kupuna Ako oversaw the ground disturbance occurring at the hotel. During ground disturbance, the remains of 86 individuals were encountered. He shared, "*iwi* I excavated are from Coco Palms, but they were all sitting down facing east. I dug them all by hand. I had a good relation[ship] with Mrs. Guslander, the owner. She and I worked together, but I took care of all 86 bodies that I exhumed."

Although these historic events were significant for Kupuna Ako, his "cultural" education truly began in his formative years. He credits his *kūpuna* for instilling in him traditional cultural values as well as traditional knowledge:

[I learned from] the *kūpuna*, my *tutus* [grandparents], and all the *kumu* [teachers]. You know those days, the younger people never used to like *kūkākūkā* [discussion] with the *kupunas* because they relate all in Hawaiian. But, I would sit down with them, and just sit down and listen. There were times when I couldn't comprehend what they were relating. Then, they would tell me, '*e keiki*, '*ike 'oe?* [child, you know?]' Or, they say do you understand? I would say, '*A'ole*. [no]' And in broken English [they would explain]. So, I would find a lot of caves in Kona [Hawai'i Island], that nobody know until today. But, I will not reveal [their location] because of exploitation. I'm just thankful I was able to comprehend what they described to me. I was a very curious child, from the time I was young. They would tell me, oh a certain place, where from land there is a cave. I would ask them, 'how would I find it?' They say you go up in a particular area, and you're going to find the crabs come out of the lava rocks. I found 'um. When I found it, and I was satisfied, I went and told the *kupunas*, and they said, 'yeah,' and to leave alone. So, all this *mana'o* I've gathered has helped me. I'm not afraid of exhuming a human being.

Drawing upon traditional knowledge, Kupuna Ako recommended that in the event of an inadvertent discovery of human remains, these remains will be properly curated and reinterred within Keālia Ahupua'a. Kupuna Ako is strongly opposed to the relocating of *iwi kūpuna* to different *ahupua'a*. Kupuna Ako also recommended that reinterment sites remain inconspicuous, with thoughtful or culturally appropriate landscaping.

Kupuna Ako lamented changes in traditional land management practices. Under the traditional land tenure system, Hawaiians had access to natural resources under the general supervision of *konohiki* (headman of an *ahupua'a* land division under a chief). Upon reflecting on the adoption of Western land management practices, primarily private land ownership, Kupuna Ako acknowledged its negative effects. He shared,

I'm familiar with land transactions, and the worst thing that ever happened to us Hawaiians was when they initiated the Great Māhele, adverse possession, and quiet title. My dad was an attorney and he learned the American system, and applied it against his own people. As an example now, the *kūpuna* come see my dad because we were one of the wealthy families in the village. He like buy one shoes. My father said, 'yeah, I'll give you, but I like one interest in your property.' But my dad knows that the guy no can pay back. In the meantime, he stay paying the tax for that guy.

In adverse possession, that's when you pay the tax for ten years, and in 11 years you can claim. . .

Kupuna Ako's son, Ivan also shared his *mana'o* regarding changes to land management practices and access rights. He shared with CSH, "even though we knew it was private land, a lot of us had access to it because we were family and we came from that area." Elaborating further, he explained the tacit understanding between sugar plantation owners and the community in regard to accessing resources,

. . . it was all sugar cane. It was all private property, but if you were known to come from that area, it was always OK for us to go fishing. My dad used to always go down to the beach and pick *limu kohu* [seaweed; *Asparagopsis taxiformis*], and all that kind of stuff.

So, it was sort of an unspoken, 'yes, you guys have permission,' even though this is private. That's one of the issues coming up.

The politics is so different. When I left 25 years ago, the plantations were still pretty much the rulers of what's happening on the island, because they had so much influence. But when the plantations left, all these new land owners came in, and they became the influential ones.

The need to maintain access to cultural resources is of the utmost importance to cultural practitioners. Additionally, these resources exist in a symbiotic relationship with the natural environment; degradation of the environment would invariably lead to degradation of cultural resources. Without healthy and abundant raw materials, it becomes increasingly difficult to perpetuate the culture.

Kupuna Ako continues to engage in cultural practices, and still makes '*inamona* and *kūlolo* for consumption. '*Inamona* is a condiment or relish consisting of roasted *kukui* nut and *pa'akai*. He noted that the process of making this condiment is very time-intensive. Traditionally,

The hard-shelled nuts were roasted on the embers of a fire or on hot stones to cook the kernels, care being taken to turn them from time to time to prevent the shells from burning. When one was cracked as a test, it was sufficiently cooked if the kernel had turned brown. The nuts were cracked and the kernels ground in a small stone mortar (*poho 'inamona*) with a stone muller, salt being added to taste. In these modern days, some people add pepper. The '*inamona* was served in the stone mortar or in small wooden or gourd receptacles or simply placed on a freshly plucked ti leaf. A small pinch was taken now and then with the fingers as a relish to the other food. Caution must be exercised in its use, as too much *kukui* oil has purgative properties. [Buck 1964:73]

Kūlolo is often described as Kaua'i's "dessert staple" (Toth 2015), and consists of mashed taro, coconut meat or milk, and sugar. Traditionally,

[*kūlolo*] was made from grated raw taro which was probably once mixed with shredded coconut meat but which is now mixed with coconut cream. The mixture was wrapped in ti leaves and cooked in the earth oven. The raw taro was evidently

grated on flat blocks of rough-surfaced coral. The preparation is referred to in Hawaiian accounts as 'he mea 'ono loa 'ia' (a very delicious food). [Buck 1964:21]

Kalo (taro), one of the main ingredients in Kupuna Ako's *kūlolo*, is currently grown in Keālia. Mr. Ivan Ako shared that the local Keālia Farms, headed by Adam Asquith, contains numerous *lo'i kalo* (taro patches). He added that Mr. Asquith also helps out local Keālia farmers, and is concerned about water (availability and quality) within the *ahupua'a*.

Following discussion of traditional food items, Kupuna Ako shared *mo'olelo* of an ancient race of giants (believed to have not been Hawaiian because mandibles were not of the rocker form) in the neighboring *ahupua'a* of Kapa'a and Wailua, within the larger *moku* of Kawaihau. The current project area is also situated within the *moku* of Kawaihau. He recalled excavating at Coco Palms, and observing the remains of extraordinarily large humans.

You know the same type of human that I excavated [at Coco Palms in Kapa'a], but the Lydgate Park, get a subdivision over there. They call it Kahalani. We found the same kind of people, but they were laying down flat, and they had *puka* [hole] on the head. Evidently, they may have had fought. In Ka'u [Hawai'i Island], there's a place they call the Valley of the Giants. Same type of people. . .

Numerous *mo'olelo* record the existence of giants (i.e., The *mo'olelo* of the Giant Guard [Pukui and Curtis 1949]; the *mo'olelo* of Pōhaku o Kaua'i [Armitage and Judd 1944:100; Westervelt 1915]; the *mo'olelo* of the Giant Gods [Skinner 1900]). For Kaua'i Island, the *mo'olelo* of Kanaka Nunui Moe (Wichman 1985) and the Battle of the Giants (Knudsen 1946) are particularly salient.

Within the *mo'olelo* of Kanaka Nunui Moe, it is revealed that a giant resides in the low hills of Kawaihau behind Kapa'a Town (Wichman 1985:14). The people of Kawaihau were said to have loved this giant; his gentle demeanor and generosity won him the hearts of the people. However, this giant was always sleepy, and found it difficult to stay awake for more than a "hundred years at a time" (Wichman 1985:14):

When he could no longer fight against the drowsiness overpowering him, he would sleep using a small hill for a pillow. Because of this, the people called him Kanaka-nunui-moe, the sleeping giant. When he slept, Nunui slept for hundreds of years while the winds blew dirt over him and seeds were dropped there by the birds. The gentle showers sent by Ka-hale-lehua, goddess of the gentle rains, fed these seeds and a forest grew up over the giant. [Wichman 1985:14]

The Sleeping Giant is also known as the *wahi pana* of Nounou. From the top of Nounou, the coastline of Keālia is visible.

According to Kupuna Ako, the skulls recovered from Lydgate Park exhibited signs of trauma. He surmised that this may be associated with ancient warfare. Such warfare has been recorded in the legend of the Battle of the Giants. The legend, collected from an "old kanaka fisherman" from Kaua'i, states the following,

Hundreds of years ago a race of giants lived here in Hawaii. One great giant lived here in Mana and one lived on Niihau. One day they looked across the channel at one another and began to talk. First they bragged about their strength and size. Then they began to call each other names, and finally they got so enraged that they each

grabbed a rock and hurled it at the other. The Kauai giant tore off a chunk of the pali back of Mana and it landed on Niihau, right on top of the other giant, and killed him instantly. His bones are lying underneath that hill, and if you dig in there you will find them. . . [Knudsen 1946:189–190]

The interview concluded with Kupuna Ako echoing an additional concern. While describing his concern, he recalled the tragic dam breach at Kaloko Reservoir that resulted in the deaths of seven individuals. The Kaloko breach was also considered an environmental disaster. He warned of a large reservoir at Kumukumu, above the current project area. He also noted that neither the State nor the County currently maintain the reservoir, adding that this reservoir, should it breach, would have a significant impact on Keālia *waena* (central) and Keālia *kai* (seaside).

6.4.3 Summary of Richard Kauai Interview

CSH interviewed Mr. Richard Cummings Kauai on the lands currently managed and cultivated by Keālia Farms on 23 May 2017 for the proposed Keālia Subdivision project (Figure 43 and Figure 44). The parcel currently cultivated by Keālia Farms consists of 20 acres located within Keālia Waena. Mr. Adam Asquith, owner of Keālia Farms, also attended the interview.

Mr. Kauai maintains a longstanding and familial relationship with Keālia. He is particularly connected to Keapana (or Keahapana). His connection to Keālia may be traced back through the generations, and through the many ancestors born and raised within the *ahupua‘a*. As noted by the geographer Edward Relph (1976:231), “there is a deep association with and consciousness of the places of birth and childhood. This association. . . [is] a vital source of individual identity, cultural identity, and security (Andrade 2014:7). His attachment to Keālia is evident within his personal stories as well as the *mo‘olelo* of his ancestors. These stories act as anchors, drawing him to the ‘āina and filling him with love for it (Andrade 2014:8–9).

Historical documentation, namely in the form of land records, provided additional evidence of his ‘*ohana* connection to the *ahupua‘a*; this connection was maintained during a period of significant land and cultural change within the Hawaiian Kingdom, and still continues today. Mr. Kauai’s *kūpuna* were awarded LCA 8061, and Mr. Kauai himself still maintains his family estate. The interview began with Mr. Kauai emphasizing the significance of Keālia to both past and present populations of *kama‘āina*, and the need to maintain its lands for future generations:

This area here was really one gathering place. . . People all used to gather together, share what they get, and just live happy. It was happy. This valley was a happy valley. Keapana Valley. So, when Adam [Asquith] came here to grow he did the right thing. He scratched the ‘āina . . . but that’s the kind of people we need to have so that our children might be able to do the same thing. We got to keep them in this picture. . . But you know, you gotta get dedicated people, and somebody strong, work hard. Because taro is a big business, plus it’s hard work. Nothing easy about it, and that’s why I’m concerned about our kids today. You know, maybe we can set up something from this survey for the children. Because they’re the leaders to come. That’s my heavy concern.

In nurturing future leaders, the transference of knowledge and skills remains of the utmost importance. The passing on of knowledge and skills, upon the land itself, was one of the most effective means of connecting children to both their culture and natural resources, while



Figure 43. General overview of Keālia Farms property with Nounou visible in background, view to northwest



Figure 44. General overview of *lo'i kalo* located at Keālia Farms within Keālia Waena, view to southwest

simultaneously assuring “that a people’s cultural legacy continues” (Chun 2011:2). It may be inferred from Mr. Kauī’s above statements that *nā keiki o ka ‘āina* (the children of the land) represent a productive force, constituting the next generation, and as the next generation, hold the power to unite society. For Mr. Kauī, the children are a symbol of “hope and redemption for the future” (Stahl 1986:83), however, access rights (to lands within Keālia and Kawaihau) need to be ensured for such redemption to occur. This issue was touched upon, emphasizing that the “alienation of land” (Walker 1995:4 in Andrade 2014:10) may prove to be the greatest challenge facing future generations of cultural practitioners. Also included in the discussion were the many challenges facing future generations of Hawai‘i’s children, including the rising cost of homes and the decline of agricultural lands. With most incomes dedicated to owning or renting a home, it often becomes difficult to cover other expenses such as food, taxes, and health care. Mr. Asquith noted the rising cost of living will soon force many *kama‘āina* to return to the land; a “return to the land” (agriculture) would allow local families to supplement their incomes and diets.

Mr. Kauī articulated the importance of creating and maintaining a space whereby the traditions of the land can be perpetuated by the youth. An emphasis was placed on looking forward, “*nānā ma mua*,” and leaving a sustainable legacy for the children of the area. This belief is best encapsulated by the *‘ōlelo no‘eau*, “*E mālama ‘ia nā pono o ka ‘āina e nā ‘ōpio*” (“the traditions of the land are preserved by the youth”).

CSH asked Mr. Kauī to elaborate on his own childhood, on the invaluable years spent learning to work and care for the lands within Keālia Ahupua‘a, and the elders who encouraged such learning. Mr. Kauī shared that he was born on 11 August 1941 at Līhu‘e Wilcox Hospital. His father was originally born and raised in Keahapana Valley, and was 100% Hawaiian. His mother, originally from Maui, was a member of the Cummings ‘Ohana. She was of Hawaiian (75%), Irish, English, and German ancestry.

He recalled that his mother was a housewife and his father was a local policeman. Although involved in law enforcement, his father was also a skilled *mahi‘ai* and *lawai‘a* (fisherman). His father was dedicated to continuing a long tradition of farming and fishing within the *ahupua‘a*. He shared that his father would venture into the *lo‘i* at night and plant according to the Hawaiian moon phases. By laying his lines in the day, he would be able to place his *huli* (planting material) in a straight row by night. By morning, Mr. Kauī would awaken to a newly planted patch. On the day of the interview, Mr. Kauī was picking up *huli* from Keālia Farms for his *lo‘i* at home.

For many generations, Keālia was renowned for its community of farmers and fisherman. Previous studies have revealed that Keālia “was home to a large, settled population of farmers and fishermen, who exploited the coastal areas abundant natural resources, as well as the land that contained nutrient rich soil immediately inland and *mauka* (upland) from the coasts” (Drennen et al. 2007:12).

Mr. Kauī also spoke of the richness of Keālia, providing CSH with a general history of the area:

In the ancient days, what they mostly used to do was fish. Yeah, because the river was filled with fish, and the mountains had so much animals, so that’s all they used to do, you know, was trade off. Then they come down to Keālia and make salt, where that landing was. Because when the waves come, it settles, and that’s how they get their salt. Big salt bed here was, plenty people don’t know that. But we know that.

The salt was pure white. Really, really salty. Because it’s from the ocean yeah. It’s not like that Hanapēpē one, it’s salty but not as salty as this one. So, when you mix ‘um with the *alae* dirt, sort of cut ‘um down. . . But over here had their own salt by the landing. Because get ponds, eh. So, when big waves come, the salt settles. Then they just go and pick them up.

In continuing this tradition of farming, fishing, and gathering, Mr. Kauī’s father was able to supplement his family’s diet. Mr. Kauī described his father’s yields, as well as the communal meals they shared in:

But, you know our valley, where I’m at, Keapana, when I was growing up, we always get together every Friday. My dad used to pound four bag taro and give all the family. We all eat lunch together, it was a weekly thing. Visitors come, you feed them. That was the ritual before. You know, naturally tourists, when they come, they no can eat the taro or the *poi* because they’re not used to [it]. But, my dad had a way with ‘um, he used to mix the fish with the *poi* or the taro and they eat ‘um. And they never did eat ‘um [before], but they like it. But the *poi* is a little bit hard because they not used to [it]. But, it’s a terrific food [source].

Mr. Kauī also discussed his grandfather, noting that he used to roam the entirety of the *ahupua‘a*, assisting many of the Hawaiian families in the area with maintenance work. In recalling his grandfather, Mr. Kauī discussed the traditional sharing of resources. The equitable division of resources ensured all members of the community shared a common commitment to each other and to the *‘āina*. Mr. Kauī explained the system,

So, as far as the place itself, the *ahupua‘a*, it really was a gathering place. Keālia Valley. Because they all used to get together, somebody catch fish, they bring, they all share. Somebody kill pig, they all share. That’s how it was. No money was involved. Just like trading.

CSH inquired if this system of exchange had continued into the mid-twentieth century. Mr. Kauī shared that this system continued well into the plantation days. By continuing to share natural resources (and maintain these resources in ecologically-sound, traditional ways), both *kama‘āina* and *malihini* were able to preserve the *ahupua‘a* as a cultural *kīpuka*. Cultural *kīpuka* in this instance refers to,

. . . rural communities that have been bypassed by major historic forces of economic, political, and social change in Hawai‘i. . . cultural *kīpuka* are communities from which Kānaka ‘Ōiwi culture can be regenerated and revitalized in the contemporary settings of Hawai‘i. [McGregor 2010:210]

For residents of Keālia, the abundant natural resources were especially valued. Similar to various other cultural *kīpuka*, “the ability to provide for families through subsistence fishing, hunting, and cultivation” was also treasured (McGregor 2010:210). Mr. Kauī expounded on this valued way of life,

We had our own animals, we had our own taro, we had our own *poi*, and my dad used to catch all the fish. We had our own cow, so we had two milking cows. So, we had everything except money. Nobody had money. But, you just was rich in that way. . .

Mr. Kauai revealed that the community faced the forces of economic, political, and social change head on; despite these powerful forces, Mr. Kauai's father was able to protect "the natural resources and subsistence livelihoods" (McGregor 2010:210) of community residents. Mr. Kauai shared,

Before when the plantation first came here . . . they came to my dad. If my dad was the type that he really wanted money, could get money. My father wasn't like that. His main concern was food to feed the people. So, the plantation bosses asked him, 'Mr. Kauai, how much we owe you to run the water through your place.' My dad told them, 'you don't owe me nothing, all I like is permission if I can use that water too, for my *kalo*.' All they did was shake hand like this. Then that thing [deal] went last for about 50-60 years, without signing nothing. But, he never go for the money. Otherwise we would've been rich, but he never care. The water was more valuable than money. See, that's how things was before, no contract signed, just by the heart. It's unreal, you know, you can't find those kind of things today.

Mr. Kauai also expanded upon the context in which traditional Hawaiian values were being maintained. As McGregor notes, *kīpuka* and rural communities such as Keālia, though grounded in traditional Hawaiian values, operated within "contemporary settings" (McGregor 2010:210). These contemporary settings invariably included immigrants of various nationalities. Mr. Kauai shared with CSH the ways in which immigrants contributed to the local Keālia community.

. . . had plenty Portuguese people living here, had about maybe 30 families. Portuguese, some Puerto Ricans, very few Japanese. It was mostly Portuguese. This area was occupied by the Portuguese people, they were the bakers. They used to teach all the Hawaiian people how to bake. So, my mom got affiliated with them, and she became a tremendous baker. Learned how to make sweet bread, *malasada* [fried doughnut]; I mean you eat that, you no like eat any other thing. That was the real McCoy. Yeah, the Portuguese people here were really talented in terms of baking. Good bakers. That's why they get that big oven in that pasture over there. They used to make the bread over there. Amazing. This place was a happy place!

CSH inquired into the history of the sugar plantations in Keālia, in addition to the relationship of the community with plantation owners. During the height of the plantation era, the lands of Keālia were completely covered with cane. According to Mr. Kauai, the cane fields extended to the base of the mountains. He also shared that he has seen "black paper" in Keālia Uka. Mr. Kauai explained that black paper was utilized for sugar planting: "Before they used to put them in the rows [of cane]. Way back in the beginning, but then after that they went stop that. That way, they no need weed. After that they went to . . . spray. Otherwise was all black paper like pineapple."

Traditional farming continued alongside large-scale commercial sugar production. Mr. Kauai recalled *lo'i kalo* existing in portions of Keālia during the 1960s. His own family had 14 taro patches prior to the shutting off of their water by the sugar plantation. Their taro patches were fed via '*auwai* (water channels) connected to Kapa'a Stream. His description of the '*auwai* revealed aspects of his family's relationship with plantation management:

This '*auwai* here was flowing beautiful when my dad was alive. So, when my dad died, my aunty went to the plantation office and put a ridiculous price on what they owe them. So, the boss told her, 'you have no jurisdiction here; I didn't deal with you.' So, what they did, they broke the flume, throw the pump in the river, and

that's how was. Just shut us right off. They never like do 'um, but they had to. I even went plead with them, I told them, 'gee I coming up, I no like you guys do that' Then the floods came, broke the main place, and took that back.

Following the loss of the water, the Kauai 'Ohana were able to sustain their patches for a short period of time by utilizing water from a nearby spring and small stream.

CSH asked Mr. Kauai if he had knowledge of potential cultural sites, including burials, that may be impacted by the proposed development. He was not aware of any cultural or archaeological sites within the project area, however, he cautioned that burials may be encountered during ground disturbance:

Before, those days, not like today, you can just bury your own family or friend, you never need to go to the mortuary. So, you know probably is graves around without all us knowing about them because so many Hawaiian people was living up here, all over this place.

In regards to cultural practices, Mr. Kauai noted he was aware of *hula* (dance) occurring within Keahapana Valley. Certain families would visit the valley and perform *hula*. Families like Mr. Kauai's own 'ohana would also engage in traditional Hawaiian arts. Members of Mr. Kauai's 'ohana were particularly skilled musicians. He recalled family gatherings where many Hawaiian songs were performed. He reminisced,

. . . sometimes we gather Fridays or Saturday, and all the family take their instrument and just sing all day. Just sing and dance, just one happy thing. . . All Hawaiian songs . . . slack key, *ukulele*, guitar. Even the bass, the pan they had, they make they own homemade string and pluck 'um, but was nice.

Mr. Kauai made sure to impart the significance of Keālia, a significance derived directly from the sacred. He concluded by noting that Keālia was an '*āina momona* (fertile lands). The richness of the lands effectively dissuaded violent conflict. Mr. Kauai explained,

This land here you guys surveying is really one sacred valley. Because in the olden days, you know they say only *ali 'i*'s roamed the area, and truthfully it's what it was. Because that harmony, nobody was sacrificed or anything like that. It was a different thing in this valley, everybody meant something to each other. So, they're not going to kill you, or do things like that to you. Certain area, like Wailua, they had eh? You do something wrong, you run there, they save you. . . it just was a peaceful valley and a loving place.

It has been noted that *wahi pana* may consist of natural formations such as streams, peaks, and rock formations or man-made structures such as fishponds and '*auwai*'; quite notably, *wahi pana* may also refer to Hawaiian land divisions such as *ahupua'a* or '*ili*. Mr. Kauai's revelation that the entirety of the *ahupua'a* is considered sacred may index the community's understanding of Keālia as *wahi pana*. Regarding additional *wahi pana* within the *ahupua'a*, Mr. Kauai shared that several trails lead to Waipahe'e Falls; the falls and swimming hole are located *mauka*, in the Anahola Forest Reserve. He described the area in detail:

Quite a few trails up here. This was a huge area and goes all the way up to the slides up here. This whole area. All Hawaiians used to live up here. Before they had, the

place they called Slippery Slides, was a famous place. Certain times, people go, maybe they do something wrong, or never do something wrong, you hear a drowning happened. ‘Cause there was no lifeguard, you just go on your own. Because the plantation had that place at one time.

Mr. Kauai commented that many people would visit the area to gather a purple variety of *liliko‘i* (passion fruit; *Passiflora edulis*). Mr. Asquith also shared that the waters from Waipahe‘e are brought down to his *lo‘i* via old sugarcane irrigation. A small waterfall on his property also derives its waters from Waipahe‘e (Figure 45). Although a beautiful locality, several drownings have occurred at Waipahe‘e Falls. The area is also prone to flash floods. The state closed off the site to the public in 1979.

Mr. Kauai’s discussion of *wahi pana* prompted Mr. Asquith’s discussion of sacred places. Mr. Asquith also identified Keālia Ahpua‘a as a sacred place, highlighting the importance of being *pono* (moral, proper, fair) in such a sacred place. Mr. Asquith shared that he understands *pono* as a state of being, of maintaining a state of balance or harmony. He shared,

The most important lesson is to be *pono*, in the sense of finding the balance. Even though it was a sacred place people could survive because they could access those areas. There was a balance. Even during the plantation days, there were just handshakes. Everyone gets what they need, strike the balance. But they will also tell you, post plantation, there hasn’t been much of a balance. Partly, the big picture balance was encapsulated in *nānā ma hope* (look to the past) and *nānā ma mua* (look to the future). What he’s seeing disappear is the opportunity for future generations to be a part of that balance.

Mr. Asquith elaborated on the notion of balance. He highlighted that the rules of landowners, such as rules that prohibit hunting, the utilization of water for farmlands, or the collection of wood for *imu* (underground oven), creates an imbalance. Mr. Asquith added that certain families maintain access and gathering rights to areas in Keālia. These rights were ensured and gifted to the people, including Mr. Kauai’s *‘ohana* and descendants, by Kamehameha III:

Imagine, his rights to the area were a gift from Kamehameha III, forever. I grant you guys the right to access this land forever. Now you’re asking him if it’ll be alright to give that gift away that the king gave you. . . Who is he to give it away for the coming, for the next generation? But, it is in context of the whole valley. So, it is very difficult to predict what the future generations will need from those 100 acres [the proposed project area], right? Much easier to look at the valley, the rest of the property, and go oh, we can have a better idea of what the future generations are going to need from the rest of the property. If they voluntarily give away the gift in this area, how can they make sure that the future generations can exercise this gift on the rest of the property. . . But fortunately, according to Uncle Richard and others, most of the resources that he does know that we’ve used, are in other areas. But they can’t necessarily access those [areas or resources], even now. So, that’s the [catch-22] . . .

Mr. Asquith recommended that the project area be evaluated based on its past use, its current use, as well as its potential future use. He shared that Keālia Farms was originally “fallow” cane



Figure 45. General overview of waterfall and small pond utilized for irrigating the Keālia Farms *lo‘i kalo*

fields, adjacent to the current project area. However, after years of hard work and planting, he now has 50 acres cultivated in taro. His revitalization of the lands and cultivation of the Hawaiian staple crop *kalo*, have helped to make the area culturally significant once again. He explained,

Where we farm, there hasn't been taro there for over a hundred years. If you would've asked someone during the plantation era, they [would've said] 'ahh, whatever, nothing going on.' Ho, 50 years [later], we get 50 acres of taro feeding everybody. So, that's the difficulty of asking the question about one point in time.

He believes that if you "put people back on the land" growing taro and producing food, then the land becomes significant again. Echoing similar sentiments, both Mr. Asquith and Mr. Kauai expressed a desire for some sort of agreement to be reached that ensures future generations will have access to undeveloped parcels in Keālia Ahupua'a in perpetuity.

Mr. Kauai ended his interview by recommending that consultation occur between landowner and the community. He hopes this will result in the creation and/or preservation of a space that allows future generations to engage with their culture, in whatever way they choose. Mr. Kauai also recommended that lands within Keālia Waena, outside the current project area, be reopened and planted in *kalo*. Mr. Kauai concluded by once again emphasizing his focus on *nā 'ōpio*, the future generation, "well my main concern is to try see if we can get something for the kids. That's my main concern."

6.4.4 Summary of Tim Reis Interview

In summer 2017, Mr. Timothy Reis, a cultural practitioner and educator, reached out to CSH via email regarding the cultural impact assessment for the proposed Keālia Subdivision project. Included within this initial communication was a request to provide him with evidence that the proposed project would not impact his cultural practices:

I recently was made aware of a request for information, regarding a residential development project in the Kealia area.

I am a farmer in the Keahapana Valley. I farm on parcel number 470030090000, with permission of Kenneth Bray through his daughters Chenoa Bray, Cholena Bray and Ginger Bray.

On this property is a spring which feeds a taro patch which historically fed the Kauai Ohana.

This message is to serve as notice to you of the Bray Ohana's interest in this area and the concern that the aproposed [*sic*] development could have on their cultural practices and those of their descendants.

The source of water needed for the proposed 200+ homes could affect the aquifer that is the source of the spring on the property we farm.

We request that you provided us with evidence that proves the proposed project will not negatively impact our cultural practices.

If you have any questions or require additional information, please let me know.

CSH attempted to coordinate a telephone call with Mr. Reis to explain the role of CSH, the CIA process, and the difficulty in assessing adverse impacts without identifying the nature and scope

of cultural resources, practices, and beliefs (as facilitated through consultation and/or formal interviews). Shortly thereafter, CSH was notified by Kamealoha Hanohano Smith, on behalf of Kaiāulu Papaloa, that Mr. Timothy Reis would be the voice for a *hui* consisting of Native Hawaiians with direct ties to Keālia Ahupua‘a. Mr. Smith notified CSH with the following:

As a reminder, our Hui is a group of native Hawaiians, including the kupuna, with ties and interests in Kealia. Kai‘ulu [*sic*] is a nonprofit organization which has been selected by the Hui to communicate their interests on this matter. They have chosen this vehicle because they fear reprisal from the land manager and its contractors.

Kai‘ulu [*sic*] will remain the buffer between the *hoa‘āina* and the landowner at this point, but the direct point of contact will now be Timothy Reis.

Due to the lack of differentiation between the interests of the *hui* and the interests of Mr. Reis, CSH attempted to address both parties within a letter dated 10 July 2017:

We would like to explain the role of Cultural Surveys Hawaii (CSH). The proposed Keālia Subdivision project is subject to State environment law that requires assessing impacts to the natural environment and cultural practices. To meet this requirement, project proponents must hire neutral third-party consultants to conduct studies related to this compliance process. CSH has been hired to prepare a Cultural Impact Assessment (CIA) and a Literature Review and Field Inspection (LRFI) for the subject parcel. It is CSH’s responsibility to conduct an objective study, to gather information from concerned community members, and to compile the information gathered into a report that becomes part of the public record. Through the consultation process, as well as the public’s review of completed studies, the public has an opportunity to speak to this project.

As part of our CIA it is standard practice for us to contact people in the community, as well as key stakeholders (including the government and its appropriate agencies). As part of this process, we also reach out to the Office of Hawaiian Affairs (OHA), the Kaua‘i and Ni‘ihau Island Burial Council, and the State Historic Preservation Division (SHPD) (Burial Sites Specialist and History and Culture Branch). The purpose of our outreach efforts is twofold: to inform the community of the proposed project, and to identify, through consultation with knowledgeable individuals in the community, ongoing or past cultural practices occurring or that have occurred within the project area. Through community consultation, CSH can evaluate potential adverse effects on the cultural practices and cultural resources of the community and State. This is in compliance with Act 50 of State law. As outlined in Act 50, CSH is limited to only ‘identify[ing] and address[ing] effects on Hawaii’s culture, and traditional and customary rights’ (State of Hawai‘i Act 50 2000). CSH can only go so far as to identifying ‘significant effects,’ and recommending mitigating actions based directly on stakeholder comments.

In order for us to remain neutral third parties, we cannot directly advocate for, or represent the hui or represent the landowner in any way. CSH cannot act as a mediator between the Keālia Hui and the landowner, nor can we actively participate in mitigation.

CSH was notified in November 2017 of Mr. Timothy Reis' comments before the Land Use Commission, and of his request to speak to CSH regarding traditional cultural practices, including the use of water for the cultivation of *lo'i kalo* and *māla 'ai*. According to Land Use Commission Meeting Minutes dated 8 November 2017,

Mr. Reis requested clarification on the process involved with the proposed project and the environmental impact statement. Mr. Tabata described how the environmental impact statement (EIS) information was being gathered and took Mr. Reis' contact information to provide follow up information.

CSH reached out to Mr. Reis via email on 16 November 2017, and continued correspondence throughout the months of November and December. On 17 November 2017, CSH attempted to address Mr. Reis' request for "proof that the approx. 2 million gallons a month (10,000 gallons x 200 homes) or 24 million gallons a year needed for the proposed project would not negatively impact [his] cultural practices:"

As we are still gathering information on cultural practices, in relation to the proposed project, it is extremely difficult to comment on potential negative effects to cultural practices at this time. Also, as of this time, an engineering report, evaluating the existing water system and proposed water system, is being drafted. This report will be included within the Draft EIS, available for review through the OEQC website.

On 7 December 2017, a formal interview date was confirmed with Mr. Reis for 21 December 2017. CSH interviewed Mr. Timothy Reis at Keālia Beach Park on 21 December 2017 for the proposed Keālia Subdivision project. Following introductions, Mr. Reis offered clarification on the initial confusion regarding the interests of the *hui* (in regard to access rights throughout the *ahupua'a* of Keālia) and his interests (in regard to potential impacts to the aquifer and *pūnāwai*):

I guess there was some confusion in the early part, there were a couple concerns brought forward to you. One was through a *hui*, and then mine was a separate one, and I kind of got wrapped into both of them. Yeah, I'm not representing that *hui* here today, it's just me as an individual. It's just me as an individual, dealing with our water usage on that piece of property. Yeah, it's been awhile, and there was a big concern brought forward that's outside the purview of anyone who's going to be involved in this [CIA]. So, it's a bigger problem that needs to be tackled at a later date, but it was something some people wanted to voice, and bring forward as an issue. I do feel it's a legitimate issue, but like I said it's beyond the scope of any of our responsibilities. It's not what we're really talking about, or need to bring to the table [right now]. So, I'm here to address my family's interest in this.

Mr. Reis maintains a familial relationship with Keālia. He is particularly connected to lands included within LCA 8061 (TMK: [4] 4-7-003:009, currently owned by the Bray, Kau, Kanehoalani, and Ornellas families). His connection to Keālia has been long-standing, established by many ancestors who have come to live and work on those lands. Although born and raised in California, he returned to Kaua'i approximately 10 years ago. Through *aloha 'āina* work, Mr. Reis has developed an emotional closeness to the land, best encapsulated by the term *hoa 'āina*. In differentiating *hoa 'āina* from *maka 'āinana*, it is necessary to note that

Hoa is translated as friend, companion, peer and fellow (Pukui & Elbert 1986:73). The relationship of friend and companion to that land contrasts greatly with both commoner and tenant. This emotional closeness of the people to the land is expressed in many of the songs, stories and chants of the Hawaiian people and the word *hoa'āina* used to describe themselves is a perfect example of this emotional closeness. [Andrade 2004:12]

While discussing his attachment to the lands of Keālia, Mr. Reis shared his genealogy with CSH: “My father is Kimo Reis, who lives here on the island. He is of Hawaiian ethnicity. Aboriginal Hawaiian, and his mother is Margaret Kauai, and his grandmother’s grandfather was David Nalani Nahiku, who married Wilhelmina Cummings.”

In recounting his *mo'okū'auhau* (genealogical succession), Mr. Reis highlighted how these familial ties have borne him back to the land of his *kūpuna*:

But, my *wahine* [partner] and I have had a child, and she is of the Kauai line. That’s my genealogy here. I was born in San Jose, California. I was raised in California for most of my life. I didn’t know what it meant to be a Hawaiian, and it wasn’t until I was 30 years old, and I came back, that I started to learn about the history of this place. Learning my genealogy really, trying to explain it.

Mr. Reis understands the *mo'olelo* of Keālia as representative of its genealogy, linking present generations to the past. He shared with CSH, “That’s just one of my personal frustrations of the [environmental review] process, in actually protecting our *mo'olelo*, and that’s really what it is. Whether we know the stories or not, that’s our *mo'olelo*, that’s our genealogy.”

In understanding the term “*mo'olelo*” as it is applied by Mr. Reis, it is useful to look at word structure, in this case the root word “*mo'o*.” Mary Kawena Pukui defines *mo'o* as a dragon or lizard, as well as a succession or series, especially a genealogical line (Pukui and Elbert 1986:253). Hence a *mo'olelo* “is a progression of words strung like vertebrae along a cord of meaning” (Wianecki 2012). Likewise *mo'okū'auhau*, indexes an understanding of the lizard or dragon’s “interlocking bones as symbolic of their own sacred lineage” (Wianecki 2012):

The dragon is a major force of life. . . Its head peers into the future, the white dawn yet to come. Its front feet are the 'opio (youth), reaching, touching, examining. Next come the makua (parents), the stable hind legs of the dragon, and beyond them, the kupuna (elders). The kupuna form the spine, the collective song of all that came before. They tell how other dawns were and how this dawn will be. [Sam Ka'ai cited by Wianecki 2012]

For Mr. Reis, it was his *kūpuna*, their call, that drew him back to the land:

My *wahine*’s father [Mr. Kenneth Bray], was taught *ki'i* (image or statue) carving, and he was a recognized *kahuna kālai ki'i* (expert image carver) here on Kaua'i. I began learning under him for about a year before I moved off island. Then I continued carving, 15 *ki'i* outside of his teaching. That really started me on my path to understanding the *kānaka maoli* (full-blooded Hawaiian person), the cultural side of who I was. Since then I feel like I have received direction from *kūpuna* here in Keahapana, about seven [or] eight years ago, my life changed very drastically. I am an avid fisherman, an accomplished fisherman, and I used to fish all the time.

Something happened in my life, I was pretty distraught, pretty broken, and I was on the property where we happen to have our family burials, and I had asked them for *'ike*, for wisdom, and sometimes I wished that I hadn't actually done that. What I was told was, '*Pau* (finished) fish. Go *mauka*.' I think what they were telling me was, 'you can fish, we know you can fish, we know you can do that, you can harvest from the ocean, but you need to learn what is *mauka*.' I didn't fully understand that at that point in time. That led me on a path to studying endemic plants, native plants. Their uses, today I'm an aspiring *po'e kāko'i* (adze maker). I've developed a method of creating *poi* pounders using stone implements. Which I actually held a project, or pilot program at Kawaikini School teaching 16 kids the method that I created to make that stone implement.

Through the practice of carving stone implements such as *poi* pounders, Mr. Reis has been able to reconnect with his heritage. While making the implements, he realized the necessity of actively employing traditional tools within everyday life and practice. As *nā mea makamae* (precious things), these tools are especially valued for the ways in which they demand engagement and practice. They are more than just artifacts, they are "markers and makers of cultural identity" (Cipolla 2008:196).

The enculturation potential intrinsic to the practice of *kāko'i* itself soon became apparent to Mr. Reis. He realized the importance of passing down the traditions associated with the creation of stone implements. The transmission of such cultural knowledge would not only provide a young student with the skill sets necessary to produce a work, but also expose them to traditional and contemporary Hawaiian values:

Within that journey I've recognized certain aspects of doing these art forms, and I suspect it's across the board in Hawaiian arts. Certain things are refined. Practicing patience, perseverance . . . preparation, problem-solving strategies are all, in my opinion, nurtured and promoted in these works. Working with wood and stone, there's no guarantee of what's inside. You oftentimes run into flaws, so you have to learn to adapt and work with those things. . . That's why I took it to Kawaikini, because I thought if our children would be taught in a manner exposed to these art forms, they would be unknowingly exposed to these [values]: patience, perseverance, dealing with problems, strategizing. And I thought those would all be good things for that individual or that child throughout their life if, through the education system, they were exposed to that for twelve years. That's actually kind of my goal to be able to produce a work, and great programs, and make them available to the education system. I think the Hawaiian cultural education system is in its infancy now, and in the future, there would be room for that type of inclusion or implementation of that kind program. The toughest part is bringing Neolithic cultural practices into today and making them relevant. Because it's such a different [environment and society], we don't use stone tools anymore, we don't need to use *olonā* [*Touchardia latifolia*] nets anymore. . . but how is it relevant? I think that ties into the '*āina*-based learning. . . That's kind of my path that I am on, and really for me, my drive is giving the next generation something that I didn't have today.

In discussing the importance of a Hawaiian cultural education system, Mr. Reis underscored the potential benefits to *kama'āina* children. By establishing an education system that connects students to *āina* and culture, “social and emotional learning (SEL) skills and academic mindsets to succeed in college, careers and communities locally and globally” (Department of Education 2015) will be gained. CSH inquired into the feasibility of an *āina*-based learning model being employed within Keālia Ahupua'a. Mr. Reis commented by informing CSH that all *ahupua'a* have potential to teach and to be utilized in such a manner; for *nā 'ōpio* (the youth), a cultural education works to instill a sense of belonging and responsibility; to teach them *aloha*, and encourage them to strive for excellence. Mr. Reis explained,

Here in this *ahupua'a*, this *ahupua'a* has been tied up by a large landowner for a very long time yeah, and it has changed hands. It's predominately cattle; the Waipahe'e area, was a playground for my *kūpuna*... As far as [how cultural practices are maintained and an *āina*-based learning approach] develops in this *ahupua'a*, it has potential.

While discussing the potential benefits in synthesizing Hawaiian culture with Western educational practices, Mr. Reis cautioned against development in which the “cultural realities” of a locality (Minerbi 2003:1) are not taken into full account. In accounting for “cultural realities,” especially within culturally and historically rich *ahupua'a* such as Keālia, it is necessary to understand,

There are many cultures in a place, including the culture of the native people and those of the newcomers. Elite, popular, minority, and indigenous cultures may all be present in one locality. The tapestry of culture has many threads, with each culture importing its ways, language, cultural landscape, and building styles, interacting with the preexisting culture, and evolving into a complex and layered system of local cultures. . . All these cultural realities need to be accounted for in conflict resolution and planning. [Minerbi 2003:1]

Mr. Reis explained,

All the *ahupua'a* have potential, it just depends on who is driving the development and the intent, and that's kind of where we are at today. [We are] wanting to see more of the Hawaiian culture included in that. They want to build homes up here, and in all honesty, I don't think it's a bad idea or bad location. I really don't. It's on the side of the road, there's nothing but cows there, as far as cultural resources, they're not present on the property. So, I understand their choice, I understand it's probably going to be built.

In sharing his concerns regarding the planning process and proposed development, Mr. Reis made clear that his primary concern is for his “cultural practice.” Mr. Reis engages in numerous cultural practices; formerly a *lawai'a*, Mr. Reis is now a *mahi'ai*, *kālai ki'i* (wood carver), and *kālai pōhaku* (stone carver). Not only does he continue to farm on the parcel, he also shapes adzes and stone tools there as well. He shared,

My concern is with my cultural practice. Like I said, I went down this road of learning the stone tools, learning the *poi* pounders. You can't buy a *poi* pounder here on Kaua'i. That to me, is an injustice. That's what I'm trying to fix. That

naturally led me, from being flown here, not grown here, having to learn *kalo*, because it's part of that. I work for Adam, who is right across the street, who has 25 acres, who is a leasee of the guy who owns the land [current project area], he's a *kalo* farmer. I work with him, and it's funny how it worked out that I got to learn *kalo* that way. So, down on their property, we have a *lo'i*, and we're growing *kalo*. The importance of farming *kalo*, the tools, making the tool, is my life mission, to be able to pass that on to my daughter and son, so that I can feel that it's not lost. . I have heard of a couple *kumu hula* [hula teacher] that have taught their *haumāna* [students] to make *poi* pounders, but it's not as widespread as it should be. So, in me doing what I'm doing, I can feel secure if I can pass it on to my *keiki* [children]. I've done my part and that includes their [his '*ohana*'s] *lo'i*, down on their land, which is fed by a spring.

Mr. Reis noted that the stone tool is best employed when used in the preparation of *pa'i'ai* (hard, pounded but undiluted taro). Although *poi* (Hawaiian staff of life) may be made with breadfruit, sweet potato, banana, or taro, the Reis Family prepares *poi* made of taro. Regarding his family's production of *poi*, he shared,

Farming *kalo* down there, in my research, I came across La'amaikahiki. In his name chant, it actually references the *kalo* of Keahapana. It's either the big *kalo* or lots of *kalo*, but in our '*ohana* it was you grow *kalo* to pound *poi*, and that's predominately what they did. They used it for *poi* instead of cooking it or eating it other ways.

Due to the reliance on *pa'i'ai* (for *poi*), Mr. Reis realized he must devote his labor to the cultivation of taro. A return to the cultivation of taro (as well as other food crops) required Mr. Reis to pursue agricultural activity within the *mauka* portions of the *ahupua'a*.

In returning *mauka*, Mr. Reis focused on the northern corner of a parcel of land within Keahapana Valley. The parcel, LCA 8061, is located approximately 1.64 km east of the current project area (Figure 46) and was originally awarded to Waianae, on behalf of Hainau (also identified as Kainau). Hainau was Waianae's wife, and the original claimant for the land. The parcel became available to Hainau by way of a series of resolutions adopted by the Hawaiian Privy Council on 19 October 1849. These resolutions laid the groundwork for the Kuleana Act of 1850, in which the rights of native tenants were confirmed and protected. Under this act, the claimant (Hainau) was required to provide two witnesses who knew the claimant and the boundaries of the land and could testify that the claimant had lived on the land for a minimum of two years and that

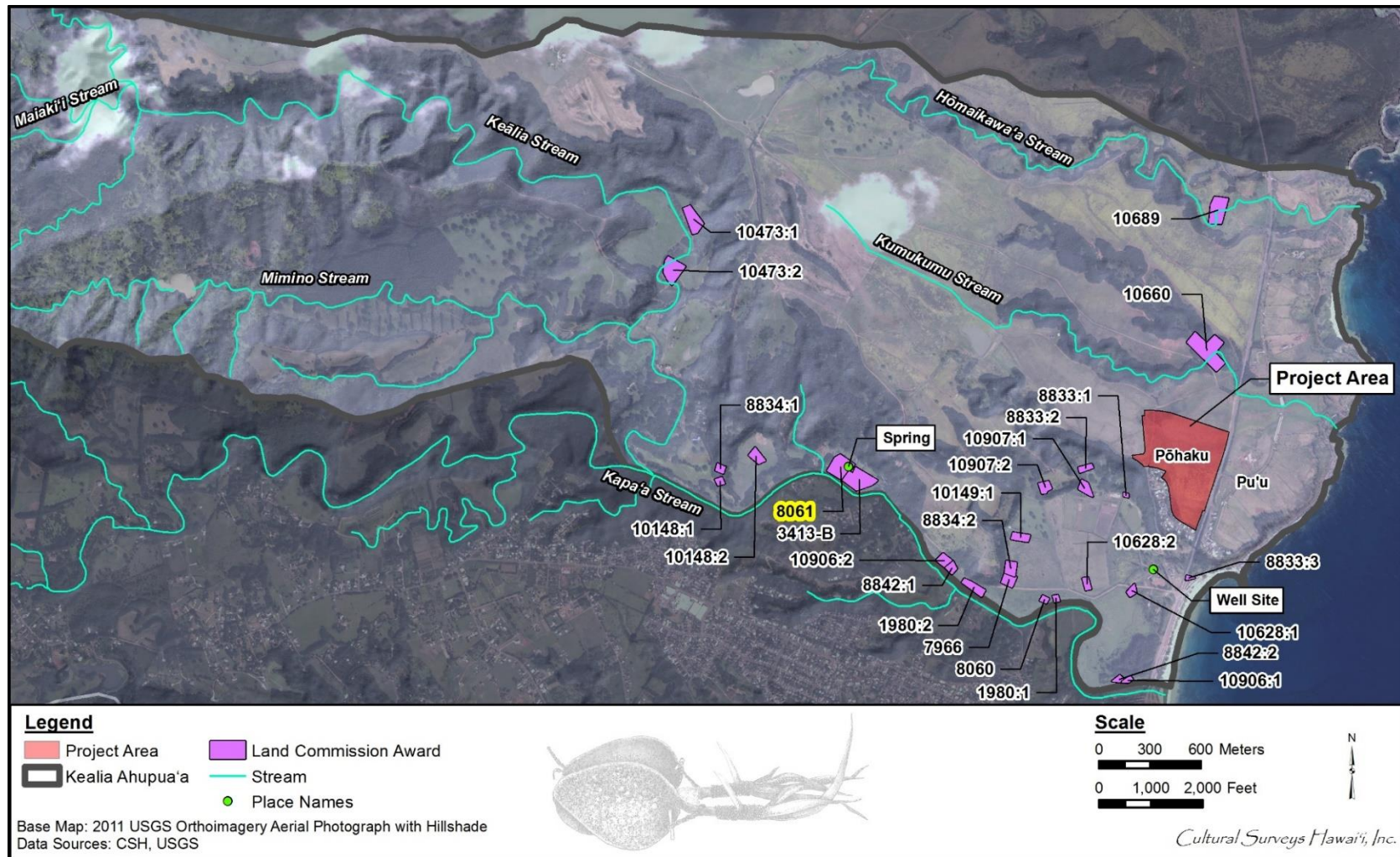


Figure 46. A 2011 USGS Orthoimagery aerial photograph depicting LCA 8061, where Mr. Reis and his family currently cultivate *kalo* and various other food plants and maintain a spring. The map also depicts the location of the potential well site, *pōhaku*, and a *pu'u*, as identified by Mr. Reis during consultation. (Please note that the project area, as depicted, is synonymous with the Petition Area)

no one had challenged the claim. The land also had to be surveyed. Native tenants or naturalized foreigners who could prove occupancy on the parcels before 1845 could be awarded lands they occupied or cultivated as Kuleana Awards. No commutation fee was necessary to apply for a Royal Patent for a Kuleana Award, as the commutation fee had presumably already been paid by the *ali 'i/konohiki* (chief/supervisor) to whom the *ahupua 'a*, or *'ili* in which the native tenant claimed his own small parcels had been awarded (Chinen 1958:8–31).

For Hainau, the following is recorded within the Native Register (Figure 47) (translated below):

The Land Commissioners, greetings: I hereby state my claim for land, four taro lo'i and a kula which adjoins them. I have another kula far mauka. There are four mala of noni, three mala of wauke and two-house sites. [Waihona 'Aina 2000]

Native Testimony (Figure 47) records the following for Hainau's *kuleana* parcel (translated below):

No. 8061, Hainau

Koikoi, sworn, he has seen this claim in the ili land of Kapuna.

Section 1 - House lot with 4 loi and a pasture together.

Mauka by Konohiki pasture

Anahola by Konohiki pasture

Makai by Makole's loi

Puna by Kealia River.

Land from the Konohiki after the war, no disputes. Hainau died in 1840, and the land bequested to her husband, Waianae. Kaaku, sworn, verifies Koikoi's testimony.

Foreign Testimony (Figure 48) records the following for the same parcel

No. 8061, Hainau, Claimant

Koikoi, sworn, says I know the lands of Hainau in ili Kapuna Kealia. It consists of house lot, 4 Lois, & kula adjacent all in 1 lot.

Bounded as follows:

Mauka by Konohiki's kula

Napali by Konohiki's kula

Makai by loi 'Makole'

Puna by Kealia River.

These lands were given, Claimant by the Konohiki previous to 1835 & were held peaceably till her death in 1849. They are now in the peaceable possession of Waianae, her husband.

Kaaki, sworn, says I know the lands of Claimant I heard all that Koikoi has testified. It is all true.

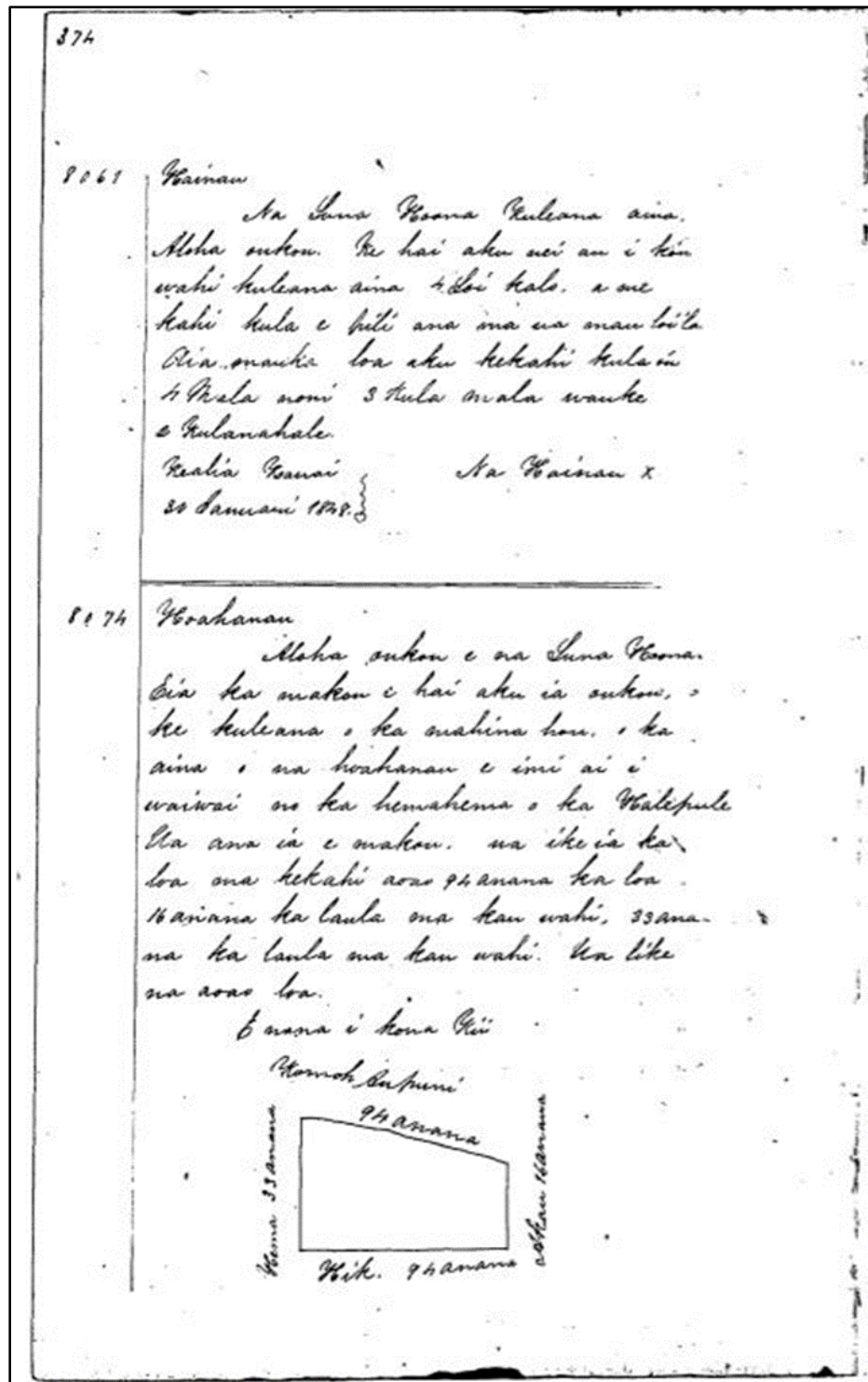


Figure 47. Image of Helu 8061 within the Native Register (pg. 374, volume 9; Office of Hawaiian Affairs 2015)

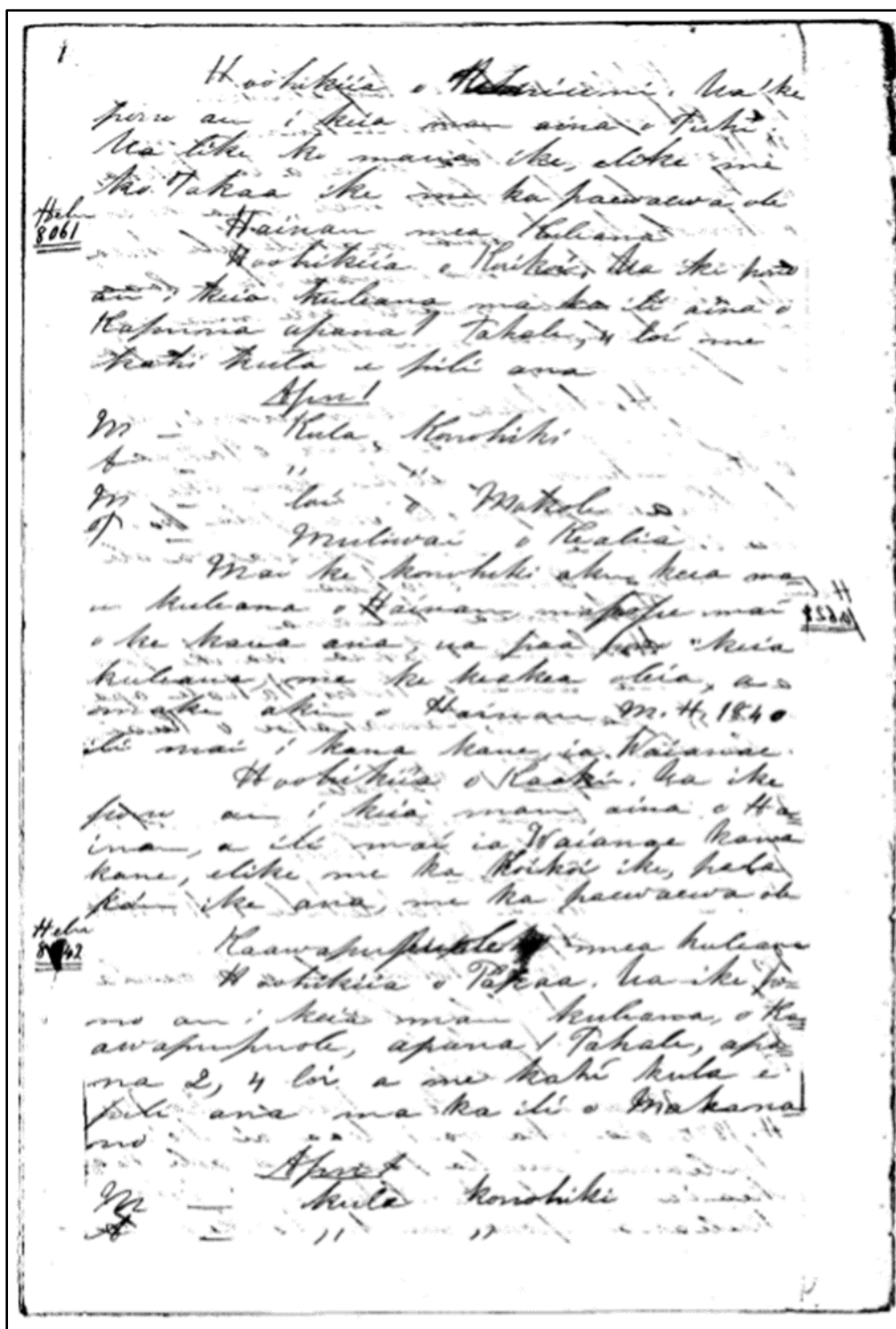


Figure 48. Image of Helu 8061 within Native Testimony (pg. 114, volume 12; Office of Hawaiian Affairs 2015)

109

These lands were given Cth. by Palekaia (Mamohiki) in or previous to 1835, & have been held in peaceable possession till this time.

Mamohiki swears says -
I have heard all that Palekaia has testified relative to lands of Cth. in Kealia - it is all true - that is our united testimony.

8.242 Hainan Cth.

Palekaia swears says -
I know the lands of Hainan in the "Kapauna" Kealia. It consists of House Cth. Holois, & Kula adj. all in lots.

8.243 Banded as follows:

A. by Mamohiki's family
B. "Loi" "Makaha"
C. "Kealia" River

These lands were given Cth. by the Mamohiki previous to 1835, & were held peaceably till her death in 1849. They are now in the possession of Waianae her husband.

Kaahi swears says -
I know the lands of Cth. I heard all that Mamohiki has testified it is all true.

8.244 Kamaupule Cth.

Palekaia swears says -
I am acquainted with lands of Cth. in Kealia. It is in 2 lots as follows -
No. 1. To House Cth. in "Kapauna"
"2. " Holois & Kula in the "Makaha"

Figure 49. Image of entry No. 8061 within Foreign Testimony (pg. 109, volume 12; Office of Hawaiian Affairs 2015)

A review of Hainau's testimony reveals aspects of traditional life as they were practiced in the mid-nineteenth century. Particularly salient are the descriptions of resources contained within that *kuleana* parcel (habitation and agricultural plots claimed by the common people). These resources allowed for the continuation of traditional practices. According to Kuykendall (1938) and Malo (1951) (cited in Andrade 2004), traditional practices included

. . . cultivating formal fields, both wet and dry, for food production; use of water for irrigation and home consumption; hunting of birds, gathering of plants for consumption and production of necessities; the raising of pigs, dogs, and chickens for meat; building of structures for a variety of practical uses as well as ritual buildings; and access to the ocean and stream areas for fishing and gathering of sea vegetables. [Andrade 2004:3–4]

Mr. Reis and his 'ohana still cultivate wet and dry fields for food production, utilize spring water, gather flowers for burials, and raise pigs for meat. Mr. Reis listed the natural resources contained within his family's parcel; besides *kalo*, they also cultivate *mai'a* (banana; *Musa x paradisiaca*), *noni* (Indian mulberry; *Morinda citrifolia*), cacao (*Theobroma cacao*), cinnamon (*Cinnamomum*), and heliconia (*Heliconiaceae*). The *kalo* and *noni* grown within the parcel today are particularly significant, largely due to their historical antecedents. These native plants were amongst the original crops cultivated by Hainau and Waianae. Mr. Reis additionally revealed that the variety of *kalo* grown on their property is known as the "Keahapana variety." While clearing the land, Mr. Reis discovered an untouched "*puka of kalo*," presumably an heirloom varietal. He saved that plant and utilized the *keiki* growing around it within his own *lo'i*.

Mr. Reis elaborated on the history of agricultural activity occurring on his family's parcel:

. . .the original plan [was to use the land] as a flower garden for the 'ohana who came and visited, to be able to come and cut. But over the years, people raiding it, and pigs [foraging], it kind of got diminished. The cacao trees we use for propagation stock, starting from seeds and air layers. The cinnamon tree we just collected seeds from. It's kind of like a seed bank right now. Along with the *lo'i*, there's bananas and other fruits, edible plants and flower plants. We don't water anything, we don't need to water, there's no irrigation down there, so that spring provides all of that, as well as the name of this valley, Keahapana, 'white breath,' is one of the interpretations, and because there's a fog in the valley every morning. So, everything gets a light watering every morning. It's a phenomenal growing area, and I definitely see why our *kūpuna* decided to settle in there with fresh water springs and the abundance. The ability to not have to water.

The "white breath" mentioned by Mr. Reis may be indicative of fog drip. In the early morning hours, one may observe a layer of fog hovering within Keahapana Valley. Generally, there is approximately 0.05 to 0.5 g of liquid water in a cubic meter of fog. Studies in other localities have shown that fog drip can add as much moisture as rain. "When fog comes in contact with vegetation. . . the water condenses and covers the plants. Eventually, the water collects and drips down, watering the plants, the ground and the surrounding habitats" (Catalina Island Conservancy 2017). Plant resources within the Reis parcel are also supplied with water by way of a spring.

Upon mention of the spring, CSH inquired into the history of the water source, traditional names, and its discharge or flow. Mr. Reis noted there are *mo'olelo* associated with the spring,

however, he does not know if the spring was given a name. Stories regarding the spring have been passed down to him through his *wahine*'s father, Mr. Kenneth Bray. He shared with CSH a story about Mr. Bray's original attempts to locate the spring:

The story told to me was that [Mr. Kenneth Bray's] mother, Johanna Kauai, who grew up on the property, showed him where the spring was. When he was a young man, 18 or 19, he went down there and started clearing the land and reconnecting with his culture. He dug where the spring was, but the spring was no longer there.

In 2008, Mr. Reis began his efforts to relocate the spring. He recalled that a corner of the property, known as "Johanna's Corner," had been neglected for a long period of time and was largely covered in *hau* (*Hibiscus tiliaceus*). Mr. Reis recalled,

The *hau* was left to grow. As I started the *ki'i* carving, in the path of learning the culture, I said 'hey you got land down there, let's plant some stuff. Let's go clean up, let's go *mālama 'āina* down there.' And it was a swamp, just a swamp, mushy, *hau* was growing, and we didn't know about this spring. So, we started clearing and as we cleared, I realized that there was water coming out of the ground. I could tell, as we cleared, clean water was coming in, so we started to inquire with her dad about the land. And that's when he started to share about what was down there. We were told that there was a *lo'i* down there. There is a massive monkey pod tree (*Albizia saman*) on the property that has stories associated with it. But what I believe has happened is that the monkey pod's roots have disrupted the spring that was originally there, and it's either blocked it in some areas, or the spring is either following the roots along different routes. But there is an abundance of water that is coming out of that corner of the property and that's one of the reasons why my woman's grandmother chose that corner.

The spring, located approximately 121 m northeast of Kapa'a Stream (Keālia River), is in a relatively wide flatland (see Figure 46). According to Handy and Handy (1972:423), "where Kealia and Kapa'a Streams join inland there are wide flats that were terraced." According to the U.S. Department of Agriculture (USDA) Soil Survey Geographic (SSURGO) database (2001) and soil survey data gathered by Foote et al. (1972), the majority of the parcel contains Hanalei silty clay, 0 to 2% slopes (HnA). According to Foote et al. (1972):

This soil is on stream bottoms and flood plains. Included in the areas mapped on Kauai along the Waimea River and in Waipaoiki Valley are small areas where the surface layer is 8 to 10 inches of reddish-brown silty clay. . .

Permeability is moderate. Runoff is very slow, and the erosion hazard is no more than slight. The available moisture capacity is about 2.1 inches per foot of soil. Roots penetrate to the water table. Flooding is a hazard. [Foote et al: 1972:38]

The USDA adds that "this soil is excellent for the production of wetland crops. The water table is seasonal in most areas and ranges from about 2 to 5 feet in depth and saturated as shallow as the surface" (USDA SSURGO 2001). Mr. Reis further described the location of the spring, detailing the setting in which it once functioned:

[Those *kūpuna* who remember the spring] were after the actual, untouched usage of the spring. They, in their childhood, would remember a little different scenario.

That monkey pod tree could be, gosh, 200 years old, at least 150 years old. At the time, my cousin was telling me that during their childhood, there were flumes set up. It's kind of recessed the property, it's at river level, and there were flumes set up that would trickle water down. It would leak water, and that water would make it wet down there too, and that water would go down into the *lo'i*.

In describing the spring and its environs, Mr. Reis revealed that feral animal activity has had a negative impact. Wild pigs would often trample the spring, resulting in Mr. Reis having to clean and dig out the water source on multiple occasions. Exasperated, he dug the spring completely out (approximately "four feet down"), "rocked the bottoms and rocked the sides," and installed a metal culvert. He explained,

I put in a culvert to stop the pigs from caving it in. Now there's always water in it. There's about two feet of water in this culvert, it's about a two and a half to three-foot-wide in diameter culvert. Vertical in the ground, you open the lid, and there's clean water in there. The access, there's a small *puka* in the culvert, that just kind of leaks into the *lo'i*. As it fills up, it keeps the *lo'i* fed. Then I can take water from there to wash my hands, or water other things around, so I do use the water from the spring.

When questioned about seasonal water fluctuations, Mr. Reis commented that he has observed how nearby ground disturbance activities have decreased the volume of flow:

You know, now that I have established that culvert, that's something that I do look at, because I have a line [marking the current water level]. I can watch it and monitor it. Like I said, before, the pigs would come in, and it was hard to tell [the volume of water]. My uncle, who controls the property, has done some excavation on the property, and on two occasions he has dropped the level of the spring by ripping a big trench on his side, which filled with water. Good for him, that's what he wanted. But, it lowered my spring, so that's kind the reason that I'm raising the issue. Because I've experienced how another person's activity can directly affect mine. . . It forced me to dig my *lo'i* lower, it forced me to dig my spring access lower. . .

Mr. Reis understands that ground water in Hawai'i is a public trust, and through first-hand experience, knows that adverse effects at one location (such as a well site) may impact available resources in another location. Identifying the proposed well site on an aerial image of Keālia (see Figure 46), Mr. Reis commented that approximately 24 million gallons of water a year will be drawn from it to support the proposed subdivision. The pumping of such a large volume of water has generated concern about potential adverse impacts to ground water resources, cultural resources, and cultural practices.

So, we have a situation now, where these guys want to develop, and like I said I don't know if I'm actually opposed to the development in particular and its location. But, I'm here and they're here [points to map], and if their [water] take drops it below my take, and I no longer have that ability [to sustain food and flower crops], it's too late. We cannot stop feeding these 300 homes water, I mean for you and your cultural practice. That's why I'm doing what I'm doing now, I'm being proactive, putting my concerns forward, I just need to have it on the record that this

is what I'm doing, and why I'm doing it, and if your development is going to put an end to that, so we need to have a serious discussion in regard to that. So, I don't know if they can provide evidence of what I'm seeking. And it very well may be the case that it doesn't, you know, but I'm not willing to take the chance to wait to see if it does, because I know that it's irreversible. So, yeah that's why I'm here, why you guys are here, and I appreciate your time, I really do.

CSH inquired if Mr. Reis had any recommendations in regard to mitigative measures should he observe impacts to his freshwater resources. Mr. Reis commented,

If it comes to a point where I start to witness that there is a problem, the reality is it's probably too late. There's probably nothing that's going to be done to stop it or reverse it just because, like I mentioned, once they build it and start pumping water, they're not going to stop pumping the water. I guess they could build a water treatment plant, *mauka*, and take it from another source up there, but it's going to cost them X amount of millions of dollars, which they're not going to want to eat for one lone *kānaka* down there. I understand the reality of the situation we're in. I'm doing this to get on the record. . . that these people were notified of my use in the area. Basically, what I'm doing is setting up a scenario that provides me with a rock solid legal argument. And what just compensation is, to deny my children of their inherent birthright as a protected person under international law, I don't know what that looks like, but that's the argument I'm going to make yeah. We're in an occupation, not everyone knows that, not everyone agrees with that, but I've done enough research to understand the facts, and there is a legal argument. I'm here to protect the birthright of my children. They can disregard it all they want, and do what they want, but there's consequences. We all get to choose right? And there's benefits and consequences to all that we do. I'm just here to use my *leo* (voice), and pray to *Akua* (God), and just hope that we can work something out. Unfortunately, like I said, I don't know if they can provide evidence that their pumping is not going to impact me. 'Oh you're on a different land, your land goes this way, here's the ground survey, we have evidence of this.' I don't know if they can do that, they'll probably just trickle down through that. We'll see what happens.

CSH inquired if Mr. Reis had any additional concerns regarding impacts to cultural resources contained within the project area. He noted he has observed culturally significant *pōhaku* all along the eastern side of Kaua'i, from Keālia Ahupua'a all the way to Anahola Ahupua'a. Mr. Reis is well versed in the geology of not only Kaua'i, but of the entire Hawaiian archipelago. He has devoted much time, as *kālai pōhaku*, to the study of the earth's physical structure and processes. As a student of the earth sciences, he has often gone out to monitor earth moving activities, analyzing the types of rocks exposed during ground work. Of particular interest to Mr. Reis are the *pōhaku* that appear to have been shaped or altered by humans. He shared with CSH,

Ok so because of my interest in rocks, [the project area] is screaming significant to me. I'll tell you why. . . I did read a *mo'olelo* about a chief in Anahola, somebody was sick and they had to send for somebody on the north shore, a practitioner to heal this person. I think his house site was in Anahola. As you leave here, I would ask you to drive in this direction to Anahola, as you go down the hill and come back

up the other hill, the next hill, if you look to the right, in the side hill that they cut to make the road you will see four *pōhaku* sticking out of the dirt, and they are in a straight line. It's very peculiar to me. What I believe is that it's an archaeological site that was cut through to make the road. One of the reasons that I believe that is not only the line of *pōhaku* sticking out, that was probably the floor of some sort of structure. But if you were to look directly across the highway, there are rocks obviously there. So, going this [way], rocks sticking out of the side hill, can't miss it. On the other side, over that hill *makai*, there's a property there that recently underwent a facelift. It was full of *hau*, machines went in there and tore it down. I'm the guy that shows up after the State and county people disturb things, rocks popping up. I'm in there looking for things. They did that and there were lots of *pōhaku* in the side hill. Some of them had whole round holes in them, it's next to an old dry riverbed. So, my concern in regard to archaeological sites, I don't have any evidence to tell you what was there. . . But there was something there, at one point in time. . . I'm going to guarantee that they're going to find things, lots of things, lots of rocks there. The Anahola solar farm, that was the case. I read the cultural impact statement, it was wonderful, talking about the worship of the sun, but when it came to the actual site, it was one page, I think their impact statement was 30 pages. One page talked about the site, but I know, from my personal experience when I witnessed the excavation, there were five mountains of rocks that were over 14-16 feet tall. And what caught my attention were the mounds of rocks blocking the driveway, which were all peculiar, large, interesting shaped, flat, thin stones that were piled up. As I looked further I could see that there were all these mountains of rock everywhere, and the impact statement didn't capture any of that.

Mr. Reis went further, recommending that education and cultural sensitivity training be incorporated within pre-construction planning. He suggested that those working on the project be educated on the types and varieties of traditional Hawaiian cultural material. He also recommended that a field guide be generated and utilized as a reference for onsite construction workers and archaeological monitors. This field guide would be generated in conjunction with stakeholders and/or cultural descendants of Keālia. In addition to education and cultural sensitivity training, Mr. Reis recommended that prior to any ground disturbance, a survey of the project area should be conducted with ground penetrating radar (GPR). He shared,

What I would like to see moving forward in the process, ground penetrating radar. Unfortunately, that cost falls on the developer. But if you want to develop the property, you need to ensure before you start digging, that you're not going to turn up a bunch of rocks. And educating people, and that's what we're really lacking. The educated machine operators, you start digging, and you start pulling up rocks and they're all in a row, maybe it's time to stop. My research will hopefully tell me, if you dig up a piece of olivine basalt, far from a shore, you might be digging into a house site, or that might be a tool. That type of rock isn't supposed to be there. Understanding that structures, *heiau*, had uniformity with and amongst the type of stone that was used to increase the *mana*. That's very simple. You go to a place,

and they're all the same type of stone, that's an indicator of something. We just don't have, the guys on the ground, don't have that [kind of] education.

Mr. Reis concluded by reiterating the importance of preserving and protecting cultural resources and cultural practices for future generations.

6.4.5 Summary of Ricardo and Maggie Banquel Interview

On 1 September 2018, CSH interviewed Mr. Ricardo Banquel and Mrs. Magnolia Banquel at Keālia Beach Park for the proposed Keālia Subdivision project. Mr. Banquel is *kama'āina* of Keālia and was brought up primarily in Kumukumu and Keālia camps. Mr. and Mrs. Banquel, however, currently live in the *ahupua'a* (traditional land division) of Hanamā'ulu. Mr. Banquel elaborated on life within the plantation camps, and times spent traversing the lands between Kapa'a and Keālia. The third child of ten born to Buenaventura and Theodora Alisna Banquel, Mr. Banquel recalled his early days within Kumukumu Camp:

Kumukumu Camp is just below Keālia Kai, on the left side by the banana trees, right where the cane truck run across the road. . . . Going to school was going to Kapa'a School, kindergarten up to high school. I used to ride the bus from Kumukumu down to the school. Most of the time walk, walk in the rain from Kumukumu Camp.

For children growing up in the plantation camps, schools were sometimes an extension of the plantation itself. Although, Mr. Banquel made it clear that Kapa'a School was not managed by Lihue Plantation, school demographics were very much reflective of the nearby camps. According to Peter T. Young,

While the public schools in the rural areas of Hawaii were not under direct control of plantation management, they were looked upon as an extension of the plantation because virtually every child had parents who worked on the plantation.

School principal[s] and teachers were often included in the social milieu of the plantations hierarchy, and school program[s] tended to represent middle-class American values of hard work and upward mobility, which have motivated second generation children from the early 1930s to the present. [Young 2016]

Within Kumukumu Camp, Mr. Banquel recalled about 10-15 people, both families and single men, living there during the 1950s. Mrs. Banquel elaborated on the history of plantation demographics, "Kumukumu, a lot of the homes were originally made for single men. In the beginning of the plantation days, [it] was only single men." Historical data also point to skewed sex ratios in the early days of imported labor. Although the numbers of families and women within the camps did increase with the emigration of Japanese women during the picture bride era, "there still remained a large community of single male laborers" (Young 2016). CSH also inquired into the ethnic compositions of camp residents.

Mr. Banquel's father was an immigrant from the Visayas; his mother, although born on Kaua'i, was also of Visayan descent like his father. Both Mr. and Mrs. Banquel recalled that Keālia Camp was primarily composed of individuals of Japanese and Filipino descent, although Hawaiian families lived in Kumukumu Camp as well. The Portuguese mostly occupied positions as plantation supervisors or *luna*. As *luna*, they "lived in special parts of the plantation housing,

divided from those of other backgrounds by roads and by rules not to play with the children across the street” (Young 2016). Mr. Banquel shared,

Up Kumukumu Camp, I know had Hawaiian . . . was Delo Santos, Jay Delo Santos, Tony Delo Santos . . . they used to work in the plantation, the father. The mother used to dance *hula*. The mother is Emma. They had a daughter, Barbara. This guy always plant flowers, his name was Mariano. Plant orchids, vandas, all that kind. We used to pick flowers sometimes.

As a child, Mr. Banquel also entertained himself by constructing homemade toys. Mrs. Banquel explained that during the mid-twentieth century, plantation families made do with what little they had available to them. Toys and candy were either made or purchased very cheaply. Mr. Banquel explained how he would create his toys:

For me, we never had toys so we used to go with the guy Alfredo [inaudible], go to the rubbish dump, pick up bicycle, build up bicycle without tire, ride on rims. That was good fun, that was in Kumukumu Camp. Then, when we came down Keālia, I had the same thing. I build up the bike to go race with the other boys. I went build um up, had the big tires, fender, mud flap, lights, go around at night, put the flashlight [laughs], drive around the camp. But that was fun, that was our fun because we never thought about going store, because the candy was so cheap. That's why I get all rotten teeth anyway. The candy was so cheap, 1¢ candy, the big round lollipop was only 10¢ at Keālia Store. Then we had coupon, buy 'um with coupon.

Mr. Banquel also recalled building toys out of scraps found within Kumukumu Camp. “When I was growing up in Kumukumu Camp, I used to make my own toys out of pineapple cover, sausage can, nails, and wood. So, my father used to get mad all the time because we used all the nails and the wood.”

Upon mention of his father, CSH inquired into the work that Mr. Buenaventura Banquel did for the plantation. While describing his father's role within the commercial sugar industry, Mr. Banquel also explained the history of Keālia Mill and the Makee Sugar Company. He shared,

[By the time I was born] Keālia Mill was going down already. They call 'um Makee. Makee Sugar Company was Keālia, that was when Keālia Mill was running. But when I was growing up, the mill was out already. They used Hanamā'ulu for repair, they come Keālia for repair too. In the meantime, we had a lot of fun. We used to ride the train. Used to have train running from Anahola, they make their own tracks go inside the field then they come out where the Haul Cane Road stay, that's where the train track was, all on the side of the beach. So, we used to take cane, I used to watch my father run, he was the brakeman, he changed tracks . . . He was a brakeman. The guy driving the train used to be Barretto. The old man. He used to drive the train, all the way from Keālia. Because they come Keālia, service the train, then take 'um out and go all the way Līhu'e to unload at the Līhu'e Mill. Because Keālia Mill was *pau* already that time when I was growing up.

Although the position of the brakeman was a dangerous one, requiring men to run along the trains to assist in applying brakes, the pay was relatively low. Due to the low pay, Mr. Banquel's

father supplemented his family's meals with fresh fish and homegrown vegetables. Mrs. Banquel explained, "they really had no money, so they pretty much lived off the land." *Nenu* (lowfin chub; *Kyphosus vaigiensis*), *kala*, and *moi* (Pacific threadfin; *Polydactylus sexfilis*) were caught by pole and line. His father utilized special trails to access the beach for fishing; according to Mr. Banquel, these trails had been long established. "The trail was already there from before, and we used to walk down from there. Used to go 14 Crack by Anahola, walk all the way up there and down. But most of the time we take the car, because he no like walk too much."

Mr. Banquel, however, did not pick up his father's affinity for fishing; he recalled,

I used to follow my father go fishing, I wasn't interested. After that, I would go hook *tilapia* down the river. After that, I heard they were raising pig up above, we came down to Keālia yeah, and I heard that they raising pig up above and doodoo water come down, down the stream. That's when I give up [fishing].

In addition to fresh fish, vegetables such as beans, eggplant, onion, cabbage, and *malunggay* (*Moringa oleifera*) were grown in the family garden. The Banquel Family also raised various farm animals such as ducks, chickens, fighting roosters, rabbits, and pigs for consumption. The family also raised dogs for the protection of their home. Mr. Banquel recalled,

. . . Ducks, chicken. My father used to like fight chicken, my neighbor had fight chicken. . . . Then we had rabbit, dogs. I don't know, dogs, we had dogs forever. Then we had raising pigs, we used to pick up grass down the beach. They call it in the Filipino name, *osiman*. The kind grass you plant sometimes, but more green and more thick. That was fun but hard work, because we gotta carry the five-gallon bucket filled with slop. We used to go pick up slop, all the houses this way, we can pick up.

As the 1950s and 1960s progressed, the Banquel Family continued to utilize the plantation camp store for basic goods. Keālia Store, run by a Japanese family, was located immediately adjacent to the current Keālia Post Office (Figure 50 and Figure 51). By the 1970s, the Banquels were mostly bartering with neighbors for food items, trading fish for vegetables or other goods. In describing Keālia Store, Mr. Banquel also recalled other notable structures utilized by the plantation community. These structures included a movie theater, field (for football and baseball games), service station, a dispensary, and a social hall (Figure 52 through Figure 54). Mr. Banquel recalled that all injuries and ailments were treated at the plantation hospital or "dispensary." In general, the layout of Keālia and its associated plantation infrastructure followed a prescribed template employed by nearly every other plantation across the island chain. These engineered plantation towns were planned in a way to service the basic needs of camp residents while ensuring that the plantation continued to maintain strict control and influence over its laborers and their families:

We bought most of our food and clothing from the plantation stores and, if our families were short of cash, credit would be provided. Some children were born at home, but most of us were born in and treated for our illnesses at the plantation hospital. . . . We were entertained (in a) recreational building provided by the plantation. Our young people, especially the males, enjoyed the ballparks provided—again—by the plantations. . . (W)e worshiped in church building provided by plantation management for the large groups who worshiped and



Figure 50. General overview of former Keālia Store, currently closed and boarded



Figure 51. Current Keālia Post Office (white building) visible in middle ground; portion of the closed Keālia Store (red building) visible on left side of photograph



Figure 52. Former location of the movie theater built to service the entertainment needs of Keālia Camp's residents



Figure 53. Former location of ball park provided by the plantation; Mr. Banquel recalled playing football and baseball at this park



Figure 54. Former location of service station; the station catered to the needs of Keālia Camp's residents

conducted religious instruction in the language of their members. [Nagtalon-Miller cited by Young 2016]

CSH inquired into the relationship between plantation laborers and their plantation managers. Mr. Banquel recalled that everyone mostly got along and that there were “no more jealousies;” however, he also recalled that plantation strikes did occur. For nearly some 100 years, workers employed in the commercial sugar industry fought and advocated for better wages, hours, and conditions. Many of Hawai'i's plantation laborers fought to build “a labor movement based on family . . . community organizing and multi-ethnic solidarity” (Center for Labor Education and Research n.d.); from their struggles was borne Hawai'i's unique *kama'āina* culture. Mr. Banquel himself was a member of the ILWU (International Longshore and Warehouse Union), a union famed for challenging the “Big Five” and for its long lasting impacts upon the socio-political climate of Hawai'i.

Hardship has often been a centralizing theme in histories of plantation labor and life in Hawai'i. However, rather than be defined by oppression and hardship, many plantation workers and their descendants found strength in their shared values. These values were centered on family, loyalty, filial piety, industry, frugality, and equality. Food also served as a unifying force within the community. Rather than eschew unique ethnic flavors, the community often embraced and incorporated them within their own traditional cuisines. Mrs. Banquel elaborated on this theme, recalling that differences were often overlooked in favor of creating community; she shared, “. . . but for me I don't know what's the difference between Hawaiian, Japanese, Filipino upbringing because it looks like we were all brought up the same way.” Community solidarity was also built through celebrations. The community was often brought together by weddings and birthdays, and parties were thrown at the social hall. Regarding the social hall, Mr. Banquel shared the following,

. . . When I was growing up, in 1955 about, had two big mango trees. We used to eat mango from morning to night, common mango. Had the hall right next to the mango tree. We used to play, used to get parties in that hall. Used to get gambling, gambling behind my house, on the side [too].

Gambling also occurred during cock fights. Cock fighting was once a common practice within Keālia Camp, and many of the camp's Filipino residents participated in the practice. Mrs. Banquel explained to CSH that cock fighting was an historic cultural practice for Filipino families, additionally, it was a way for families to supplement their incomes. The practice was not entirely wasteful, as fighting roosters were also cooked and eaten. Families living in the plantation camps were extremely resourceful, living off the land and making do with what was available to them. Mrs. Banquel recalled that her father-in-law had shown her how to cook fighting roosters; generally, the meat of the rooster was treated in the same manner as “stewing chicken,” requiring a lengthy cooking time in order to tenderize the meat. Mrs. Banquel explained that this resourcefulness was borne out of necessity, “because that's what they had to bring home for feed [the] family.”

While further inquiring into the customs and traditions of their own home, CSH asked about the neighboring residents of Keālia Camp and the extent to which the *ahupua'a* was developed with plantation homes. Mr. and Mrs. Banquel recalled that a couple hundred residents were living in Keālia Ahupua'a during the plantation era. Houses were clustered *Makai* (seaward) and extended *mauka* (inland) up into “Keālia heights.” Between the homes were large swaths of cane

fields, extending far *mauka* to Keapana Camp and Waipahe'e. It was a sea of green tufts, and neither Mr. nor Mrs. Banquel could recall any other crop being as prominently visible. Mr. Banquel recalled that an airstrip used to be located in Keālia as well. Due to such large areas being planted in sugarcane, agricultural aircraft were employed to spray pesticides and/or fertilizer on crops.

Mr. Banquel also recalled the incorporation of Makee Sugar Company into Lihue Plantation, noting that this had occurred long before he was born. During Mr. Banquel's lifetime, the Lihue Plantation began converting from rail transport to truck transport. By the end of the 1950s, the Lihue Plantation was solely utilizing trucks to transport cane to the Lihue Mill. A prominent feature associated with this practice was the "haul cane" road. Mr. Banquel pointed out the remnants of the rail and roadway, highlighting the way in which "haul cane" road follows the alignment of the old railway until just before the end of the bike path near 'Āhihi Point (Figure 55). The incorporation of trucking (and other machinery) into plantation work activities proved beneficial for Mr. Banquel as he soon acquired a job working for the plantation. For nearly 30 years he worked as a laborer and truck driver, running machinery for Lihue Plantation and later, Amfac. He recalled, ". . . because from Lihue Plantation they changed to Amfac. . . In fact, we had so many bosses. We had one, Alan Smith, Tabata, the *haole* [foreigner] from the mainland, Ornellas, [another] *haole* boss."

The transfer of the Makee Sugar Company to Lihue Plantation in some way marked the decline of Keālia Town. Some residents began to move away from Keālia, opting to live closer to the center of Lihue Plantation's operations. Mrs. Banquel shared,

Yeah, they was going to close over here, so in the '70s and '80s they was moving everybody to Hanamā'ulu. They allowed everybody to, they had opened up land in Hanamā'ulu, where everybody could purchase house and land. They just wanted to close this part down, but still had families here throughout the '80s.

Many of the former plantation workers remained within Keālia well into the 1970s. While waiting for their home to be completed in Hanama'ulu, Mrs. Banquel resided with Mr. Banquel in a plantation home at Keālia Camp. She recalled that many of the residents appeared to be retirees, in their 60s and 70s, most likely former workers for Makee Sugar Company. Reflecting on why many residents (or retirees) decided to stay in Keālia long after the mill was shuttered, Mrs. Banquel stated, ". . . actually, it was a place where you could leave your doors open and nobody, you no need worry about nothing." The reluctance to leave the camp may have been attributable to many factors such as safety, rental costs, and/or general contentment. Mr. Banquel recalled renting from the plantation during the '70s, noting that the rent was once only \$80 a month. The familiarity and security with the area, or general contentment with the economic support system established by the plantation, may have also been motivating factors for many workers to stay.

CSH further inquired into the structure and construction of the plantation homes; Mrs. Banquel recalled that although they were simple, single-wall construction homes, they were surprisingly large. The home that both Mr. and Mrs. Banquel resided in while living in Keālia consisted of a parlor, four bedrooms, a kitchen, and a shower or *ofuro* (bath) located outside. While living in Keālia, Mrs. Banquel soon learned about the "*obake*" (ghost) stories associated with the area. The home, although a sanctuary for the family, had been associated with several supernatural occurrences. Mr. Banquel shared several stories related to the supernatural, particularly



Figure 55. View of outlet for “haul cane” road on *mauka* side of Kūhiō Highway

emphasizing that a night marcher trail exists within Keālia. The first of these stories involved an eerie image within his bedside window,

I started to know about that *obake* stuff was Keālia, Kumukumu Camp. Every night I go sleep, was picture by the window. Then when we moved down to Keālia Camp, same thing. After I got married, I tell myself if I'm going to be scared, I not going to go out because my mother told me, 'you scared, you not going out, you going stay home.' At that time, I came brave already. . .

Another tale involving the supernatural revolved around a burial; the burial had been accidentally dug up by plantation machinery. Upon digging up the burial, the tractor began to malfunction. When the tractor sat on the mound of spoils associated with the burial, the tractor would not start up. When workers moved the tractor from the mound, the tractor was able to start up again, with internal components working perfectly. Quite memorable, however, were incidents related to the night marchers. Mr. Banquel described how the night marcher path once cut through his home and how he would often hear "beautiful" music almost every night. Activity seemed especially high when no one was residing within the home; neighbors often described to Mr. Banquel that they had seen lights turn on by themselves or had heard loud noises coming from the home,

Me, I wanted to stay in Keālia Camp because party almost every weekend, and then you can enjoy. But the house we [were] in, we used to listen to Hawaiian music from the mountain. Because the house we [were] in had the trail going up to the mountain. Night walkers ok, and my neighbor tell me when we had move out, 'ho they was happy!' Big noise in the house, nobody live already in the house, big noise. That was Fred Lopez, he *make* [passed away] already. Big noise had in the house, they celebrate, Hawaiian music and all everything, going. That's when we move out . . .

He recalled that the trail extended to Waipahe'e, and cut through Keālia Camp, and that "on certain nights they [would] come stomping through the house to go up the mountain." His brother tried to film the occurrence on several occasions, but the film would never properly develop, "it came out blank."

CSH began to conclude consultation with general reflections upon development and residency patterns within Keālia during the latter half of the twentieth century. In general, those who could afford the price of homes within Keālia Tract were able to continue residing in Keālia. A large number of workers did buy property of their own and subsequently moved out of Keālia. With their move, much of the infrastructure that had once serviced residents became dilapidated or was removed entirely. During the 1970s, properties were being offered in Hanamā'ulu to former plantation workers; Mr. and Mrs. Banquel recalled that the median price for a two-bedroom one-bath home was \$28,000.

Mr. and Mrs. Banquel offered no comments or recommendations in regard to the current proposed project within the Petition Area.

6.5 Summary of *Kama‘āina* Interviews

Based on Mr. Kenneth Ponce’s, Mr. Valentine Ako’s, Mr. Richard Kau‘i’s, Mr. Tim Reis’, and Mr. and Mrs. Ricardo Banquel’s reviewed and approved summaries, the following is a synthesis of findings within Keālia and Kapa‘a Ahupua‘a.

Mr. Kenneth Ponce was interviewed by CSH on 22 May 2017 at the Courtyard Kaua‘i in Kapa‘a, on the island of Kaua‘i. Mr. Ponce, a *kama‘āina* of Kapa‘a, is a retired firefighter from the Kaua‘i Fire Department. As a third generation resident of the Kapa‘a-Keālia area, Mr. Ponce discussed with CSH his relationship to the *ahupua‘a* of Keālia and provided descriptions of plantation life (ca. 1960s) within the area. Mr. Ponce described to CSH the influence of his ancestors, Pedro and Crescencia Ponce, within Keālia and Kawaihau at large. The impact of Hawai‘i’s plantation workers, in particular their contributions to the island’s unique *kama‘āina* culture, was evaluated.

Mr. Ponce’s testimony reaffirmed the ways in which the actions and experiences of plantation workers “helped create the changes that saw Big Five control over Hawaii give way to multi-ethnic participation in a more democratic society” (Nishimoto et al. 1984). Within Keālia, these workers became an integral part of the community, emblematic of the ever-evolving social fabric of the Hawaiian Islands. Mr. Ponce’s ancestors were also identified within an oral history anthology of Hawai‘i’s working people (Nishimoto et al. 1984); Pedro Ponce was identified as the “striker” and Crescencia Ponce as the “healer.” While both were Visayan immigrants from the Philippines, it wasn’t until after the “territory wide Filipino plantation strike of 1924” (Nishimoto et al. 1984:107) that the two were finally able to meet, marry, and establish a family and business within the Keālia-Kapa‘a area.

Discussion of the natural resources available within Keālia were often accompanied with personal *mo‘olelo*. Among these personal stories were recollections of Crescencia Ponce’s healing gifts. Mr. Ponce’s grandmother, Crescencia, was known throughout Kawaihau District as a religious woman who was especially skilled in matters relating to obstetrics; Mr. Ponce remarked that she often helped childless women conceive, and assisted women during difficult pregnancies. Mr. Ponce also remarked that as a *hilot* (also known as *manghihilot*), Crescencia would gather herbs to utilize in her healing practices (akin to an *albulario* [herbalist]). Mr. Ponce described some of the native vegetation within the *mauka* portions of Keālia Ahupua‘a, but did not assign cultural significance to these resources or link them to any specific cultural practice.

According to Mr. Ponce, *mauka* portions of Keālia, near Kumukumu, were once occupied by homes belonging to plantation camp workers. In discussing plantation camp demographics, Mr. Ponce identified the ethnic groups once living in close proximity to the Petition Area. These groups were the Portuguese, the Filipinos, the Japanese, and the Hawaiians. Regarding the Kumukumu area, Mr. Ponce recalled that chicken fights were once held there. Mr. Ponce identified the chicken fights as a traditional cultural practice introduced by Filipino plantation workers.

Mauka of the plantation camp homes, the landscape primarily consisted of sugarcane. Within these *mauka* lands, Mr. Ponce and his father hunted for pheasants. The bird was eaten and the feathers sent to relatives on O‘ahu; feathers were later used to make *humu papa*. Currently, the fallow sugarcane fields have been converted to pasture land. In discussing current site conditions, Mr. Ponce pointed out that some portions of Keālia Ahupua‘a are being leased by Keālia Farms.

The current Keālia landscape is reflective of the intensive land modifications that occurred as a result of the sugar and pineapple industries of the late nineteenth to early twentieth century. Mr. Ponce added that he had once worked in the pineapple fields as a young man. According to Mr. Ponce, “old timers” consisting of former plantation workers and private workers had acquired 20-acre tracts in the *mauka* portions of Kapahi and Kapa‘a Ahupua‘a, near Kawaihau Road and the former Hawaiian Fruit Packers pineapple cannery; by the 1960s, land use primarily consisted of private or agricultural land holdings. These 20-acre tracts were often cultivated with pineapple; some of the private owners of these tracts—“old timers”—were Hawaiian Fruit Packers employees who sold their fruit back to the cannery (De Silva 2016). Mr. Ponce also recalled how leftover pineapple cuttings were dumped into the waters just north of Keālia Beach.

Mr. Ponce also recalled the historic plantation social hall located on the north side of Kapa‘a Stream, just within the limits of Keālia Ahupua‘a. The hall played host to many plantation workers and their families and was utilized for numerous celebrations and *lū‘au*. Although these celebrations were described as “good fun,” Mr. Ponce noted that by the 1960s the community of Keālia was quite small, with limited “modern” development and rural infrastructure. The only large development within the area was a residential subdivision located immediately southeast of the Petition Area.

In discussing cultural practices within the *makai* portions of Keālia Ahupua‘a, Mr. Ponce recalled accompanying his grandmother, Crescencia Ponce, on fishing trips to Kapa‘a Stream. Kapa‘a Stream remains a freshwater resource for the residents of Keālia. Mr. Ponce commented that this stream is occasionally confused as “Keālia River” by some local residents. This mistake may be attributed to the fact that Kapa‘a Stream forms a portion of the southern boundary of Keālia Ahupua‘a. However, the smaller Keālia Stream does share headwaters with Kapa‘a Stream; both originate from Pu‘u Eu, a peak in the Anahola Mountains.

Mr. Ponce shared that his family would eat whatever was caught from the stream or ocean. When he and his grandmother fished in the stream, their catch would consist of ‘o‘opu, *Pāpio* and *ulua*, once plentiful in the waters off Keālia, were generally caught near the mouth of the stream. Freshwater ‘ōpae were also collected from the stream and used as bait. Mr. Ponce also recalled picking ‘opihi at Keālia Beach.

Mr. Ponce also discussed the cultural practice of *he‘e nalu* (surfing). As a young man, Mr. Ponce surfed near Keālia Beach. In his youth, he and his friends would often spend the entire summer surfing, swimming, and fishing down at Keālia Beach. Summers spent at the once “empty” Keālia Beach, accentuated the rural, “country” feel of the Keālia community.

CSH inquired if Mr. Ponce was aware of any *wahi pana* or cultural sites located within or in close proximity to the Petition Area. Regarding *wahi pana*, Mr. Ponce shared descriptions of Waipahe‘e Falls located far *mauka* of the Petition Area. Described as Kaua‘i’s “Slippery Slide,” Mr. Ponce and his friends would often cool off in its waters after a long day of work in the pineapple fields. He also fondly recalled a song by Braddah Iz entitled “Waipahe‘e Falls,” and recommended that CSH research this *mele*. Mr. Ponce, however, could not recall any cultural sites within the Petition Area and stated that he had never heard of burials being encountered within or in the vicinity of the Petition Area. In general, he supports the project and does not believe it will impact any view planes.

Although Mr. Ponce did not recall any burials being uncovered by either human or natural disturbance within Keālia, Kupuna Valentine Ako was quick to warn about the presence of burials within coastal portions of the Kawaihau District.

CSH interviewed Kupuna Valentine Ako and his son Ivan Ako on 25 May 2017 at his home in Kapa'a, Kaua'i. Kupuna Ako began the interview by sharing his *mana'o* regarding the proposed Keālia Subdivision project. Kupuna Ako shared his concerns about potential subsurface finds, including traditional Hawaiian cultural material (i.e., *imu*) and burials. He recommended that developers and on-site workers be made aware of the possibility of inadvertent finds, and should these finds be encountered, proper protocol be followed. He also stated that should *iwi kūpuna* be inadvertently discovered during ground disturbance, these remains must be reinterred within the *ahupua'a* of Keālia. He made clear that any *iwi kūpuna* discovered within the *ahupua'a* of Keālia should not be removed from the *ahupua'a* of Keālia. Kupuna Ako also recommended that reinterment sites remain inconspicuous, and landscaped with appropriate vegetation.

Years of learning from his *tūtū*, coupled with personal work experience, has allowed Kupuna Ako to develop an understanding of proper burial protocol. He shared with CSH two personal *mo'olelo*. The first of these *mo'olelo* recounted how he had helped recover the bodies of over 10,000 fallen soldiers from the Battle of Guadalcanal in the Solomon Islands. Kupuna Ako's second *mo'olelo* recalled his time working for Mrs. Guslander at the Coco Palms Hotel in neighboring Kapa'a. As a construction supervisor for the hotel, Kupuna Ako oversaw the exhumation and reinterment of 86 individuals. Kupuna Ako noted these individuals were found sitting up and facing east. These individuals were described as being "giant" in size; Kupuna Ako also noted they may not be Hawaiian or Polynesian, as mandibles were not of the rocker form.

Upon discussing the *ahupua'a* of Keālia, Kupuna Ako lamented changes to traditional land management practices within the area. Kupuna Ako reviewed with CSH Hawaiian legal land terms. During this review, Kupuna Ako discussed the process of adverse possession. Kupuna Ako's son, Mr. Ivan Ako also elaborated on land use practices during the height of the plantation era. During this period, Keālia was covered in sugarcane and its lands were privately owned by the plantations. Although the sugar plantation (Makee Sugar Company and later the Lihue Plantation Company) was the recognized landlord, the access and gathering rights of both lineal and cultural descendants remained recognized. Mr. Ponce's testimony, however, indicated access and gathering rights extended beyond individuals of Hawaiian ancestry, and included any tenant of the *ahupua'a*, regardless of birth or race.

The importance of maintaining natural resources, for the perpetuation of cultural practices was noted. Kupuna Ako shared with CSH that he continues to make traditional food items such as *'inamona* and *kūlolo*. For these foods, Kupuna Ako relies on natural materials such as *kukui*, *pa'akai*, and *kalo*.

The interview was concluded by Kupuna Ako noting an additional concern. He recalled to CSH the tragic dam breach at the Kaloko Reservoir that resulted in the deaths of seven individuals. The impact of the dam breach upon the natural environment and marine ecosystem was particularly severe. Kupuna Ako warned that a large reservoir is located *mauka* of the Petition Area. Should the dam at this reservoir breach, both Keālia *waena* and Keālia *kai* would be negatively impacted.

The reservoir in upper Keālia was constructed by the Makee Sugar Company around the end of the nineteenth century. Under the direction of Col. Z.S. Spaulding, the plantation was remarkably

successful, producing nearly 5,000 tons of sugar. To support this agricultural industry, water was brought in via a ditch system that led from “the mountain watershed and emptied into Hōmaikawa’a Stream” (Drennan and Dega 2007:4). In 1934, the Lihue Plantation Company took over the Makee Plantation:

By the time Lihue Plantation acquired Makee, it had 7200 acres in cane with another 2200 acres planted by independent planters, primarily homesteaders. It had a well-developed water collection and delivery system, too, which delivered an average of some 30 mgd and included Anahola, Kaneha and Kapaa ditches. Altogether it had a total reservoir capacity of 700 million gallons. [Wilcox 1996:73]

Mr. Richard Kauai recalled his family’s own dealings with the Makee Plantation (later the Lihue Plantation Company), including the negotiations related to water distribution. CSH interviewed Mr. Kauai on 23 May 2017 at Keālia Farms, Kaua’i. During the interview, Mr. Kauai recalled the relationship between *kama’āina* and the plantation. The relationship was one of trust; *kama’āina* were allowed access to natural and cultural resources. Such deals were generally made with only a “handshake;” signed contracts were deemed unnecessary. Mr. Kauai revealed that a deal was brokered by his father, thereby allowing the Lihue Plantation to move water across the Kauai property on the condition that the Kauai ‘Ohana could also utilize this water to feed their *lo’i kalo*. Mr. Kauai recalled that an *‘auwai* was utilized to feed 14 *lo’i kalo* within his family’s *kuleana* parcel (LCA 8061). During the 1960s, a disagreement occurred between his aunty and the Lihue Plantation. As a result, the plantation broke a flume and pump, and cut off the active flow of water through the Kauai ‘Ohana’s property. Although Mr. Kauai indicated his family’s taro patches were fed via *‘auwai* from Kapa’a Stream, the flume destroyed by the plantation may in fact be SIHP # -3953. This historic property was identified in an AIS report, “Phase I of a Portion of 2,008 Acres in Keālia, Keālia Ahupua’a, Kawaihau District, Island of Kaua’i, Hawai’i [TMK: (4) 4-7-003:002 (Por.) and 4-7-004:001 (Por.)]” (Drennan et al. 2006). SIHP # -3953 consists of

. . . of an earthen ditch (the Kakaukua Ditch) located on the north side of Kapa’a Stream. . . This site is situated immediately adjacent to and north of Kapa’a River/Stream. Site -3953 measures approximately 1,610 m long by 5.0 to 6.0 m wide by 2.0 m, and follows the contour of the slope. It is associated with *kuleana* (farm lots) awards and house lots, from the mid-1800s. This site may be associated with LCA 10148: 1, house lot awarded to Mamaki. . . Site -3953 has been interpreted as an irrigation ditch which appears to have been constructed during the pre-Contact period, but also used during the historic Plantation Era . . . [Drennan et al. 2006:47]

Mr. Kauai’s family continued to farm, although on a much smaller scale, by relying on a spring and small stream (located immediately northeast of their property). Although the sugar plantation negatively impacted their production, *kalo* still remained at the very heart of their agricultural activity.

Kalo continues to figure largely within Keālia. During the interview, Mr. Adam Asquith, owner of Keālia Farms, sat in to observe. Keālia Farms spans 20 acres, with portions of the property planted in *kalo*. Mr. Kauai’s father was responsible for planting *kalo* and making *poi*. He often offered *poi* to *malihini* visiting the Keālia area. His preparation was such that those unaccustomed to the flavor of *poi* soon took a liking to it. The Kauai ‘Ohana historically utilized *kalo* and *poi* as a

staple in their diets. Mr. Kauai still cultivates *kalo* for consumption. Throughout the interview, CSH was reminded of the importance of *kalo* to not only the Kauai ‘Ohana, but to the history of Keālia.

The abundance of *kalo* and food crops made Keālia an ‘*āina momona*. According to Mr. Kauai, Keālia’s significance was derived directly from the presence of *ali‘i*. During the pre-Contact period, *ali‘i* roamed Keahapana Valley. Tracing their lineage to the gods, *ali‘i* were *kapu*, or essentially an extension of the sacred. As overseers of resources, food remained plentiful for all those residing within the *ahupua‘a*. Mr. Kauai also noted that human sacrifice was never practiced within Keahapana Valley, most likely attributable to social “harmony” and equitable distribution of resources. In identifying Keahapana (and Keālia at large) as “sacred,” Mr. Kauai revealed the spiritual connection of *kama‘āina* to both place and past. In this way, both Keahapana Valley and Keālia Ahupua‘a may be understood as *wahi pana*. Other *wahi pana* identified by Mr. Kauai included *mauka* trails leading to traditional Hawaiian habitation areas, Waipahe‘e Falls (Slippery Slides), and a Portuguese earthen oven (see Figure 32). Although non-Hawaiian, the earthen oven is a physical reminder of Keālia’s rich plantation history.

The effect of the sugar plantation upon the social milieu of Keālia has been measured by the degree to which cross-cultural exchange has occurred. Mr. Kauai’s testimony supported the belief that high levels of cross-cultural exchange did occur (as evidenced by material culture, food items, and intermarriage). Mr. Kauai shared personal *mo‘olelo* of his family’s relationship with various other ethnic groups. Ethnic groups that settled in Keālia included Portuguese, Puerto Ricans, and Japanese. The Portuguese taught his mother how to make *pão doce* and *malasada*. Rather than succumb to xenophobia, these multi-ethnic communities frequently interacted and shared with one another. Mr. Kauai fondly remembered plantation-era Keālia as a “happy place.”

Throughout the interview, Mr. Kauai emphasized the importance of Keālia Ahupua‘a and the need to maintain its lands for future generations. The phrases “*nānā ma hope*” and “*nānā ma mua*” were mentioned on multiple occasions, with emphasis on their interconnectivity. The traditions of the past are best preserved by looking forward to the future, to *nā keiki o ka ‘āina*. CSH understood both statements to be best encapsulated by the ‘*ōlelo no‘eau*, “*E mālama ‘ia nā pono o ka ‘āina e nā ‘ōpio*.” Mr. Kauai discussed the need to find dedicated people to work the land, recultivate *kalo*, and “set up something . . . for the children.” Mr. Kauai views the children as “future leaders” and shared with CSH that he hopes consultation will remain ongoing between the landowner and the community. Open dialogue would work to preserve access rights to undeveloped parcels within Keālia Ahupua‘a (as outlined under HRS §7-1), and thus ensure the creation/preservation of a space wherein future generations can engage with their culture in whichever way they choose.

Mr. Timothy Reis also iterated a concern about the ability of future generations to engage with their culture. CSH interviewed Mr. Reis on 21 December 2017 at Keālia Beach Park. Throughout consultation, Mr. Reis made clear that much of his work as a cultural practitioner has been motivated by a desire to preserve and protect cultural resources and cultural practices for future generations. Regarding cultural practices, Mr. Reis identified himself as *lawai‘a* (formerly), *mahi‘ai*, *kālai ki‘i*, and *kālai pōhaku*.

Mr. Reis has maintained familial ties to the *ahupua‘a* of Keālia. Through his grandmother, Ms. Margaret Kauai, Mr. Reis can trace his lineage to the Kauai ‘Ohana. His *wahine*, a daughter of Mr. Kenneth Bray, also maintains connections to the Kauai Line. Throughout discussion with CSH, Mr. Reis illuminated how his work as a *kālai pōhaku* has borne him back to the lands of his ancestors.

Under the guidance of Mr. Kenneth Bray, a *kahuna kālai ki'i*, Mr. Reis first learned how to carve wood. He then went on to learn how to carve stone implements. While engaged in the creation of stone implements, Mr. Reis realized the need to actively employ such tools. Constituting *nā mea makamae*, these tools are essential to understanding traditional Hawaiian foodscapes. In actively utilizing tools such as *pohaku kui'ai*, one must have a supply of natural resources. In this case, taro was an essential component to the practice of making *pa'i'ai* and *poi*. For Mr. Reis and his *'ohana*, *poi* is integral to their diet, identity, and culture. His family's cultivation of *kalo*, solely for the production of *poi*, indexes wider cultural associations of Keālia Ahupua'a. One such cultural association is contained within the Chant of Puna (uttered by Prince Kila to his grandfather Māweke, whilst on a mission to retrieve La'amaikahiki). Mr. Reis made mention of the "name chant" of La'amaikahiki (see the Lahainaluna student version of the chant in Section 1.4.1.5 and the Akina version of the chant in Section 3.4.1). This name chant is significant for Mr. Reis in that it clearly identifies the association between Keahapana and *kalo*.

In recognizing the connection between resources and practice, Mr. Reis began to cultivate *kalo* within this family's lands. Mr. Reis currently farms on lands owned by the Bray, Kau, Kanehoalani, and Ornellas families (TMK: [4] 4-7-003:009). The parcel upon which he works is located approximately 1.64 km east of the Petition Area. This parcel is a *kuleana* (LCA 8061), originally awarded to Waianae, the husband of Hainau. Within the Native Register, Hainau claimed four *lo'i kalo*, a *kula* adjoining the *lo'i*, four *māla* of *noni*, three *māla* of *wauke*, and two house sites. Mr. Reis still cultivates *kalo* and *noni* within the parcel. His "work" on the land is not limited to just agriculture. He shapes adzes and stone tools on the property as well.

While elaborating on his cultural practices, Mr. Reis raised concerns about potential impacts to the aquifer and the *pūnāwai*. Supplying water to his crops is of the utmost concern to Mr. Reis. He went on to describe a *pūnāwai* located within their property. Mr. Reis did not identify the *pūnāwai* by a specific name and went on to note that such knowledge was not provided to him. Although known to be located within a corner of the property known as "Johanna's Corner," the *pūnāwai* no longer remains in its original location. According to Mr. Reis, the *mo'olelo* surrounding the spring relates how Mr. Bray was shown the spring by his mother, Johanna Kau, when he was a young boy. Upon entering his late teens, Mr. Bray attempted to locate the spring again, but it was no longer there. Mr. Reis described the area as a "swamp," largely overgrown with *hau*. Besides *hau*, a large monkey pod tree was also located nearby. Mr. Reis believes the roots of the monkey pod have disrupted the original spring source:

But what I believe has happened is that the monkey pod's roots have disrupted the spring that was originally there, and it's either blocked it in some areas, or the spring is either following the roots along different routes. But there is an abundance of water that is coming out of that corner of the property and that's one of the reasons why my woman's grandmother chose that corner.

Nonetheless, water remains abundant within that corner of the property. The abundance of water may be attributable to soil type. Soils contained within the parcel consist of Hanalei silty clay, 0 to 2% slopes (HnA). Generally confined to stream bottoms and flood plains, this soil is "excellent for the production of wetland crops" (USDA SSURGO 2001). "The water table is seasonal in most areas and ranges from about 2 to 5 feet in depth and saturated as shallow as the surface" (USDA SSURGO 2001). According to Foote et al. (1972):

Permeability is moderate. Runoff is very slow, and the erosion hazard is no more than slight. The available moisture capacity is about 2.1 inches per foot of soil. Roots penetrate to the water table. Flooding is a hazard. [Foote et al: 1972:38]

Mr. Reis went on to point out the location of the spring on a 2011 USGS Orthoimagery Aerial Photograph overlaid with LCA data (see Figure 46). In describing the spring and its environs, Mr. Reis discussed the impact of feral animal activity over the years. The spring has been trampled and in-filled by wild pigs for years. Only recently, however, he dug the spring completely out (approximately “four feet down”), “rocked the bottoms and rocked the sides,” and installed a metal culvert.

There is usually 2 ft of water within the approximate 2 ½ to 3-ft-wide culvert. A small hole, drilled into the side of the culvert, allows water to drain into the *lo'i*. CSH was unable to visit the spring, nor was provided pictures of the spring. CSH inquired into seasonal water fluctuations. Because Mr. Reis has only recently established the culvert, he was unable to comment on water level patterns over the long term. He did note, however, that the spring has been impacted by localized ground disturbing activity. His uncle had once dug a trench near the spring: “My uncle, who controls the property, has done some excavation on the property, and on two occasions he has dropped the level of the spring by ripping a big trench on his side, which filled with water. . . it lowered my spring. . .”

In raising his concerns about impacts to the spring and his cultural practices, Mr. Reis provided estimates on the amount of water to be drawn from the proposed well site. He calculated that approximately 24 million gallons of water a year will be drawn to support the proposed subdivision. He is particularly concerned about the volume of water that will be drawn from the well site (identified by Mr. Reis on Figure 46). It is understood that a well can be drilled into the aquifer and water drawn out; however, pumping too much water faster than the rate of recharge may result in an aquifer yielding less water and potentially running dry. Ground water, as a public trust within the State of Hawai'i, also constitutes a cultural resource. CSH noted Mr. Reis' concern for this cultural resource. However, as the hydrogeology of Keālia (specifically, Keahapana Valley) remains outside the scope of the current CIA, CSH was unable to comment on potential negative impacts to groundwater resources during the interview. However, CSH did inform Mr. Reis (via email) that, “. . . an engineering report, evaluating the existing water system and proposed water system, is being drafted. This report will be included within the Draft EIS, available for review through the OEQC website.”

CSH inquired if Mr. Reis had any recommendations for mitigative measures. Mr. Reis commented that he believes it would be too late to remedy the situation once the proposed subdivision is constructed.

Mr. Reis is also concerned about preserving the *mo'olelo* of Keālia as he identifies it as an aspect of his genealogy. As he shared with CSH, “that's our *mo'olelo*, that's our genealogy.” The connections between *mo'olelo* and genealogy are established aspects of traditional thought (Pukui and Elbert 1986:253; Wianecki 2012). Essentially, Mr. Reis underscored the interconnectivity of *mo'olelo* and one's *mo'okū'auhau*.

Mr. Reis also understands Keālia Ahupua'a as a culturally and historically rich *wahi pana*, well suited to supporting a Hawaiian cultural education system. Mr. Reis also went on to point out that culturally significant *pōhaku* may be contained within the Petition Area. Mr. Reis recommended

that GPR be utilized prior to ground disturbance in an effort to survey the Petition Area for potential subsurface cultural deposits. Mr. Reis also recommended that education and cultural sensitivity training be incorporated within pre-construction planning. In addition to this training, a field guide should be generated in conjunction with stakeholders and descendants of Keālia, to be utilized in the field by construction workers and archaeological monitors.

Due to concerns expressed by the Wailua-Kapa‘a Neighborhood Association regarding the documentation of Keālia’s plantation history during the 1950s, 1960s, and 1970s, CSH reinitiated community outreach with individuals who once maintained connections to Keālia Camp. Among those individuals identified were Mr. Ricardo Banquel and Mrs. Magnolia Banquel. CSH interviewed Mr. Ricardo Banquel and Mrs. Magnolia Banquel on 1 September 2018 at Keālia Beach Park. Mr. Banquel began the interview by sharing his memories of Kumukumu Camp. Located just below Keālia Kai, Kumukumu Camp housed about 10-15 people during the 1950s. The children living withIN Kumukumu Camp (and throughout the disparate camps under Makee Plantation management) were sent to Kapa‘a School. Both Mr. and Mrs. Banquel also recalled the ethnicities of the various plantation camp residents, noting that Keālia Camp was primarily composed of Filipino and Japanese residents. Other ethnic groups represented in the camp included Hawaiians and Portuguese. The Portuguese were often employed as *luna* within the plantation.

In general, Mr. Banquel recalled a simple, yet, fulfilled childhood. Because plantation wages were low, residents of the camps often had to be resourceful and inventive. As a child, Mr. Banquel remembered making his own toys from materials and scraps that could be salvaged from around the camp. Adults were also required to be creative, oftentimes availing themselves of Keālia’s natural resources as a means of supplementing their diets. Although, Mr. Banquel’s father worked as a brakeman; his father’s pay was not commensurate with the risk involved. As a result, the Banquel family had to supplement their meals with fresh-caught fish and homegrown vegetables. As Mrs. Banquel made clear, many of the residents utilized their income for essential expenses; when this income could no longer be stretched, residents then “lived off the land.”

Mr. Banquel identified the varieties of fish caught and consumed by the Banquel ‘Ohana, including *nenue*, *kala*, and *moi*. His father utilized trails to access fishing areas; one of the fishing areas identified was “14 Crack by Anahola.” Tilapia was also caught in “Keālia River.” However, Mr. Banquel stopped fishing in the river upon learning that animal feces was being carried downstream from piggerys located in the *mauka* portions of the *ahupua‘a*. Vegetables grown by the Banquel ‘Ohana included beans, eggplant, onion, cabbage, and *malunggay*. Animals raised by the Banquel ‘Ohana included ducks, chickens, fighting roosters, rabbits, and pigs. Upon discussion of fighting roosters, Mr. and Mrs. Banquel recalled the cultural practice of “cock fighting.” Once again, Mr. and Mrs. Banquel iterated that the practice was also another way to supplement one’s income. Issues related to income, or the lack of livable wages, was a theme touched upon throughout Mr. and Mrs. Banquel’s interview. As many histories of Hawai‘i’s sugar plantation workers recall, it took nearly 100 years to build a strong labor movement. The success of the labor movement in Hawai‘i may be attributable to many of the shared values and beliefs of Hawai‘i’s working class people, regardless of race or ethnicity. As Mrs. Banquel explained, it was difficult to pinpoint and focus on differences (i.e., racial), especially when so many residents of the camp had been brought up in the same way, with the same values. It may be inferred that many of the camp’s residents shared numerous values, values underpinned by a love for family, community,

and *‘āina*. Through their shared values and shared struggles, residents of the plantation camps, like Keālia Camp, were able to contribute to the creation of Hawai‘i’s unique *kama ‘āina* culture.

Mr. Banquel elaborated more upon the influence of the plantation upon camp residents’ lives. This influence was especially visible throughout the landscape and by way of the built environment. Prominent features of the built environment included a plantation store, post office, movie theater, social hall, service station, park, and dispensary. The features of Keālia’s plantation town appeared to follow a prescribed formula, one which required the plantation to service the basic needs of its workers while ensuring control and influence over its interests. Despite the strict control and influence of the plantations, workers fostered close relationships with one another. Mr. Banquel recalled that everyone mostly got along and cooperated with one another. Weddings and birthdays were celebrated at the social hall.

CSH further inquired into the landscape of Keālia, and the location of the various plantation camps. Mr. Banquel could not recall Amberry Camp, but did point out the location for Kumukumu Camp. Homes within the camps were single-wall construction, although Mrs. Banquel also recalled that the homes were also surprisingly large. When Mrs. Banquel moved to Keālia Camp in the 1970s, she resided within a four-bedroom home. Upon moving to Keālia, she learned of the *obake* stories associated with the area. Most prominent among these tales were descriptions of the night marchers. Mr. Banquel recalled that the night marcher path ran directly through his home, and that every night the sound of Hawaiian music (drumming, chanting) could be heard. When the Banquels had finally moved from their home, his neighbor later informed him that a “celebration” had occurred in their home on the night of their move. On several occasions, Mr. Banquel’s brother attempted to photograph the event, however, the photos would never properly develop. Mr. Banquel identified the night marcher path as stretching from the ocean to Waipahe’e, following an alignment through Keālia Camp.

The Banquels’ move from Keālia was not unique for the period. Beginning in the 1930s, residents of Keālia Camp had begun moving to locations outside Keālia and closer to the main operations of Lihue Plantation. By the time of Mrs. Banquel’s arrival in Keālia in the 1970s, she recalled that most of the residents appeared to be retirees, most likely former workers for the Makee Sugar Company. With the transfer of the Makee Sugar Company to Lihue Plantation, and Lihue Plantation’s subsequent decision to phase out operations in Keālia, residents were provided the option to move to Hanamā‘ulu. Still under employment with Lihue Plantation, Mr. Banquel and his *‘ohana* made the decision to move from Keālia to Hanamā‘ulu, and in so doing, became first time home owners.

Section 7 Traditional Cultural Practices

Timothy R. Pauketat succinctly describes the importance of traditions, especially in regard to the active manifestation of one’s culture or aspects thereof. According to Pauketat,

People have always had traditions, practiced traditions, resisted traditions, or created traditions . . . Power, plurality, and human agency are all a part of how traditions come about. Traditions do not simply exist without people and their struggles involved every step of the way. [Pauketat 2001:1]

It is understood that traditional practices are developed within the group, in this case, within the Hawaiian culture. These traditions are meant to mark or represent aspects of Hawaiian culture that have been practiced since ancient times. As with most human constructs, traditions are evolving and prone to change resulting from multiple influences, including modernization as well as other cultures. It is well known that within Hawai‘i, a “broader ‘local’ multicultural perspective exists” (Kawelu 2015:3) While this “local” multicultural aspect is deservedly celebrated, it must be noted that it has often come into contact with “traditional Hawaiian culture.” This contact between cultures and traditions has undoubtedly resulted in numerous cultural entanglements. These cultural entanglements have prompted questions regarding the legitimacy of newly evolved traditional practices. The influences of “local” culture are well noted throughout this section and understood to represent survivance or “the active sense of presence, the continuance of native stories, not a mere reaction, or a survivable name. Native survivance stories are renunciations of dominance, tragedy and victimry” (Vizenor 1999:vii). Acknowledgement of these “local” influences helps inform nuanced understandings of entanglement and of a “living [Hawaiian] contemporary culture” (Kawelu 2015:3). This section strives to articulate traditional Hawaiian cultural practices as were practiced within the *ahupua‘a* in ancient times, and the aspects of these traditional practices that continue to be practiced today; however, this section also challenges “tropes of authenticity” (Cipolla 2013) and acknowledges the multicultural influences and entanglements that may “change” or “create” a tradition.

This section integrates information from Section 1.4 and Sections 3–6 to further examine cultural resources and practices, both past and ongoing, identified within or in proximity to the Petition Area as well as within or in proximity to the sewer line installation project area. Such an analysis is conducted in order to determine whether the proposed undertaking will potentially affect or physically alter cultural resources, practices, or beliefs, isolate cultural resources, practices, or beliefs from their setting, and/or introduce elements which may alter the setting in which cultural practices take place (OEQC 2012:13). Although, this analysis is designed to identify and describe cultural resources, practices, and beliefs located within the “potentially affected area” (OEQC 2012:12), interviewees did not identify specific traditional cultural practices, either past or ongoing, within the Petition Area. Interviewees also did not identify specific cultural resources within the Petition Area. However, interviewees did indicate there is a potential for subsurface cultural deposits within the Petition Area. Additionally, one interviewee articulated a concern about potential impacts to ground water resources, which could in turn, negatively impact his cultural practices. Regarding this concern, HHF provided the following information:

The Proposed Action has estimated water demand of 118,000 gallons per day (gpd), with maximum daily demand of 17,250 gpd. [The] existing water service agreement

with Kealia Water Company allows for drawing up to 300,000 gpd. Two existing wells will be used. The existing and proposed pumpage is well within the pump capacity approved by the DLNR Commission on Water Resource Management.

However, as these concerns relate to potential impacts to the environmental welfare of the community, they lay beyond the purview of the current CIA. The results of an engineering report evaluating potential impacts of the proposed project's water system on the community, and mitigative measures should be included in the Final Environmental Impact Statement (FEIS). Excerpts from interviews are incorporated throughout this section where applicable.

7.1 Gathering of Plant and Food Resources

Located on the northeast side of the island of Kaua'i, the *ahupua'a* of Keālia is a fairly large alluvial plain with irregularly shaped gulches and small valleys in the uplands, through which small tributary streams run from the major Kapa'a Stream. These streams empty into the ocean at the southern border of the *ahupua'a*. Kapa'a can be characterized as fairly flat, with irregularly shaped gulches and small valleys in the uplands through which small tributary streams run. The lowlands of Kapa'a are typified by a large (approximately 170-acre) swamp area that has been mostly in-filled in modern times (Handy and Handy 1972:394, 423). Traditionally, however, settlement and agricultural activity would have been constrained to a "cigar-shaped sliver of land," as it was "the only arable hard ground by the shoreline" (Hulsman et al. 2015:7).

Traditional sources indicate that the Hā'ao, Kea, and Ho'olua rains are associated with Kapa'a (and more generally, the *moku* of Kawaihau). Located on the windward side of the island and subject to prevailing winds, rainfall is considered plentiful for the region. However, the lack of traditional rain names associated with Keālia Ahupua'a is indicative of historic environmental conditions within the area. Handy and Handy (1972) attest to these drought-like conditions, recalling Keālia as "rather dry" (Handy 1972:423). Due to these conditions, *maka'āinana* living within the *ahupua'a* were forced to modify nearby freshwater resources. The modification of freshwater resources was not limited to the Keālia area; sometime after AD 1100, complex agricultural irrigation systems were developed across the island chain. The Keālia landscape was altered by early Hawaiians with the construction of well-engineered lateral ditches (State of Hawai'i Commission on Water Resource Management 1993:9). One such ditch was documented by Wendall Clark Bennett in 1931. Bennett describes the ditch, located just south of Keālia Valley, as

. . . about 6 feet in width and of varying depths. . . a deep cut about 100 feet long made through a low ridge alongside of which the ditch ran. The lands to be irrigated were on the other side of this ridge and so the cut was made to a depth of 10 or 15 feet through loose rock and subsoil. [Bennett 1971:n.p.]

Labor for such large scale or intensive agricultural or construction projects was provided by the *maka'āinana*. Keālia Ahupua'a was "home to a large, settled population of farmers and fishermen" (these individuals were the literal backbone of the *maka'āinana*), "who exploited the coastal areas abundant natural resources, as well as the land that contained nutrient rich soil immediately inland and *mauka* (upland) from the coasts" (Drennen et al. 2007:12).

Historic documents from the late eighteenth century are amongst the first written observations of Keālia and Kapa'a. Captain George Vancouver, sailing off the east coast of Kaua'i during his third voyage to the Hawaiian Islands in 1793, described the area in detail.

This part seemed to be very well watered, as three other rapid small streams were observed to flow into the sea within the limits above mentioned. This portion of Attowai, the most fertile and pleasant district of the island, is the principal residence of the king, or, in his absence, of the superior chief, who generally takes up his abode in an extensive village, about a league to the southward of the north-east point of the island. [Vancouver 1798:221–222]

His written observations provide key insight into the potential scope of resource extraction occurring in the Puna (Kawaihau) District during the early post-Contact period. Both *lo'i kalo* and *kula* would have been required to support the “extensive village” observed by Vancouver. Although not specifically named, the village identified by Vancouver may have been located somewhere along the northeast coast, an area spanning from Keālia to Moloa'a Bay. A well-functioning agricultural and aquacultural system would have been essential not only for Keālia and Kapa'a, but for the entire northeast portion of Puna (Kawaihau) Moku as well.

The production (and consumption) of *kalo* or taro was vitally important to Keālia Ahupua'a. The reliance upon this staple crop is evidenced by the remnants of *'auwai* within the *ahupua'a* as well as the large number of *lo'i kalo* identified within LCA records. According to these records, the majority of land claims were made on lands adjacent to Kapa'a Stream (also known as Keālia River). Other *kuleana* lands were situated adjacent to smaller streams or *'auwai* north of Keālia River. Sixty-seven cultivated *lo'i kalo* were claimed as *kuleana*; within the claims, numerous references were made to uncultivated *lo'i* as well as to the boundaries of cultivated *lo'i* that were not claimed. Both physical and documentary evidence attest to the importance of *kalo* to communities of Native Hawaiians living in Keālia during the mid-nineteenth century.

Captain James King, visiting Hawai'i in 1779, noted that “the natives of these islands are, in general, above the middle size and well made; they walk very gracefully, run nimbly and are capable of bearing great fatigue” (Shintani 1993:10). Accordingly, the high level of physical activity and physical fitness described by Captain King was a normal part of Hawaiian life, and largely attributable to the availability of plant and food resources such as *kalo*, *'uala*, *niu*, *mai'a*, *limu* (seaweed), and *i'a* (fish). Besides the observed contributions to stamina and health, *kalo* was also a revered staple food, believed to have derived from the first-born son of Wakea and Papa.

... the supreme god Kane 'in the form of Wakea (a form associated with the earth) produced two sequential offspring: the first became *kalo* (taro) plant, the second became Hāloa, the ancestor of man ... thus, in kinship terms, the taro is the elder brother and the senior branch of the family tree, mankind belongs to the junior branch, stemming from the younger brother.' [Trask 2012:75]

Kalo is still cultivated in portions of Keālia today. Kupuna Valentine Ako also shared that he relies on *kalo* to make *kūlolo*. Mr. Richard Kauai also continues to cultivate *kalo* within his family's *kuleana* parcel. During consultation with CSH, Mr. Kauai was picking up *huli* from Mr. Adam Asquith, the owner of Keālia Farms. In discussing the planting of *kalo*, Mr. Kauai recalled that his father was a skilled *mahi'ai* and *lawai'a*, dedicated to continuing a long tradition of farming and fishing within the *ahupua'a*. He shared that his father would plant according to *kaulana mahina*

(the Hawaiian lunar calendar). The utilization of *kaulana mahina* signifies a certain level of expertise, of skilled knowledge connected to place. In this case, Mr. Kauai's ancestors, as *kama'āina* or *hoa'āina* of Keālia Ahupua'a, were highly attuned to their environment.

Mr. Kauai's *kuleana* parcel, LCA 8061 (1.64 km east of the Petition Area), is also utilized by Mr. Tim Reis for the cultivation of plant and food resources. Mr. Reis currently cultivates the "Keahapana" variety of *kalo* (possibly an heirloom varietal), in addition to *mai'a*, *noni*, cacao, cinnamon, and heliconia. The *kalo* and *noni* grown by Mr. Reis is particularly significant. These native plants were amongst the original crops cultivated by Hainau and Waianae, the original claimants of LCA 8061. Ground water via a *pūnāwai* is a valuable resource currently utilized by Mr. Reis to irrigate his *lo'i kalo*. Although, this *pūnāwai* remains approximately 121 m northeast of Kapa'a Stream (Keālia River), within the *'ili* of Kapuna, Mr. Reis is concerned that the pumping of fresh water for the proposed subdivision will tax the aquifer, eventually impacting his supply of ground water. *Kuleana* parcels within Keahapana Valley are also provided with water by various other means (i.e., fog drip).

Within the Petition Area soils consist of the Ioleau and Lihue Series, and generally suited for irrigated sugarcane, pasture, and pineapple. In contrast, soils near LCA 8061 and LCA 3413 are of the Hanalei, Kolokolo, Ioleau, and Lihue Series. Notably, Hanalei soils are used in the cultivation of *kalo*. They consist of "somewhat poorly drained to poorly drained soils on bottom lands" (Foote et al. 1972:38). The water table is seasonal in most areas, encountered anywhere between two to five feet below surface; the water table can be "saturated as shallow as the surface" (USDA SSURGO 2001). Water for crops is also available via fog drip. In discussing the meaning of Keahapana, Mr. Reis revealed that it translates to "the white breath," and is a direct reference to the fog that blankets the valley in the early morning hours. Generally, there is approximately 0.05 to 0.5 g of liquid water in a cubic meter of fog.

Soils within the northern portion of the sewer line installation project area include the Lihue Series and Rough broken land. Rough Broken Land is primarily used "for watershed and wildlife habitat. In places it is used also for pasture and woodland" (Foote et al. 1972:119). Soils within the central to southern portion of the sewer line installation project area include the Mokuleia and Lihue Series and Badland. Soils of the Mokuleia Series are also for sugarcane, truck crops, and pasture. Badland primarily occurs on Kaua'i and "is used for water supply and wildlife habitat. Ironwood trees have been planted in small areas" (Foote et al. 1972:28).

Traditional Hawaiian diets were sometimes supplemented with land-based protein. Only three animals were traditional domesticates within ancient Hawai'i; these were the *pua'a*, *'ilio*, and *moa*. All three of these animals were introduced by Polynesian wayfinders to the islands, and later raised by the *maka'āinana* as food sources. These animals also figured largely within religious practice as they were deemed acceptable offerings for the gods (Hommon 2013:78). By the mid-nineteenth century, *pua'a* was the only traditional domesticate still being raised for consumption within Keālia. Māhele documents from the period indicate the *kama'āina* of Keālia were raising turkeys and goats as well.

From the ocean, the *kama'āina* of Keālia could rely on a variety of "molluscs, crustaceans, and echinoderms" (Edmondson 1946:7) as an additional source of protein. Interviewee Kenneth Ponce also recalled collecting *'opihi* along the Keālia coastline. Ivan Ako, son of Kupuna Valentine Ako, noted to CSH that they once gathered *limu kohu*. Further south in Kapa'a, the offshore reef allowed

for spear fishing and *lamalama*. Both *he'e* (octopus) and *limu* could be gathered in near shore waters.

Animal protein sources such as meat and fish were flavored with either salt or relishes such as *'inamona*. Kupuna Valentine Ako still relies on *kukui* and *pa'akai* to make *'inamona*, however, he did not disclose from where or from whom he gathers his ingredients. Keālia, literally translated as “the salt encrusted,” was noted for its salt ponds. Mr. Kauī recalled this cultural association, sharing that,

Then they come down to Keālia and make salt, where that landing was. Because when the waves come, it settles, and that's how they get their salt. Big salt bed here was, plenty people don't know that. But we know that.

The salt was pure white. Really, really salty. Because it's from the ocean yeah. It's not like that Hanapēpē one, it's salty but not as salty as this one. . .

Large waves would often flood the coastal flats of Keālia, resulting in the formation of shallow ponds. After a time, the water would evaporate, leaving a thin layer of white salt. None of the interviewees identified the gathering of *pa'akai* as an ongoing cultural practice; currently, coastal Keālia is primarily utilized for recreation. However, based upon a Keālia reminiscence submitted by the Kaua'i Historical Society, it appears that salt was still being gathered from Keālia at least into the 1940s, and then utilized to preserve meats. According to John Clark, “salt from the deeper pockets was gathered to satisfy a variety of domestic, medicinal, and ceremonial needs” (Clark 1990:11).

Another noteworthy resource in Keālia were *loko 'ia*. Four fishponds were mentioned within Māhele documents. Unfortunately, only two of these ponds, Loko Akiana (LCA 8060) and Loko Waipunaula (LCA 8833) have been explicitly identified. Loko Akiana (LCA 8060) is believed to have been in the *'ili* of Akiana, and Loko Waipunaula (LCA 8833) is believed to have been in the *'ili* of Waipunaula. Freshwater resources were not only raised, but also caught in the rivers and streams. A *kahe 'o'opu* was claimed by one individual (LCA 2381), but was not awarded. Mr. Ponce also recalled fishing in the Kapa'a Stream (Keālia River), over which the sewer line installation project area crosses. Joining his grandmother on fishing expeditions, they would haul in *'o'opu* and *'ōpae*. Near the mouth of the stream, *pāpio* and *ulua* were also caught. Mr. Ricardo Banquel also recalled fishing practices within Keālia. Fishing, undertaken by recent immigrants under the employ of the sugar plantations, was a way to supplement diets. Mrs. Magnolia Banquel recalled that plantation wages were often low, and as a result, workers had to learn to live off the land. Mr. Banquel's father would supplement his family's meals with various fish, including *nenuē*, *kala*, *moi*, and tilapia. According to a reminiscence of plantation life during the 1940s and 1950s, plantation workers also supplemented their diets by gathering *opihi* and *pipipi* from Keālia's shoreline. Both freshwater and marine resources were utilized to supplement the diets of both Kapa'a and Keālia's *kama 'āina* families.

Food also played a vital role in the treatment of the sick. For Keālia, there exists a *mo'olelo* that speaks to this concept. When visiting the *ahupua'a* of Keālia, both Hi'iaka and Wahine'ōma'o cook *lū'au* to help feed, and thereby heal, an old man and his sick wife. Malo additionally notes that when a *kahuna lapa'au* was first sought for help, he would inquire into the disease and then proceed to restrict certain articles of food from the sick man (Malo 1951:107). Once the patient agreed to follow this dietary regimen, the *kahuna* would then administer the treatment (Malo

1951:107 in Shintani 1993:35). *Mo'olelo* also illuminate on the ways one could acquire *mana* (power) through a particular natural resource. Accounts of the sacred banana grove at Ka'ea, recall how the *kupua* Palila consumed only bananas in his formative years and acquired preternatural strength. References to valued natural resources can also be found in *oli*, as evidenced in a chant recited by Lonoikamakahiki describing the *kalukalu* grass of Kapa'a. Previous ethnographic research has also documented how the roots of this grass could be used as a famine food.

Specific references to food or medicinal plant resources can also be located within Māhele documents. The original claimant of LCA 8061 (a kuleana parcel currently associated with the Kauai, Bray, and Reis 'Ohana), Hainau, identified a grove of *noni* within her lands. *Noni* is used for the treatment of boils, bruises, sores, wounds, broken bones, and concussions (Abbott 1992:99–100). It has gained popularity as a curative tonic within recent years. *Wauke* was also identified within LCA 8061. Although generally used in making *kapa* and cordage, the plant can be used in the treatment of 'ea (respiratory illness) and *pa'ao'ao* (general ailment) in adults (Chun 1994:253–254 cited in Bishop Museum 2018). CSH observed culturally significant *lā'au* (plants; also medicine) along Keālia Beach. These resources consist of *naupaka kahakai*, *kauna'oa*, *pōhuehue*, and *niu*. During consultation, no comments were provided regarding the utilization of particular plants for *lā'au lapa'au*, nor the presence of culturally significant *lā'au* within the Petition Area.

Following the overturning of the 'ai kapu (literally “sacred eating;” under this code of conduct men and women could not share meals together and certain foods were forbidden to women), the types of food sources, and the ways in which they were prepared and consumed (and by whom) was significantly altered. Western-style hunting of introduced game animals was adopted during the early nineteenth century. Over the next century and a half, western-style hunting would become increasingly relied upon as a means to supplement diets, especially for low-income or working class *kama'āina* families. Interviewee Kenneth Ponce shared that he once hunted pheasant with his father in the lands *mauka* of the Petition Area. He commented that the area was entirely covered in sugarcane, but by utilizing existing cane haul roads they were able to reach the very base of the mountains. The pheasants were consumed and/or mounted by his father. Feathers from the pheasants were also sent to Mr. Ponce's family on O'ahu for the creation of *humu papa*. In the Keālia reminiscence written by a daughter of John F. Barretto (a train operator for the Makee and Lihue Plantations), pig hunting also occurred within the *mauka* portions of the *ahupua'a*. Although, pig hunting is not considered a traditional Hawaiian cultural practice, it is a respected practice within *kama'āina* culture. Pheasants and wild pigs may remain in the *mauka* portions of either Kapa'a and/or Keālia.

7.2 Religious Practice and Burials

Traditionally, prior to any undertaking, prayers were offered to the multitude of ancestor gods and spirits, to *akua*, *'aumākua*, and *kupua* alike. As Mary Kawena Pukui notes, “Long before the missionaries came, Hawaiians were *haipule*, religious. Everything they did, they did with prayer” (Pukui et al. 1972:121). The offering of prayer is especially evident within a *mo'olelo* about Hi'iaka and Wahine'ōma'o in Keālia (Wichman 2001). In this legend, Hi'iaka and Wahine'ōma'o help a man named Kalalea cook *lū'au* to feed his sick wife. Hi'iaka proceeds to heal the sick wife as well. In the Wichman (2001) version of the tale, Hi'iaka offers her chant to Kānekapolei, asking for the god to “pray enter, and heal, and let live Ko'ana-wai, the ailing woman of Ke-ālia” (Wichman 2001:95). Formal prayers consisting of “composed, memorized, handed-down chants”

were often associated with public ceremonies involving both the *ali* 'i and the priestly class. Those belonging to the royal and priestly classes prayed before *kuahu* (altars) and *heiau* (Pukui et al. 1972:123). According to Pukui et al. (1972:123), “these prayers were often accompanied by sacrifices to the gods, [and] embellished by ritual. . .”

It was at the *heiau*, the sacred temples, that sacrifices, or offerings were made. Several *heiau* are believed to have been located in either Kapa'a or Keālia Ahupua'a including Pahua Heiau, Kumalae Heiau, Waiehumalama Heiau, Napuupaakai Heiau, Noemakalii Heiau, Puukoa Heiau, Piouka Heiau, Una Heiau, Mano Heiau, and Makanalimu Heiau (HEN 1885:214–216). Two *heiau* in Kapa'a, Kuahiahi and Kaluluomoikeha, correlate with *wahi pana* so general locations are somewhat known. Kaluluomoikeha is thought to be the general area near the Mō'īkeha Canal and the present day Hotel Coral Reef Resort. Mailehuna and Pueo, identified by Lahainaluna students in the late nineteenth century (HEN 1885:214–216), were located within Kapa'a Ahupua'a.

In addition to those *heiau* documented by Lahainaluna students, Thrum makes note of Kawelomamaia Heiau (Site 112) in Keālia (Bennett 1976:129; Thrum 1907:41). Bennett locates this *heiau* in the *makai* portion of Keālia Ahupua'a, “where the Kawelomamaia stream runs into the sea north of Keālia” (Bennett 1976:129); Thrum identifies this site as being within the Hōmaikawa'a area. Thrum additionally notes this *heiau* is of the *po'okanaka* class. *Heiau* classified as *po'okanaka* (literally translated as “skull”) were used ceremoniously for human sacrifices (Stokes 1991:24). Quite notably, the Kawelomamaia Heiau is described as being associated with Kawelo, and dedicated to his shark god.

In the *mo'olelo* of Kawelomahamahaia, a shark man is said to patrol the waters between Keālia and Wailua, eating any child that dares to swim out in this area. The shark man is finally caught by the Puna residents and put to death. However, Beckwith notes that this shark man, “is identified with the famous chief Kawelomahamahaia (Kawelo with fins like a fish), a grandfather of Kawelo and descended from Mano-ka-lani-po, who was believed to become a shark god (*akua mano*) at death” (Beckwith 1970:141).

The notion of the “man-eater” or *niuhi* is invoked within another *mo'olelo* of Keālia. Within the *mo'olelo* of 'A'aka the *menehune*, 'Āhihi Point and Hōmaikawa'a figure prominently. While swimming at 'Āhihi Point, 'A'aka has a nearly fatal encounter with a man-eating shark (Wichman 1998). In the Rice (1977) version of the story, 'A'aka goes swimming with other *menehune* at Hōmaikawa'a. While bathing, they are nearly caught by the shark. The *menehune* swim ashore, and continue fleeing inland toward the plain known as 'A'aka. Led by the *menehune* 'A'aka, the group devises a plan to catch the shark. The *menehune* succeed in capturing the shark, dragging it to the reef at 'Aliomanu, near Anahola.

The shark was one of the many animal forms (*kinolau*) that '*aumākua*, or ancestor gods, could take. However, on the Island of Kaua'i, '*aumākua* did not assume the form of sharks (Pukui and Elbert 1986:32). The '*aumākua* was a revered intercessor, providing the “closest man-with-god relationship” (Pukui et al. 1972:123). As Pukui (1972) also notes:

For these deities had once been living beings; they were long departed ancestors become gods. From the long corridors of time the '*aumākua* watched their descendants. And though they judged and punished, they were also special advocates and protectors. For '*ohana* (family) loyalty continued into eternity.
[Pukui 1972:123]

As a protective entity, *'aumākua* were believed to accompany the *huaka'i pō* or *'oi'o* as well. The *'aumākua* marched alongside the spirits of chiefs, chiefesses, priests, and warriors "to protect any of the living children who might be caught in the path of the march" (Taylor 1995:45). During community consultation, *kupuna* and *kumu hula* Beverly Muraoka identified a night marcher path in the vicinity of the project area. According to Kupuna Muraoka, the night marcher's path stretches from Mt. Makaleha to Keālia Beach. According to interviewee Mr. Ricardo Banquel, a former resident of Kumukumu and Keālia Camps, the night marchers would take a path from the sea towards the mountains, heading in the direction of Waipahe'e. Mr. Banquel recalled that the night marcher path once cut through his home in Keālia Camp. Every night, "beautiful Hawaiian music" could be heard echoing from the Waipahe'e area. On certain nights, however, the night marchers would come "stomping" through his home to head up into the mountains.

It has been noted that the dimly lit, last four nights of the lunar phase, the nights of Kāne, Lono, Maui, and Muku, were when the spirits marched. Martha Beckwith writes that marchers were seen only on the sacred nights of Kū, Lono, Kāne, and Kanaloa (Beckwith 1970:164). There were two types of spirit processions; for the processions of the gods, "the marchers move five abreast with five torches burning red between the ranks, and without music save that of the voice raised in chant" (Beckwith 1970:164). The processions of chiefs and *'aumākua*, however, were conducted in silence, or to the accompaniment of drum, nose-flute, and chanting (Beckwith 1970:164). According to Beckwith, to meet a procession of the former, was very dangerous.

‘O-ia’ (let him be pierced) is the cry of the leader and if no relative among the dead or none of his *aumakua* is present to protect him, a ghostly spearman will strike him dead. The wise thing to do is to ‘remove all clothing and turn face up and feign sleep.’ [Beckwith 1970:164]

Upon death, the spirit of the recently deceased was said to leave the body and then proceed toward a leaping place (Handy and Pukui 1977:146). It was in fact the *'aumākua* that guided the spirit to and over the *leina* (leaping place) for its leap into Pō, the world of the "unseen" (Handy and Pukui 1977:146). The body of the deceased, however, was attended to by the living. Burial was done at night, "... so that by morning the burial was accomplished" (Malo 1951:97).

Burials have been encountered in the coastal areas of both Keālia and Kapa'a Ahupua'a. Geomorphic models of the coastal zone of East Kaua'i, in general, have indicated that sandy, back beach areas, removed from oceanic influences contain significant archaeological resources (Drennan 2007:13-14). As previous archaeological studies have shown, "Along eastern Kaua'i, burials and paleo A-horizons, mostly remnant in the Kealia area, are most often identified in Zone II sandy areas." Two previously recorded burials (SIHP #s -2074 and -3960) exist outside of both the Petition Area and the sewer line installation project area. One burial has been recorded in the central portion of the sewer line installation project area (SIHP # -2162). SIHP # -2074 is approximately 316 m south of the Petition Area and approximately 60 m northeast of the sewer line installation project area. SIHP # -3960 is approximately 460 m southwest of the Petition Area and 200 m west of the sewer line installation project area. SIHP # -2162 is approximately 430 m south of the Petition Area.

Burials are also located both within and in close proximity to the southern portion of the sewer line installation project area as the sewer line approaches and enters Kapa'a Ahupua'a. SIHP # -2161, consisting of bone fragments, was inadvertently discovered during archaeological

monitoring. The remains were later reinterred near the Keālia Beach corridor transmission line (Sholin et al. 2012), within the current sewer line installation project area. SIHP # -1851 located west of Kūhiō Highway, consists of two discrete locations where fragmented remains, disturbed by sand mining activities, were identified. SIHP # -7040 is also located west of Kūhiō Highway, outside of the sewer line installation project area.

According to soil survey data, these burials are located within Mokuleia fine sandy loam (Mr) sediments. Mokuleia soils are well-drained soils along the coastal plains on the islands of O'ahu and Kaua'i and are geographically associated with Hanalei, Jaucas, and Keaau soils. It should be noted that Jaucas sand is a sediment type known to yield ancient Hawaiian burials. Previous archaeological studies have also shown concentrations of human burials along the existing Kūhiō Highway. Additionally, Ms. Danita Aiu informed CSH via telephone about the presence of a sand dune before Hauaala Road, near the intersection of Hauaala Road and Keālia Road. She commented that burials as well as a cultural layer and/or cultural deposits would be located within this sand dune environment. Folk and Hammat (1991) also identify the sand dune environment of Keālia as a likely site of Hawaiian burials.

In a letter addressed to CSH, from Dr. Kamana'opono Crabbe of OHA, comments were made regarding potential cultural deposits and *iwi kūpuna* within the project area: "OHA notes that even in heavily disturbed areas such as those parcels utilized for sugar cane cultivation, intact cultural deposits and resources, including ancestral human burials have been discovered beneath tilled areas."

During consultation with Kupuna Val Ako, CSH was informed that burials may be encountered during ground disturbance. Kupuna Ako stated that per appropriate cultural protocol, *iwi kūpuna* should not be removed from Keālia Ahupua. If *iwi kūpuna* are encountered within Keālia Ahupua'a, they must be reinterred within Keālia Ahupua'a. The determination of reinterment location and protocol must remain the *kuleana* of lineal and cultural descendants of Keālia Ahupua'a and the KNIBC. Kupuna Ako also stated that reinterment sites must remain inconspicuous.

Interviewees did not disclose to CSH information (i.e., location of sites or whether they currently access/care for sites) about specific man-made religious sites such as *heiau*, *ahu* (altar or shrine), *kū'ula* (stone god used to attract fish; *heiau* near the sea used for worship of fish gods).

However, possible *ilina* (grave or cemetery) were noted by Mrs. Kalei Arinaga, Mr. Bernard Machado, and Mr. Banquel. These grave sites would most likely be associated with early plantation activity and belong to former workers of the Makee Sugar Company. Due to the influx of plantation workers along Kaua'i's east coast, several churches and religious institutions were established to cater to the diverse spiritual needs of the community. These institutions assisted *kama'āina* families in carrying out religious practices associated with birth, marriage, and death. Some of these churches and institutions established cemeteries or columbariums. Among the early local churches and religious institutions were the Kapa'a First Hawaiian Church, the Kapa'a United Church of Christ, the Kapa'a Church of Jesus Christ of Latter-day Saints, the St. Catherine's Catholic Church, the All Saints Episcopal Church, and the Kapa'a Jodo Mission.

Several cemeteries were used throughout the plantation era and still exist throughout Kapa'a and Keālia. In 2007, following Phase I, Phase II, and Phase III inventory survey, SCS prepared a DRP for SIHP # -7028 (an historic plantation-era Japanese cemetery). The DRP was prepared in

advance of “additional archaeological research to occur at two site locations on a 2,008-acre property located in Keālia. . .” (Drennan 2007a:1). For SIHP # -7028, headstones located within the historic cemetery were to be recorded to facilitate transnational identification and identify practices of the plantation era (Drennan 2007:16). Mr. Machado later clarified to CSH that he believes the remains of former plantation workers (most likely interred in either SIHP # -7028 or SIHP # -B001) were moved to St. Catherine’s Cemetery.

Ms. Danita Aiu also communicated concern about the proximity of the sewer line installation project area to St. Catherine’s Cemetery. She discussed the practice of visiting the grave sites of family members, noting that on certain holidays, such as Easter, the parking lot can become full. She requested that access and egress to the cemetery be considered, specifically, access routes must be maintained and that visitors to the cemetery should not be blocked by either the sewer line or project related construction.

Mr. Tim Reis also shared that his family grows heliconia within their *kuleana* parcel to place at family grave sites. Additionally, interviewees did not identify any religious sites within the current Petition Area, nor did they provide comment on any ongoing religious practices occurring within the Petition Area.

7.3 Cultural Sites

Cultural sites, or Hawaiian *wahi pana* effectively contribute to the ways in which *kama ʻāina* remember and identify (Basso 1996; Holtorf and Williams 2006), and thus continue to manifest and perpetuate culture. It may be inferred that *wahi pana*, due to their ability “to manifest and perpetuate culture,” function as cultural resources. As Cipolla (2008) makes clear,

. . . people inherit the places that they inhabit (from the past), connections between memory, identity and landscape are usually quite strong. In this sense, space, as configured in the past (which could be the recent past) by either natural or cultural processes, ties reflexively to social relations in the present (see Bourdieu 1977; Lefebvre 1991) and, in turn, to social memories. [Cipolla 2008:199]

These social memories, in turn, work to inform world views and everyday practices. Counted among these practices, and largely subsumed under a “living contemporary culture” (Kawelu 2015:3), is the care or management of natural resources, including cultural sites.

The care of *wahi pana* is in many ways akin in nature to the care of one’s *kūpuna*. *Wahi pana*, as storied places, are often connected to various *mo ʻolelo*. Mr. Timothy Reis pointed out that *mo ʻolelo* are an aspect of one’s *mo ʻokū ʻauhau*; both represent sacred linkages to the past. In this way, the *kama ʻāina* of Keālia are intimately linked to the *wahi pana* of the *ahupua ʻa*. Mr. Reis also understands Keālia Ahupua ʻa as a culturally and historically rich *wahi pana*, well suited to supporting a Hawaiian cultural education system. In denoting the *ahupua ʻa* as *wahi pana*, Mr. Reis also went on to point out that culturally significant *pōhaku* may be contained within the project area. *Wahi pana* in this instance is understood to include natural geographic locations, man-made structures, and Hawaiian land divisions such as *moku*, *ahupua ʻa* or *ʻili*.

ʻUmi, son of the great chief Līloa, is credited with instituting the division of the Hawaiian Islands into taxable districts: “The four *mokupuni* (larger islands) of Kaua ʻi, O ʻahu, Maui, and Hawai ʻi were divided into *moku* (districts). . . For ease in collecting annual tribute the *moku* were

subdivided into *ahupua'a*. . .” (Kamehameha Schools 1994:VI). Keālia and Kapa'a Ahupua'a belong to the ancient district of Puna, one of five ancient districts on Kaua'i (King 1935:228). Puna was the second largest district on Kaua'i, behind Kona, and extended from Kīpū, south of Līhu'e to Kamalomalo'o, just north of Keālia. For taxation, educational, and judicial reasons, new districts were created in the 1840s. Nearly forty years later, King Kalākaua created the new district of Kawaihau. This new district stretched across multiple *ahupua'a*, from Oloheua in the south to Kīlauea in the north. Subsequent alterations to district boundaries in the 1920s left Kawaihau with Oloheua as its southernmost boundary and Moloa'a as its northernmost boundary (King 1935:222).

The land division of Keālia lies between the *ahupua'a* of Kapa'a, Kalihiwai, Anahola, and Kamalomalo'o. The land division of Kapa'a lies between the *ahupua'a* of Keālia, Kalihiwai, Wailua, and Waipouli. Natural features often served as boundaries within the *moku* and *ahupua'a*. The *mauka* border extends from the Makaleha Mountains in the south to the Anahola Mountains in the north, and includes the prominent peaks of Pōhāki'iki'i, Kamahuna, Kapehu'a'ala, Makaleha, Pu'u 'Eu, and Anahola. Also included within this *mauka* region are the Lihue-Koloa Forest Reserve and Kealia Forest Reserve. The ocean comprises the entirety of both Kapa'a and Keālia's eastern border.

Within the above stated boundaries were several *'ili*. The *'ili* of Keālia, as identified within LCA claims, were Akiana (LCA 10907), Awikiwili (LCA 10907), Haleki (LCA 7966), Haulei (LCA 8060, 1980), Hawaipaea (LCA 8060, 1980), Ka'ele'ele (LCA 10473, 1980), Kahue (LCA 8834), Kapuna (LCA 8061), Kapunakai (LCA 3413), Kauaha (also Kanaha or Kaha) (LCA 8842), Kaukuolono (LCA 10906), Kaunakakai (LCA 10628), Kealohipaa (LCA 10149, 8060), Kuaiula (LCA 10628), Kuakahi (also Kuahaki or Makuahaki) (LCA 10473), Kulehaole (also Kulehale or Kulihale) (LCA 8833), Mahuaku (Mahuali) (LCA 7966), Makapono (Makahono) (LCA 8842), Pauahi (LCA 10473), Puhokea (LCA 10473), and Waipunaula (LCA 08833). Waipunaaula was also identified as a fishpond within Keālia. Not explicitly designated within Keālia, but identified within nearby localities were Kapuahola (Kapuaahole) possibly an *'ili* in Hōmaikawa'a (LCA 10689) and Naapakukui an *'ili* in Kumukumu (LCA 10660).

The *'ili* of Kapa'a, as identified in LCA claims were Paikahawai (retained as government lands), Ulukiu (retained as government lands; LCA 8837), Puhī (LCA 3554, 3599), Kahanui (LCA 3554, 3599), Maele'ele (LCA 3638), Kalolo (also Kaloko or Kaulolo) (LCA 3638, 8843), Kupanihi (also Makahaikupanihi) (LCA 3971, 3243), Kahana (LCA 3971, 3243), Awawaloa (LCA 8837), and Apopo (LCA 8843).

LCA claims not only provided information regarding *'ili*, they also proved to be a source for descriptions of natural features and boundaries contained within the *ahupua'a*. The *wahi pana* of Keahapana was identified within LCA data and by interviewees. Keahapana, was famed for its “heavy taro” (HEN: *Kuokoa*, May 1913). In an interview conducted by CSH in 2002 (Bushnell et al. 2002), Keahapana was identified as an area located up the Keālia River, where Hawaiians continue to live, and where taro was grown until the late 1990s. Mr. Kauī understood the entirety of Keahapana Valley (located approximately 1.7 km west of the project area) to be “sacred.” Such sacrality is attributed to the presence of *ali'i*, once known to traverse the lands of Keālia in ancient times. The peaceful environment in which *kama'āina* were allowed to live and work in, also contributed to notions of Keahapana Valley as a sacred space. Mr. Kauī shared that the practice of human sacrifice did not occur in Keahapana Valley. Kapa'a was also described as a peaceful,

“more relaxed” environment due to its location on the fringes of the Wailua Complex (Hulsman et al. 2015:9).

There exist a myriad of cultural sites or *wahi pana* for Puna (Kawaihau) District. For the *ahupua‘a* of Keālia, however, several natural features remain significant. These include *pu‘u* such as Pohakuomanu, Pukahulu, Moalepi (Moalepe), and Pu‘u Kinui. Pualani, Pohakupili, and ‘Ōhi‘a are the names of mountain peaks in Keālia (Hawai‘i State Archives, Interior Department, Land, 23 June 1862). The place name Pohakupili, however, is also the name of a mountain in the larger Puna (Kawaihau) District. This peak is famed in chant as a place where clouds gather (HEN 1885:I:211–216). Pohakupili is also utilized as a landmark, “when it appears to be on the hill of Nounou,” by those fishing at the fishing ground of Limawela (HEN 1885:I:211). Interviewee Tim Reis noted that a significant *pu‘u* is located immediately east of the Petition Area. He did not disclose the name of this *pu‘u* nor any *mo‘olelo* associated with it. However, he did identify the *pu‘u* on a map (see Figure 46). Due to the proximity of this *pu‘u*, culturally significant *pōhaku* may be present within the Petition Area and sewer line installation project area. Culturally significant *pōhaku* are understood to represent pre-Contact lithic material (i.e. lithic scatter, tool, debitage) or isolated remnants of Pre-Contact rock alignments (i.e. walls, enclosures, upright stones). Mr. Reis recommended that GPR be utilized prior to construction-related ground disturbance. In addition to GPR, Mr. Reis recommended that construction personnel be educated on cultural sensitivity and traditional cultural material. He also recommended that a field guide be generated for archaeological monitors and construction crews.

Historic properties previously identified within the Petition Area remain above surface. These surface sites include SIHP #s -7013 and -7016. SIHP # -7013 is the defunct Kumukumu Camp. SIHP # -7016 is a railroad complex associated with historic-era sugarcane plantation operations. Although these historic properties do not represent traditional Hawaiian cultural sites, they do provide information important for research on prehistory or history (Criterion d; HAR §13-284-6).

During a 2017 field inspection (Kamai and Hammatt 2017) for the current project, five features (CSH-1 through CSH-5) were observed and documented. Kamai and Hammatt 2017 provide descriptions of these features:

. . . CSH-1 through CSH-4 appear to have been associated with SIHP # -07013. . . The five features within the project area are associated with the plantation as seen in previous archaeological studies as well as the similar style of construction associated with water control in sugar plantation systems on Kaua‘i. . . . CSH numbers. . . will most likely be given feature numbers associated with SIHP #s -07013 and -07016. During the current inspection, SIHP # -07016 could not be reidentified. [Kamai and Hammatt 2017:58]

Mr. Reis also discussed the significance of freshwater resources within his family’s *kuleana* parcel. Because *wahi pana* can include natural resources such as springs and streams, CSH understands that the *pūnāwai* contained within the Bray (Reis), Kau, Kanehoalani, and Ornellas *kuleana* parcel constitutes a *wahi pana*, and thus a cultural site. Mr. Reis actively cares for this natural resource and *wahi pana*. During consultation, Mr. Kau and Mr. Ponce also identified the freshwater spring.

Other significant freshwater resources for Keālia and Kapa'a include Keālia Stream and 'Ōpae Kala'ole, Kapa'a Stream, Mimino Stream, Hala'ula Stream, Kapahi Stream, Makaleha Stream, Moalepe Stream, Waipahi Stream, Maiaki'i Stream, Wai'awa'awa Stream, Opeka Stream, Kumukumu Stream, and Hōmaikawa'a Stream. Of these streams, Kumukumu is situated the closest to the Petition Area. A portion of the sewer line installation project area will cross the Kapa'a Stream via the Kapa'a Stream Bridge (SIHP # -2278). To the south of the sewer line installation project area are two canals, Waika'ea and Moikeha, originally constructed to assist in draining the marshy areas behind Kapa'a Town.

Within the project area addition or sewer line installation project area, there exists several archaeological sites. These sites include an alignment (possible trail; SIHP # - 3945); an historic complex of a remnant concrete staircase, concrete telephone pole, and a concrete foundation with a slab walkway (SIHP # -3943); a bridge/transportation infrastructure, a culvert, and drainage pipes (SIHP # - 7021); a railroad path (SIHP # -7038); a traditional Hawaiian cultural deposit (SIHP # -2165); railroad rails and a foundation (SIHP # -7015); pre-Contact human remains (SIHP # - 0884); a plantation-era staircase (SIHP # -7035); a fire pit (SIHP # -2163); and an historic culvert (SIHP # -2279b).

Overall, however, interviewees commented that they were unaware of cultural sites or cultural resources being contained within the Petition Area. Mr. Reis shared with CSH,

... I don't think it's a bad idea or bad location. I really don't. It's on the side of the road, there's nothing but cows there, as far as cultural resources, they're not present on the property. So, I understand their choice, I understand it's probably going to be built.

Interviewee Kenneth Ponce also did not believe cultural resources or cultural sites were contained within the Petition Area. He commented that,

Actually, when I saw this project I had a good feeling about it. Because what they're doing is extending part of the existing subdivision. Like I said, I don't think it will impact anything. . .when I looked at it, I felt good about it, that somebody had a good idea to put a subdivision next to an existing subdivision. Right now, it's out of the *tsunami* zone, so I think it's an asset.

7.4 Hawaiian Cultural Education System

Cultural practices of late have been inspired by traditional understandings of caring for natural and cultural resources. Many organizations have adopted practices wherein the community can *mālama* cultural sites, and in turn benefit from the knowledge inherent in such sites. Cultural sites across the islands have become the focus of those dedicated to an *'āina*-based education or Hawaiian cultural education system. Mr. Tim Reis provided an example of one such institution employing a Hawaiian cultural education system. Kawaikini, as a "Hawaiian-medium and Hawaiian-values school" makes it its mission to create a "thoughtful, knowledgeable, and healthy community where the language, beliefs and practices of the indigenous people of Hawai'i are instinctive" (Kawaikini 2018).

Mr. Reis, as a *kālai pōhaku*, has worked with the students of Kawaikini, teaching them the way to shape *pohaku kui'ai* utilizing traditional stone tools. He has observed how teaching such practices have helped to perpetuate traditional Hawaiian values. He shared,

Working with wood and stone, there's no guarantee of what's inside. You oftentimes run into flaws, so you have to learn to adapt and work with those things. . . That's why I took it to Kawaikini, because I thought if our children would be taught in a manner exposed to these art forms, they would be unknowingly exposed to these [values]: patience, perseverance, dealing with problems, strategizing. And I thought those would all be good things for that individual or that child throughout their life if, through the education system, they were exposed to that for twelve years. That's actually kind of my goal to be able to produce a work, and great programs, and make them available to the education system. I think the Hawaiian cultural education system is in its infancy now, and in the future, there would be room for that type of inclusion or implementation of that kind program.

In addition to learning traditional Hawaiian values, *kama 'āina* children acquire the “social and emotional learning (SEL) skills and academic mindsets to succeed in college, careers and communities locally and globally” (Department of Education 2015). Mr. Reis believes the *ahupua'a* of Keālia has the potential to be an essential teaching tool within a Hawaiian cultural education system. However, he cautioned with the following,

Here in this *ahupua'a*, this *ahupua'a* has been tied up by a large landowner for a very long time yeah, and it has changed hands. It's predominately cattle. . . As far as [how cultural practices are maintained and an 'āina-based learning approach] develops in this *ahupua'a*, it has potential.

. . . All the *ahupua'a* have potential, it just depends on who is driving the development and the intent, and that's kind of where we are at today. [We are] wanting to see more of the Hawaiian culture included in that.

Interviewee Richard Kauai also expressed a desire to see the passing on of traditional knowledge to *nā 'opio*. His descriptions of historic Keālia provided a sense of place, a tacit understanding of *kīpuka*. Despite rapid change occurring on Kaua'i, Keālia still maintains much of its “country” feel. Within cultural *kīpuka*, the expression and transmission of native Hawaiian culture can successfully occur. Mr. Kauai expressed the following desire during consultation,

. . . I'm concerned about our kids today. You know, maybe we can set up something from this survey for the children. Because they're the leaders to come. That's my heavy concern.

Currently, there are no schools or learning centers within Keālia. Schools are located within neighboring Kapa'a and Anahola.

Education has long been valued within both Kapa'a and Keālia. The emphasis placed on education can be surmised from the stipulations found in Portuguese immigrant contracts with Makee Sugar Company. These contracts demanded that the plantation provide an adequate public-school education for the children of emigres. Japanese immigrants were heavily involved in the education of their children, establishing language schools on Keālia's plantation lands. In 1883, the Makee Sugar Company responded by constructing the Kapa'a School at Keahiahi Point. In

1908, Kapa'a School was moved to its present site directly *mauka* on Mailihuna Hill (currently the location of Kapa'a High School). St. Catherine's Catholic School was later opened on the corner of Kawaihau and Hauaala Road in 1946 (Hulsman et al. 2015:83).

Following the addition of the sewer line installation project area, CSH reached out to the principals of Kapa'a Elementary, Middle, and High Schools. As these are public institutions they are subject to the Department of Education's outcomes framework (Nā Hopena A'o ("HĀ")) (Department of Education 2015). In using HĀ as a comprehensive outcomes framework, public schools in Kapa'a are engaging with Hawaiian values, language, culture, and history. CSH did not receive a response from respective principals regarding the proposed undertaking and potential impacts to cultural resources, practices, and/or beliefs.

Section 8 Results and Analysis

CSH undertook this CIA at the request of HHF, on behalf of Keālia Properties, LLC. The research broadly covered the entire *ahupua'a* of Keālia and Kapa'a, including the Petition Area and project area addition (sewer line installation project area), as well as the *moku* of Kawaihau.

8.1 Results of Background Research

Background research for this study yielded the following results:

1. Keālia and Kapa'a Ahupua'a belong to the ancient district of Puna, one of five ancient districts on Kaua'i (King 1935:228). For taxation, educational, and judicial reasons, new districts were created in the 1840s. In 1878, King Kalākaua, in an attempt to solidify the stature and influence of the Hui Kawaihau (a choral society established by Prince Leleiohoku), created the new district of Kawaihau.
2. Keālia translates as "salt encrustation." According to John Clark, who translates Keālia as "the salt bed" or "the salt encrusted area," this is a direct reference to the natural salt ponds that formed along the low-lying coastal portions of Keālia Ahupua'a. This salt or *pa'akai* satisfied a variety of domestic, medicinal, and ceremonial needs (Clark 1990:11).
3. Kapa'a literally translates to "the solid or the closing" (Pukui et al. 1974:86).
4. Generally, Keālia was described as "rather dry" (Handy and Handy 1972:423). This condition may be inferred by the relative lack of traditional rain names associated with Keālia Ahupua'a. Due to the lack of rainwater, freshwater resources such as streams were modified to satisfy the needs of *maka'āinana* living upon the lands.
5. Three rains, the Hā'ao, Kea, and Ho'olua are associated with Kapa'a. In addition to these rains, Kapa'a was fed by smaller drainages flowing into the lowlands and creating an approximately 170-acre marshland. As consequence, traditional Hawaiian settlement occurred directly *makai* of this marshy land.
6. *Ka'ao* places Hi'iaka, the beloved sister of Pele the fire goddess, in the vicinity of the project area. Hi'iaka and her companion, Wahine'ōma'o view Wai'ale'ale, Nounou Hill, and Kapa'a. Their canoe lands on the beach of Kapa'a where they jump ashore and Hi'iaka offers *oli* (Ho'oulumāhiehie 2008:167–168).
7. *Mo'olelo* identifies the rocky headland between Kapa'a and Keālia as the location where Pāka'a was raised by his mother La'amaomao and her brother Ma'ilou, a bird snarer.
8. Various members of the Kawelo family line are said to have spent time within Keālia and its environs. Two *mo'olelo* are associated with this legendary line of Kaua'i kings. The first involves Kaweloleimakua and Kauahoa at the *wahi pana* known as Waipahe'e. In the legend, the two kinsfolk, engage as young boys in a series of contests. In each of the contests, Kawelo is bested by Kauahoa. As grown men, they are finally pitted in bloody battle against each other. In order to thwart the conflict, Kawelo attempts to remind Kauahoa of their boyhood excursions; Kauahoa is not swayed and swears to fight to the death. The second legend concerns Kawelomahamahaia, the shark man of Kaua'i. The shark man, a man-eater who hunted in the waters between Keālia and Wailua, was finally caught and stoned to death. This shark man was believed to be associated with Chief Kawelomahamahaia, a grandfather of Kawelo and descended from Manokalanipo (Beckwith 1970:141).

9. Several *heiau* once stood in Keālia and Kapa‘a Ahupua‘a including Pahua Heiau, Kumalae Heiau, Waiehumalama Heiau, Napuupaakai Heiau, Noemakalii Heiau, Puukoa Heiau, Piouka Heiau, Una Heiau, Mano Heiau, and Makanalimu Heiau (HEN 1885:214–216). Unfortunately, the exact locations of these *heiau* remain unknown. An additional significant temple was the *heiau* known as Kawelomamaia (Site 112) (Bennett 1976:129; Thrum 1907:41). *Heiau* explicitly identified in Kapa‘a are Mailehuna and Pueo. The *heiau* of Kaluluomoikeha is believed to have been located in the general area near the Mō‘ikeha Canal and the present day Hotel Coral Reef Resort.
10. Other important *wahi pana* associated with Keālia and Kapa‘a include ‘Āhihi Point and Hōmaikawa‘a; Keahiahi Point; Ka‘ea; Waipahe‘e; Ōpae Kala‘ole; and a myriad of natural and man-made features including *‘ili*, streams, mountain peaks, and ridges.
11. Early foreign accounts describe the east coast of Kaua‘i, including Keālia Ahupua‘a, as the “most fertile and pleasant district of the island” (Vancouver 1798:221–222). Captain George Vancouver places an extensive village, located in close proximity to a king’s residence, somewhere along the northeast coast, an area spanning from Keālia to Moloa‘a Bay.
12. Māhele documentation provides insight into habitation and agricultural patterns. Kapa‘a was designated as Crown Lands while Keālia was granted to the *ali‘i* (chief) Miriam Ke‘ahikuni Kekau‘onohi. Kekau‘onohi was the granddaughter of Kamehameha, one of Liholiho’s wives, and served as Kaua‘i governor from 1842 to 1844.
13. Beginning in 1850, the *maka ‘āinana* began receiving their land titles. According to Māhele documentation, LCAs were awarded in an area immediately southeast of the Petition Area, in close proximity to the Kapa‘a Stream (also identified as the Keālia River). No LCAs were found within either the Petition Area or project area addition.
14. With the increase in foreign interests on Kaua‘i Island during the last half of the nineteenth century, an array of agricultural enterprises were attempted. The first large-scale agricultural enterprise in the area was begun in 1877 by the Makee Sugar Plantation (led by Captain James Makee) and the Hui Kawaihau (Dole 1916:8). Although hoping to establish a successful sugar corporation on the east side of Kaua‘i, a series of unfortunate events led to the disbandment of the Hui, and the passing on of property and leasehold rights to Makee’s son-in-law and the new Makee Plantation owner, Colonel Z.S. Spalding (Dole 1916:14).
15. As part of Colonel Spalding’s takeover in 1885, the Makee Plantation mill was moved from Kapa‘a to Keālia. To transport their sugar product from the Keālia mill, a railroad was constructed in the late nineteenth century. This railroad line was part of a 20-mile network of plantation railroads with some portable track, and included a portion of Keālia Valley and the *mauka* regions of the plateau lands north of Keālia (Condé and Best 1973:180).
16. The Ahukini Terminal & Railway Company was formed in 1920 to establish a railroad to connect Anahola, Keālia, Kapa‘a to Ahukini Landing, and “provide relatively cheap freight rates for the carriage of plantation sugar to a terminal outlet” (Condé and Best 1973:185).
17. In 1934, the Lihue Plantation Company absorbed the Ahukini Terminal & Railway Company and Makee Sugar Company (Condé and Best 1973:167). Besides hauling sugarcane, the railroad was also used to haul plantation freight including “fertilizer. . . [and] canned pineapple from Hawaiian Canneries to Ahukini and Nawiliwili, pineapple refuse from Hawaiian Canneries to a dump near Anahola and fuel oil from Ahukini to Hawaiian

Canneries Co., Ltd.” (Hawaiian Territorial Planning Board 1940:11). Longtime *kama ʻāina* families of Keālia recall a concrete pier (SIHP # 50-30-08-789:H) just north of Kumukumu Stream, where pineapple waste was dumped into the ocean. According to *kama ʻāina*, the current would carry the waste to Kapaʻa, which would attract fish and sharks (Bushnell, Shideler, and Hammatt 2003)

18. The explosive growth of the sugar industry within Keālia inevitably led to the development of a small town comprised mainly of sugar plantation workers, many of whom were immigrants from Portugal, Puerto Rico, the Philippines, Japan, and China (Kauaʻi Historical Society n.d.). However, the decline of sugar also marked the end of Keālia Town. The town slowly dispersed after the incorporation of the Makee Sugar Company into the Lihue Plantation in the 1930s. Many of the plantation workers bought property of their own and moved out of plantation camps. The plantation camps that bordered Kūhiō Highway were disbanded in the 1980s. In 1997, the entire *ahupuaʻa* of Keālia was sold off in an effort to downsize Amfac’s landholdings. Because Keālia was the most distant from the Lihue Plantation sugar mill, it was considered the least profitable (*Honolulu Advertiser*, 7 July 1997).
19. The conversion of *mauka* portions of Kapaʻa to pineapple fields, coupled with the arrival of Hawaiian Canneries Company, Ltd. in 1913 had a profound effect on Kapaʻa Town. Following the completion of their plantation contracts, Japanese workers moved into town and opened their own businesses. Kapaʻa became “an integrated multi-racial town, containing an extraordinary mix of people living and working together in harmony” (Fernandez 2009:48).
20. Previous archaeological studies locate two historic properties within the boundaries of the Petition Area; these sites are associated with sugar plantation operations (SIHP # -7013, “New Kumukumu Camp;” SIHP # -7016, railroad complex). Several historic properties are also located immediately north, west, and south of the Petition Area.
21. Several burials have been located either within or near the sewer line installation project area. SIHP # -2162 has been recorded in the central portion of the sewer line installation project area. SIHP # -2074 is approximately 316 m south of the Petition Area and approximately 60 m northeast of the sewer line installation project area. SIHP # -3960 is approximately 460 m southwest of the Petition Area and 200 m west of the sewer line installation project area. Burials are also located both within and in close proximity to the southern portion of the sewer line installation project area as the sewer line approaches and enters Kapaʻa Ahupuaʻa. SIHP # -2161 was inadvertently discovered during archaeological monitoring and later reinterred near the Keālia Beach corridor transmission line (Sholin et al. 2012), within the current sewer line installation project area.

8.2 Results of Community Consultations

CSH initiated its outreach effort in April 2017 through letters, email, telephone calls, and in-person contact. CSH completed its initial outreach effort in February 2018. CSH attempted to reach 34 individuals and agencies. The organizations consulted include the Office of Hawaiian Affairs (OHA), the Kauaʻi-Niʻihau Island Burial Council (KNIBC), the State Historic Preservation Division (SHPD) Burial Sites Specialist and History and Culture Branch, Queen Deborah Kapule Hawaiian Civic Club and the Kauaʻi Council of Hawaiian Civic Clubs (via the Association of Hawaiian Civic Clubs), and community members of Kawaihau District. Upon receipt of comments

from the public comment period for the DEIS, CSH was notified of concerns regarding the documentation of Keālia's plantation history during the 1950s, 1960s, and 1970s. CSH reinitiated consultation in July 2018, reaching out to those individuals recommended by the Wailua-Kapa'a Neighborhood Association. Furthermore, CSH also reached out to additional individuals known to have once been affiliated with Lihue Plantation. CSH completed additional outreach in October 2018. Below is a list of individuals who shared their *mana'o* and *'ike* about the Petition Area and Keālia Ahupua'a:

1. Kenneth Ponce, *kama 'āina* (native born) of Kapa'a and descendant of former plantation workers, Pedring and Crescencia Ponce
2. Kupuna Valentine Ako, *kama 'āina* of Kapa'a
3. Uncle Richard Kauai, *kama 'āina* of Keālia, *mahi 'ai* (farmer) within Keahapana Valley
4. Timothy Reis, *mahi 'ai* within Keahapana Valley, *kālai pōhaku*, *kālai ki 'i* (artisan in stone and images)
5. Mr. Ricardo Banquel and Mrs. Magnolia Banquel, *kama 'āina*, and former residents of Kumukumu and Keālia Camps

In November 2018, CSH was notified by HHF Planners regarding a portion of the project area that was not previously considered during earlier work on the CIA. Due to the addition of a sewer line and various other off-site infrastructure and utility improvements, CSH was prompted to reinitiate consultation to notify the community of these project area changes. Accordingly, this project area addition prompted CSH to broaden the study to also include the *ahupua'a* of Kapa'a. As part of a good faith effort, CSH expanded its contact list to also include community members of Kapa'a Ahupua'a. CSH attempted to reach 64 individuals and organizations as part of this renewed outreach effort. CSH received comment from the following individuals:

1. Danita Aiu, *kupuna* of Kapa'a
2. Mrs. Magnolia Banquel, *kama 'āina*

8.3 Non-Culturally Relevant Community Concerns and Recommendations Associated with the Petition Area

During consultation, the community may discuss non-culturally relevant concerns. As these relate to the environmental, economic, and social welfare of the community, they lay beyond the purview of the current CIA. However, these concerns should be evaluated within the FEIS. Based on information gathered from community consultation, participants voiced the following non-culturally relevant concerns:

1. A community concern expressed during consultation regarded the integrity of the Hala'ula Reservoir located *mauka* of the current project area. Comparisons were drawn to the Kaloko Dam catastrophe, and a request was made by Kupuna Beverly Muraoka that efforts be made to prevent a similar tragedy from occurring within Keālia. No additional recommendations were offered regarding this concern.
2. Kupuna Beverly Muraoka expressed a concern about the presence of chemical fertilizers and pesticides within the soil. As former cane lands, chemicals once utilized for this industry may be present within project area soils.

3. During an attempted follow-up with Mrs. Kalei Arinaga, concerns were shared regarding the DEIS. Mrs. Arinaga commented on the lack of studies on the integrity of local infrastructure and roadways, and if such infrastructure can support the proposed subdivision population.

8.4 Non-Culturally Relevant Community Concerns and Recommendations Associated with the Project Area Addition

Based on information gathered from renewed community consultation, the following non-culturally relevant concerns were voiced:

1. Mrs. Magnolia Banquel noted the location of the proposed sewer line within the coastal portion of Keālia and Kapaʻa, and inquired into construction material. Mrs. Banquel discussed the need for a corrosion resistant material as any metal sewer line will deteriorate in coastal areas.

8.5 Culturally Relevant Community Concerns and Recommendations Associated with the Petition Area

During consultation, the community expressed concerns for cultural resources and cultural practices existing outside the Petition Area. Of those consulted, three community members articulated that currently there are no traditional cultural resources within the Petition Area, nor are there any traditional cultural practices currently being exercised within the Petition Area. However, comments provided by the community solely pertained to extant, surface cultural resources (or the lack thereof) within the Petition Area. Although traditional Hawaiian cultural resources and cultural sites are not known to exist above surface within the Petition Area, the community expressed concerns that subsurface cultural deposits (i.e., *iwi kūpuna*, *imu*, *pōhaku*) may be impacted by the proposed project.

Despite the impacts of historic-era sugar plantation activities, interviewees, in general, described Keālia Ahupuaʻa as a rich cultural landscape. Although no surface sites were identified within the Petition Area during community consultation, subsurface remains such as burials, pre-Contact rock alignments, and/or occupation scatters may exist in areas that were not extensively plowed or developed. Cultural material related to burials, pre-Contact features and/or religious structures remain significant to traditional Hawaiian religious belief and practice. Due to the cultural significance of such material, and several community comments postulating the potential for subsurface finds, CSH has made an effort to report these concerns. The following list is intended to present the *mana ʻo* (concerns and mitigation recommendations) of the community, and should not be understood to represent CSH's own findings and analysis (see Section 8.7 and Section 8.8).

The following list also presents community concerns for cultural resources and practices existing outside the Petition Area. Based on information gathered from community consultation, participants voiced the following specific, culturally relevant concerns, and provided mitigation recommendations when applicable:

1. It is necessary to note that certain types of historic properties and cultural sites are difficult to recognize by pedestrian survey alone. It is possible subsurface cultural deposits (i.e., *iwi*

kūpuna, *imu*, *pōhaku*) may yet exist, and may be encountered during ground disturbing activities. During community consultation, both Dr. Kamanaʻopono Crabbe (OHA) and Kupuna Valentine Ako articulated that *iwi kūpuna* and other cultural finds may be present within the Petition Area. Timothy Reis, a *kālai pōhaku* residing in Keahapana Valley, indicated culturally significant *pōhaku* may be buried within the Petition Area. Culturally significant *pōhaku*, as noted by Mr. Reis, are understood to represent pre-Contact lithic material (i.e., lithic scatter, tool, debitage) or isolated remnants of pre-Contact rock alignments (i.e., walls, enclosures, upright stones). Mr. Reis recommended that GPR be utilized prior to ground disturbance. Mr. Reis also recommended that those working on the project must be educated on the types and varieties of traditional Hawaiian cultural material. To facilitate education, Mr. Reis recommended that a field guide be generated and utilized as a reference for on-site construction workers and archaeological monitors. This field guide should be generated in conjunction with stakeholders and/or descendants of Keālia Ahupuaʻa.

2. During community consultation with Kupuna Valentine Ako, he requested that all inadvertently discovered human remains be reinterred within the *ahupuaʻa* where they were originally encountered. Kupuna Ako additionally recommended that the selected reinterment site remain inconspicuous and landscaped in an appropriate way.
3. Current ongoing cultural practices within the *ahupuaʻa* of Keālia include the farming of plant resources. Farmed plant resources include *kalo*, *noni*, *maiʻa*, cacao, cinnamon, and heliconia. In addition to farming, pigs are also raised for consumption. The importance of *kalo* to the Keālia community has been underscored in both *moʻolelo* and *oli*. As such, the *kamaʻāina* of Keālia have remained committed to growing this culturally significant staple. Mr. Reis and his *ʻohana* still cultivate *loʻi* and *māla*, utilize spring water, gather flowers for burials, and raise pigs for meat. In particular, Mr. Reis expressed concern about potential impacts to a spring contained within his family's *kuleana* parcel (LCA 8061, approximately 1.64 km east of the Petition Area); this spring provides water to his *loʻi kalo*. Mr. Reis estimated the proposed project will draw "2 million gallons a month (10,000 gallons x 200 homes) or 24 million gallons a year" from a well site near the Petition Area. Mr. Reis requested "proof" that the proposed project will not have negative impacts on the aquifer and ground water resources throughout Keālia Ahupuaʻa. Mr. Reis believes that should his spring be impacted, it would be too late to rectify the situation, and thus did not provide mitigation recommendations.
4. The community also expressed a concern about access rights to cultural resources located throughout Keālia Ahupuaʻa. In a letter submitted by Kamealoha Hanohano Smith, on behalf of Kaiaulu Papaloa representing members of the Keālia Community, it was noted that should the subject parcel be developed, rights to access the parcel for the exercise of traditional and customary rights will be extinguished. Although the letter did not state whether the parcel is currently accessed for traditional and customary rights, nor did it describe the nature of activity occurring within the subject parcel, the following was noted:

Our primary concern is about preserving access to the land and resources in Kealia that our descendants will need. Most of these resources may occur outside the area proposed to develop. If we could assure unimpeded access to the resources elsewhere on the rest of the property, into perpetuity, then a voluntary

release of our rights in the area proposed for development could be contemplated.

Based on written testimony submitted by Kamealoha Hanohano Smith, on behalf of Kaiaulu Papaloa representing members of the Keālia Community, the landowner and/or developer should remain amenable to engaging in *ho'oponopono* (conflict resolution) in regard to access rights throughout the *ahupua'a*, with members of the Keālia Community.

5. During an attempted follow-up with Mrs. Arinaga, a concern was expressed in regard to the lack of discussion of Keālia's pre-Contact and early post-Contact history within the DEIS. A well-rounded discussion of Keālia's history from the pre-Contact and post-Contact periods should be included within the FEIS.

8.6 Culturally Relevant Community Concerns and Recommendations Associated with the Project Area Addition

Based on information gathered from renewed community consultation, the following specific, culturally relevant concerns regarding the sewer line installation project area were voiced. Mitigation recommendations were provided when possible:

1. Ms. Danita Aiu as well as Mrs. Magnolia Banquel discussed the potential to encounter burials near the proposed roundabout at the Keālia Road and Kūhiō Highway intersection. Ms. Danita Aiu highlighted the density of subsurface cultural deposits immediately *mauka* of Kūhiō Highway and called attention to previously documented burials. She commented that burials will most likely be encountered during ground disturbing activities but did not provide specific mitigation recommendations.
2. Ms. Danita Aiu also expressed concern about the proximity of the sewer line to St. Catherine's cemetery. The project must not enter the private property of St. Catherine's Church, and a five-foot setback should always be maintained. She also expressed concern about project-related construction potentially blocking access to the cemetery grounds from Kūhiō Highway.

8.7 Analysis

Based on information gathered from the cultural and historical background, and the community consultation, no culturally significant resources were identified within the Petition Area. At present, there is no documentation nor testimony indicating that traditional or customary Native Hawaiian rights are currently being exercised "for subsistence, cultural and religious purposes and possessed by ahupua'a tenants who are descendants of native Hawaiians who inhabited the Hawaiian Islands prior to 1778" (Hawai'i State Constitution, Article XII, Section 7) within the Petition Area. Additionally, no traditional cultural practices are known to currently occur within the Petition Area. While no cultural resources, practices, or beliefs were identified as currently existing within Petition Area, both Keālia and Kapa'a Ahupua'a maintain a rich cultural history. Keālia Ahupua'a traditionally was "home to a large, settled population of farmers and fishermen, who exploited the coastal areas abundant natural resources, as well as the land that contained nutrient rich soil immediately inland and *mauka* (upland) from the coasts" (Drennen et al. 2007:12). Kapa'a was also home for *maka'āinana*, as only a small sliver of land near the coast proved sufficient for settlement.

Evidence of pre-Contact settlement and land use, however, has most likely been obliterated by plowing and other historic-era sugar plantation activities. Large portions of both the Petition Area and sewer line installation project area have been subject to historic-era agricultural and, to a more limited extent, urban development. This has resulted in the loss of cultural resources and possible archaeological remains.

Despite this loss, a reconstruction of the traditional landscape can still be achieved through an examination of the historic record.

Keālia Ahupua'a can be described as a stream valley, with a fairly large alluvial plain bisected by a major stream. Kapa'a can be characterized as fairly flat, with irregularly shaped gulches and small valleys in the uplands through which small tributary streams run. Other smaller drainages flow directly into the lowlands of Kapa'a creating a large (approximately 170-acre) swamp area (since in-filled in the Historic period), suitable for *lo'i* agriculture. Kapa'a Stream is the major stream within the area, formed by the joining of the Kapahi, the Makaleha, and the Moalepe streams (Handy 1940:68). Further *makai*, the Keālia Stream intersects with the Kapa'a Stream. Keālia's headwaters include Waipahi, Maiaki'i, and Wai'awa'awa. *Mauka* portions of Keālia were also cut by the Kumukumu and Hōmaikawa'a streams. Beginning in the twelfth century, a vast system of irrigated taro fields was constructed. This field system—an impressive engineering design—took advantage of the natural environment to provide ample fresh water to residents of the *ahupua'a*. Despite the fame of Keālia's "large, heavy taros," *lo'i kalo* were only one element of a complex of features that characterized Keālia during the pre-Contact (before 1778) period. Closer to the Keālia shoreline, house sites, salt beds, and fishponds once dotted the landscape. Extending out into the ocean, *kama'āina* of the *ahupua'a* availed themselves to various marine resources.

Chiefly residences were centered primarily within nearby Wailua Ahupua'a. Traditional sources generally do not describe either Keālia or Kapa'a Ahupua'a as being home to *ali'i*. Although, Keālia was not explicitly identified as a site of chiefly residences, it is believed that *ali'i* frequented the *ahupua'a*. One may better understand Kealia's association with royalty by looking to the *mana'o* of Keālia's *kama'āina*. During community consultation, it was noted that a night marcher path sits in close proximity to the project area. Spirits participating in the *huaka'i po* were generally understood to belong to the chiefly class. It was additionally noted that *ali'i* once traversed the *mauka* portions of the *ahupua'a*.

More so, the region was home to farmers and fisherman. Devoted to farming and fishing, residents of the *ahupua'a* enjoyed a kind of "harmony." A stable population soon developed amidst this Hawaiian-engineered abundance. Captain George Vancouver (1798), sailing off the east coast of Kaua'i during his third voyage to the Hawaiian Islands in 1793, captured something of this profusion in his journals. He writes, "This portion of Attowai, [is] the most fertile and pleasant district of the island. . ." (Vancouver 1798:221–222).

Keālia and Kapa'a Ahupua'a have been enlivened by stories of goddesses, *kupua*, *ali'i*, and *menehune*. *Wahi pana* within Keālia and Kapa'a are reflective of these traditional *mo'olelo*, directly tied to figures such as Hi'iaka, Kaweloleimakua, Palila, Pāka'a, and Kauahoa. For the *hoa'āina* of Keālia, these *mo'olelo* are also understood to be tied to one's *mo'okūauhau*. Several *wahi pana* or *wahi kapu* were located in the lands of Keālia, outside the current project area. These *wahi pana* currently function as markers of cultural identity and cultural beliefs. Quite

significantly, nine *heiau* are ascribed to either Keālia or Kapa‘a Ahupua‘a (HEN 1885:214–216). The presence of such a large number of religious sites suggests the region may have possibly been more politically significant in ancient times. Early archaeological studies, however, failed to confirm these *heiau*. Recent archaeological studies within and around the current Petition Area did not identify any traditional Hawaiian historic properties. Further *makai*, however, traditional Hawaiian historic properties such as burials and cultural layers have been documented along the Kūhiō Highway corridor. Historic properties previously identified within the Petition Area are associated with post-Contact sugar plantation infrastructure.

The post-Contact period brought numerous changes throughout the Hawaiian Islands. The socio-economic and socio-political changes of the nineteenth century were most visible within the landscape of both Keālia and Kapa‘a. By the early twentieth century, the entire *makai* half of Keālia Ahupua‘a was covered in sugarcane. Plantation infrastructure dominated the *makai* portion of the *ahupua‘a*; traditional sites and resources were most likely altered or removed entirely to make way for this new industry. Coupled with these landscape changes, were changes to the region’s racial and ethnic demographics.

The growth of sugar within Keālia and Kapa‘a required the sponsorship of immigrant workers. Many of these workers were immigrants from Portugal, Puerto Rico, the Philippines, Japan, and China (Kaua‘i Historical Society n.d.). The influx of immigrants transformed Keālia, leading to the development of a small, diverse town. These new residents brought along their food, religion, and unique way of life. The genesis of Hawai‘i’s own “*kama ‘āina*” or “local” culture can be traced back to these populations of multi-ethnic working class people drawn together by the plantation experience. These workers played a pivotal part in shaping Hawai‘i’s history, and were responsible for the “changes that saw Big Five control over Hawaii give way to multi-ethnic participation in a more democratic society”(Taniguchi in Nishimoto et al. 1984:Foreword). Currently, the descendants of Keālia’s plantation workers still reside within the neighboring Keālia Town Tract. Throughout both Keālia and Kapa‘a, remnants of plantation history remains visible.

Although traditional Hawaiian cultural sites are not known to exist above surface within the Petition Area, historic properties related to sugarcane plantation operations are known to exist within the Petition Area. Previous archaeological studies have indicated the presence of two historic properties (SIHP # 50-30-08-7013, the “New Kumukumu Camp” and SIHP # -7016, a railroad complex associated with historic-era sugarcane plantation operations) within the Petition Area. Background research on sugarcane plantation operations indicates the project area was heavily plowed in the historic era. Typically, soils were plowed to a depth of 18 to 24 inches. Due to this disturbance, the likelihood of encountering subsurface cultural deposits (i.e., *iwi kūpuna*, *imu*, *pōhaku*) remains low.

However, the community also indicated cultural material may exist below these plow zones, and thus may be impacted by the proposed project. Previous archaeological studies conducted in the vicinity of the Petition Area have largely resulted in the identification of historic properties associated with sugarcane plantation operations. No burials or traditional cultural material have yet been encountered within the Petition Area. In general, burials have been encountered along the *makai* portions of the *ahupua‘a*. The community expressed concern about potential impacts to subsurface cultural deposits and burials within the sewer line installation project area. Due to the density of both traditional and historic archaeological deposits within both the Keālia and Kapa‘a

shoreline area, it is highly likely that cultural material remains preserved under existing infrastructure (i.e. *mauka* portion of Kūhiō Highway).

A concern was also expressed about potential impacts to cultural practices and cultural resources occurring within greater Keālia Ahupua'a. *Mahi'ai* Timothy Reis shared concerns about potential impacts to ground water resources and the aquifer. He currently cultivates *kalo* within Keahapana Valley, utilizing a natural spring to water his crops. Although, the farming of *kalo* represents a traditional cultural practice, this practice occurs well outside the Petition Area, as well as outside of the sewer line installation project area. Mr. Reis requested that CSH provide evidence that the proposed action would not impact his cultural practices within Keahapana Valley. Per HHH Planners,

The Proposed Action has estimated water demand of 118,000 gallons per day (gpd), with maximum daily demand of 17,250 gpd. [The] existing water service agreement with Kealia Water Company allows for drawing up to 300,000 gpd. Two existing wells will be used. The existing and proposed pumpage is well within the pump capacity approved by the DLNR Commission on Water Resource Management.

8.8 Recommendations

Based on the above analysis, the following preliminary recommendations have been made:

1. The proposed project may have an adverse effect on SIHP #s -07013 and -07016, historic properties related to sugarcane plantation operations. Consultation with the SHPD is recommended to determine if additional archaeological work is required.
2. Although the likelihood of finds within the Petition Area remains low, project construction workers and all other personnel involved in the construction and related activities of the project must be informed of the possibility of inadvertent cultural finds, including human remains during a preconstruction meeting. As part of this preconstruction meeting, project construction workers and all other personnel involved in the construction and related activities of the project should be educated on the types of cultural material that may be encountered during the course of ground disturbance.
3. In the event that any potential historic properties are identified during construction activities, all activities will cease and the SHPD will be notified pursuant to HAR §13-280-3. In the event that *iwi kūpuna* are identified, all earth moving activities in the area will stop, the area will be cordoned off, and the SHPD and Police Department will be notified pursuant to HAR §13-300-40. In addition, in the event of an inadvertent discovery of human remains, the completion of a burial treatment plan in compliance with HAR §13-300 and HRS §6E-43 is recommended.
4. In the event that *iwi kūpuna* and/or cultural finds are encountered during construction, project proponents should consult with cultural and lineal descendants of the area to develop a reinterment plan and/or preservation plan. Proposed reinterment sites must be located within either Keālia or Kapa'a Ahupua'a, based upon the original location of the burial.

5. Although, the above analysis places water draw well within the pump capacity approved by the DLNR Commission on Water Resource Management, it is recommended that a hydrogeologist investigate this situation. The results of this investigation and mitigative measures, if necessary, must be included in the FEIS. Should stakeholders (i.e., *mahi'ai* and/or cultural descendants) observe changes or impacts to water resources, the landowner and/or developer should remain amenable to engaging in *ho'oponopono*.

8.9 Ka Pa'akai Analysis

In *Ka Pa'akai v. Land Use Commission*, 94 Hawai'i 31, 74, 7 P.3d 1068, 1084 (2000), the Court held the following analysis also be conducted:

1. The identity and scope of valued cultural, historical, or natural resources in the petition area, including the extent to which traditional and customary native Hawaiian rights are exercised in the petition area;
2. The extent to which those resources—including traditional and customary native Hawaiian rights—will be affected or impaired by the proposed action; and
3. The feasible action, if any, to be taken by the LUC to reasonably protect native Hawaiian rights if they are found to exist.

The CIA found there are no known traditional and customary Native Hawaiian rights exercised in the Petition Area. Under the *Ka Pa'akai Case*, the required analysis therefore ends after the determination that there are no known traditional and customary Native Hawaiian rights exercised in the 53.4-acre petition area.

Section 9 References Cited

Akana, Collette Leimomi with Kiele Gonzalez

2015 *Hānau Ka Ua: Hawaiian Rain Names*. Kamehameha Publishing, Honolulu.

Akina, Joseph

1913 I Ke hou i Ka Lulu-o-Moikeha i ka laula o kapaa. *Kuokoa* 2–9 May 1913. HEN Place Names, Kaua‘i. Bishop Museum Archives, Honolulu.

Alameida, Roy Kākulu

1993 Land Tenure and Land Use in Kawaihapai, O‘ahu. Master’s thesis in History. University of Hawai‘i at Mānoa, Honolulu.

Alexander, Samuel T., G.N. Wilcox, William O. Smith, and A. Unna

1883 *Planters’ Monthly*. Vol. II, No. 8 (November 1883), p. 246.

Alexander, William Patterson

1991 A Tour of Kauai in 1849: Private Journal of William DeWitt Alexander. *The Kauai Papers*, Kauai Historical Society, Līhu‘e, Kaua‘i, Hawai‘i.

Andrade, Carlos

2004 *A Perspective on Ahupua‘a and Kuleana Dynamics*. Written for Teresa Tico, Attorney at Law. Kamakakūokalani Center for Hawaiian Studies: Manoa.

2014 A Hawaiian Geography or A Geography of Hawai‘i? In *I ulu i ka ‘āina*, edited by Jonathan Osorio. University of Hawai‘i Press, Honolulu.

Armitage, George T. and Henry P. Judd

1944 *Ghost Dog and Other Hawaiian Legends*. Juliette May Fraser, illustrator. Helen Lamar Berkey, editor. Advertiser Publishing Company, Honolulu.

Ava Konohiki

2015 Ancestral Visions of ‘Āina website. Available online at <http://www.avakonohiki.org/>.

Bartholomew, Duane P., Richard A. Hawkins, and Johnny A. Lopez

2012 Hawaii Pineapple: The Rise and Fall of an Industry. *HortScience*. Vol. 47, No. 10. 2012:1390–1398.

Beamer, Keola

1994 Liner notes. “Kealia.” Patrick Cockett. Dancing Cat Records.

Beckwith, Martha

1940 *Hawaiian Mythology*. Yale University Press, New Haven, Connecticut.

1970 *Hawaiian Mythology*. University of Hawaii Press, Honolulu.

Belluomini, Scott A., Trevor M. Yucha, and Hallett H. Hammatt

2016 *Archaeological Inventory Survey Report for the Kapa‘a Stream Bridge Replacement Project, Kapa‘a and Keālia Ahupua‘a, Kawaihau District, Kaua‘i, Federal Highway Administration/Central Federal Lands Highway Division (FHWA/CFLHD) contract DTFH68-13-R-00027, TMKs: [4] 4-6-014:024 por., 033 por., 090 por., 092 por. Kūhiō Highway and Mailihuna Road Rights-of-Way,*

4-7-003:001 por., and 4-7-008:042 por. *Kūhiō Highway Right-of-Way*. Cultural Surveys Hawai'i, Inc., Honolulu.

Bennett, Wendell C.

1931 *The Archaeology of Kaua'i*. Bishop Museum Bulletin 80. Bernice Pauahi Bishop Museum, Honolulu.

1976 *The Archaeology of Kaua'i*. Originally published 1931. Bishop Museum Bulletin 80. Bernice Pauahi Bishop Museum, Honolulu.

Bishop Museum

2018 Hawaiian Ethnobotany Online Database. Electronic source, <http://data.bishopmuseum.org/ethnobotanydb/ethnobotany.php?b=list&o=1>.

Buck, Peter H. (Te Rangi Hiroa)

1964 *Arts and Crafts of Hawaii*. Bishop Museum Press, Honolulu.

Bushnell, K.W., David W. Shideler, and Hallett H. Hammatt

2002 *Cultural Impact Assessment for the Proposed Kapa'a-Keālia Bike and Pedestrian Path Kapa'a and Keālia, Kawaihau District, Kaua'i Island, Hawai'i (TMK: 4-5, 4-6-14, 4-7-03 & 04) (2 Volumes)*. Cultural Surveys Hawai'i, Inc., Kailua, Hawai'i.

2003 *Cultural Impact Assessment for the Proposed Kapa'a-Keālia Bike and Pedestrian Path, Kapa'a and Keālia Ahupua'a, Kawaihau District, Kaua'i Island, Hawai'i (TMK: 4-5, 4-6-14, 4-7-03 & 04), Volumes I and II*. Cultural Surveys Hawai'i, Inc., Kailua, Hawai'i.

Bushnell, K.W., Melanie Mann, Douglas Borthwick, Tony Bush, Todd Tulchin, David W. Shideler, and Hallett H. Hammatt

2003 *Archaeological Inventory Survey for the Proposed Kapa'a-Keālia Bike and Pedestrian Path, Kapa'a and Keālia Ahupua'a, Kawaihau District, Kaua'i Island, Hawai'i (TMK: 4-5, 4-6-14, 4-7-03 & 04)*. Cultural Surveys Hawai'i, Inc., Kailua, Hawai'i.

Catalina Island Conservancy

2017 *Did You Know...* Retrieved January 5, 2017, from <http://www.catalinaconservancy.org/index.php?s=news&p=article_87>.

Center for Labor Education and Research

n.d. *History of Labor in Hawai'i*. University of Hawai'i – West O'ahu. Electronic document, <http://www.hawaii.edu/uho/clear/home/HawaiiLaborHistory.html>.

Chinen, Jon J.

1958 *The Great Māhele, Hawai'i's Land Division of 1848*. University of Hawaii Press, Honolulu.

Ching, Francis

1982 *Archaeological Reconnaissance of 3 Sites for Proposed Kauai Central Sanitary Landfill Project, Kekaha, Kipu, and Kumukumu, Kauai Island, TMK: 1-2-02:1,9,21,40; 3-4-06:12 and 4-7-04:1*. Archaeological Research Center Hawai'i, Inc. (ARCH), Lāwa'i, Kaua'i.

Chun, Malcolm Nāea

- 1994 *Native Hawaiian Medicines*. D.M. Kaaiakamanu and J.A. Akina, translated by Malcom Nāea Chun. First People's Productions, Honolulu.
- 2011 *No Nā Mamo: Traditional and Contemporary Hawaiian Beliefs and Practices*. University of Hawai'i Press, Honolulu.

Cipolla, Craig N.

- 2008 Signs of Identity, Signs of Memory. *Archaeological Dialogues*. 15(2):196-215. Cambridge University Press, United Kingdom.
- 2013 Native American Historical Archaeology and the Trope of Authenticity. *Historical Archaeology*. Vol. 47(3):12-22.

Clark, John R.K.

- 1990 *Beaches of Kaua'i and Ni'ihau*. University of Hawaii Press, Honolulu.

Condé, Jesse C. and Gerald M. Best

- 1973 *Sugar Trains, Narrow Gauge Rails of Hawaii*. Glenwood Publishers, Felton, California.

Cook, Chris

- 1999 *Kaua'i, the Garden Island: A Pictorial History of the Commerce and Work of the People*. Donning Company, Virginia Beach, Virginia.

Coulter, John Wesley

- 1931 *Population and Utilization of Land and Sea in Hawaii, 1853*. Bishop Museum Bulletin 88. Bernice Pauahi Bishop Museum, Honolulu.

CTAHR (University of Hawai'i College of Tropical Agriculture and Human Resources)

- 2001 Crops of Hawaii. *University of Hawai'i College of Tropical Agriculture and Human Resources*. Web page,
[https:// www.ctahr.hawaii.edu/TPSS/research_extension/rxsoil/sugarcane.htm](https://www.ctahr.hawaii.edu/TPSS/research_extension/rxsoil/sugarcane.htm).

Damon, Ethel M.

- 1931 *Koamalu*. 2 Volumes. Privately printed at the Honolulu Star-Bulletin Press, Honolulu.

Dagher, Cathleen A. and Michael F. Dega

- 2017 *Supplemental Cultural Impact Assessment for the Proposed Piilani Promenade Project, Ka'ono'ulu Ahupua'a, Wailuku and Makawao Districts, Island of Maui, Hawai'i, TMK: (2) 3-9-001:016, 170, 171, 172, 173, and 174*. Scientific Consulting Services, Inc., Honolulu.

Dega, Michael and James Powell

- 2003 *Archaeological Monitoring During Phase I of the Kaua'i Rural Fiber Optic Duct Lines Project, Kaua'i Island*. Hawai'i. Scientific Consulting Services, Inc., Honolulu.

Dega Michael, Robert L. Spear, and James Powell

- 2005 *An Archaeological Inventory Survey of 20.81-Acres in Waipouli, North Olohena Ahupua'a, Kawaihau District, Kaua'i Island, Hawai'i [TMK: 4-3-2:15, 16 & 20]*. Scientific Consultant Services, Inc., Honolulu.

Department of Education

- 2015 *Nā Hopena A‘o Statements HĀ: BREATH*. Department of Education State of Hawaii, Honolulu.

De Silva, Rita

- 2016 The Kauai of old will always be treasured. *Garden Island*. Electronic document, http://thegardenisland.com/lifestyles/opinion/the-kauai-of-old-will-always-be-treasured/article_00963018-c192-5ccb-ac22-dc76b856a4f1.html (accessed 4 August 2016).

Dole, Charles S.

- 1916 The Hui Kawaihau. Paper read at the November meeting of the Kauai Historical Society on 16 November 1916. Līhu‘e, Kaua‘i, Hawai‘i.

Donn, John M.

- 1906 Based on 1903 map of “Kauai Hawaiian Islands” by Walter E. Wall with data from private surveys by John M. Donn. Land use as of 1906 added to map. Registered Map 2375. Hawai‘i Land Survey Division, Department of Accounting and General Services, Honolulu.

Donohugh, Donald

- 2001 *The Story of Kōloa, A Kauai Plantation Town*. Mutual Publishing, Honolulu.

Drennan, Trisha M.

- 2007a *An Archaeological Data Recovery Plan for State Site 50-30-08-3959, located in LCA 10907:2 and State Site 50-30-08-7028 (Historic Cemetery) located in Keālia Ahupua‘a, Kawaihau District, Island of Kaua‘i, Hawai‘i, [TMK: (4) 4-7-003:002 (por.) AND 4-7-004:001 (por.)]*. Scientific Consultant Services, Inc., Honolulu.
- 2007b *Executive Summary Report on the Archaeology of 2,008 Acres in Keālia Ahupua‘a, Kawaihau District, Island of Kaua‘i, Hawai‘i, [TMK: (4) 4-7-003:002 (por.) AND 4-7-004:001 (por.)]*. Scientific Consultant Services, Inc., Honolulu.

Drennan, Trisha M. and Michael Dega

- 2007a *An Archaeological Inventory Survey Report Phase II of a Portion of 2,008 Acres in Keālia, Keālia Ahupua‘a, Kawaihau District, Island of Kaua‘i, Hawai‘i, [TMK: (4) 4-7-003:002 (por.) AND 4-7-004:001 (por.)]*. Scientific Consultant Services, Inc., Honolulu.
- 2007b *An Archaeological Inventory Survey Report Phase IV of a Portion of 2,008 Acres in Keālia, Keālia Ahupua‘a, Kawaihau District, Island of Kaua‘i, Hawai‘i, [TMK: (4) 4-7-003:002 (por.) AND 4-7-004:001 (por.)]*. Scientific Consultant Services, Inc., Honolulu.

Drennan, Trisha M., Cathleen Dagher, and Robert L. Spear

- 2006 *An Archaeological Inventory Survey Report Phase I of a portion of 2,008 Acres in Kealia, Kealia Ahupua ‘a, Kawaihau District, Island of Kaua ‘i, Hawai‘i [TMK: (4) 4-7-003:002 (por.) and 4-7-004:001 (por.)]*. Scientific Consultant Services, Inc., Honolulu.

Drennan, Trisha M., Guerin Tome, Shayna Cordie, and Michael Dega

- 2007 *An Archaeological Inventory Survey Report of a 386 Acre Portion of 2,008 Acre Property (Phase III) in Keālia, Keālia Ahupua'a, Kawaihau District, Island of Kaua'i, Hawai'i, [TMK: (4) 4-7-003:002 (por.) AND 4-7-004:001 (por.)]*. Scientific Consultant Services, Inc., Honolulu.

Economist, The

- 2017 Barbershops as confessionals, newsrooms and therapists. *The Economist*, 21 June 2017. Electronic document, <https://www.economist.com/blogs/prospero/2017/06/hairstories>.

Edmondson, Charles Howard

- 1946 *Reef and Shore Fauna of Hawaii*. Bishop Museum, Honolulu.

Ellams, Inua

- 2016 Inua Ellams: Redefining black masculinity. Video file, <https://www.youtube.com/watch?v=QG7Fb7E5nOk>.

Emerson, Nathaniel B.

- 1965 *The Unwritten Literature of Hawaii: The Sacred Songs of the Hula*. Collected by Nathaniel B. Emerson. Charles E. Tuttle Company, Rutland, Vermont and Tokyo.

Folk, William H. and Hallett H. Hammatt

- 1991 *Field Inspection, Surface Collection and Assessment at Keālia Sand Quarry Site*. Letter report on file at Cultural Surveys Hawai'i, Kailua, Hawai'i.

Foote, Donald E., Elmer L. Hill, Sakuichi Nakamura, and Floyd Stephens

- 1972 *Soil Survey of the Islands of Kauai, Oahu, Maui, Molokai, and Lanai, State of Hawaii*. U.S. Department of Agriculture, Soil Conservation Service, in cooperation with the University of Hawai'i Agricultural Experiment Station. U.S. Government Printing Office, Washington, D.C.

Fornander, Abraham

- 1916-1919 *Fornander Collection of Hawaiian Antiquities and Folk-Lore*. Bishop Museum Press, Honolulu.
- 1919 Legend of Kuapakaa. In *Fornander Collection of Hawaiian Antiquities and Folk-Lore* Volume V Part I, Bishop Museum Press, Honolulu.

Friends and Family of Nisei Veterans

- 2018 "History of 442nd Regimental Combat Team." Web page, <http://ffnv.org/history-of-442nd-regimental-combat-team/>.

Giambelluca, T., M. Nullet, and T. Schroeder

- 1986 *Rainfall Atlas of Hawaii Report R76*. State of Hawai'i, Department of Land and Natural Resources, Division of Water and Land Development, Honolulu.

Google Earth

- 2013 Aerial photographs of Hawai'i. Google Inc., Mountain View, California. Available online at www.google.com/earth.html.

Green, L.C. and Martha Beckwith

- 1926 Hawaiian Customs and Beliefs Relating to Sickness and Death. *American Anthropologist*

Green, Laura C. and Mary Kawena Pukui

1936 *The Legend of Kawelo and other Hawaiian Folk Tales*. Martha Warren Beckwith: Honolulu.

Hammatt, Hallett H. and Rodney Chiogioji

1998 *Archaeological Reconnaissance Survey and Assessment of the Lands of Keālia Ahupua‘a (6,690.9 Acres), Kawaihau District, Kaua‘i Island TMK 4-6-08:07, 4-7-01:01, 4-7-02:03, 4-7-02:05, 4-7-03:02, 4-7-04:01, 4-7-04:06*. Cultural Surveys Hawai‘i, Inc., Kailua, Hawai‘i.

Handy, E.S. Craighill

1940 *The Hawaiian Planter*. Bishop Museum Bulletin Volume 1, No. 161. Bernice Pauahi Bishop Museum, Honolulu.

Handy, E.S. Craighill and Elizabeth G. Handy

1972 *Native Planters in Old Hawaii: Their Life, Lore, and Environment*. Bishop Museum Bulletin 233. Bernice Pauahi Bishop Museum, Honolulu.

Handy E.S. and M. Pukui

1977 *The Polynesian Family System in Ka‘ū*. Hawaiian Polynesian Society, Inc., Wellington, New Zealand.

Hawai‘i TMK Service

2014 Tax Map Key [4] 4-7-09. Hawai‘i TMK Service, Honolulu.

Hawaiian Territorial Planning Board

1940 *Master Plan of the Town of Kapaa*. In collaboration with the Kaua‘i County Board of Supervisors, Publication No. 8. Advertiser Publishing Company, Honolulu.

HEN (Hawaiian Ethnological Notes)

1885 *Papers by Lahainaluna Students After Interviews with Old Residents of Kauai*. Hawaiian Ethnological Notes, Vol. 1, Lahainaluna Students Papers, Hms. Misc. No. 15. Waimea, Kauai. Bishop Museum Archives, Honolulu.

Hoku o Hawaii

1908 Article. *Hoku o Hawaii* 31 December.

Holstein, Ed C.

2003 *Ka Buke Mele o nā Hīmeni Hawai‘i (The Lyric Book of Hawaiian Choral Songs)*. Foreword by M. Puakea Nogelmeier. Bishop Museum Press, Honolulu.

Hommon, Robert J.

2013 *The Ancient Hawaiian State: Origins of a Political State*. Oxford University Press, New York.

Honolulu Advertiser

1997 Amfac to put more land up for sale: Tracts on Kauai, Big Island. By Mike Gordon. *Honolulu Advertiser* 7 July 1997:Section B1.

Ho‘oulumāhie

2008 *The epic tale of Hi‘iakaikapoliopole, woman of the sunrise, Lightning-skirted beauty of Halema‘uma‘u, as told by Ho‘oulumāhie*. M. Puakea Nogelmeier, translator. Awaiaulu, Honolulu

Huapala

- n.d. Hula o Makee. Electronic document, http://www.huapala.org/Hula/Hula_O_Makee.html.
- n.d. Lanakila Kawaihau. Electronic document, http://www.kalena.com/huapala/Lanakila_Kawaihau.html.
- n.d. Lanakila Kawaihau. Electronic document, http://www.huapala.org/Lan/Lanakila_Kawaihau.html.
- n.d. Waipahe'e (Slippery Water). Electronic document, <http://www.huapala.org/Wai/Waipahee.html>.

Hula Preservation Society

- 2014 Hula Preservation Society website. Available online at <http://hulapreservation.org>.

Inahara, Toshio

- 2005 "Classified 4C – enemy alien." *Discover Nikkei: Japanese Migrants and their Descendants*. Japanese American National Museum, 6 December 2005. <http://www.discovernikkei.org/en/interviews/clips/472/>.

Jackson, Kenneth T.

- 1985 *Crabgrass Frontier: The Suburbanization of the United States*. Oxford University Press, New York.

Joesting, Edward

- 1984 *Kauai, The Separate Kingdom*. University of Hawaii Press and Kauai Museum Association, Ltd., Honolulu.

Jourdane, Elaine and Sarah Collins

- 1996 *Field Inspection of Inadvertent Burial Reported at Keālia, Kaua'i, State Site # 50-30-08-1851*. State Historic Preservation Division, Department of Land and Natural Resources, Honolulu.

Juvik, Sonia P. and James O. Juvik (editors)

- 1998 *Atlas of Hawai'i*. Third edition. University of Hawai'i Press, Honolulu.

Ka Maka'āinana

- 1897 Article. *Ka Maka'āinana* 4 January:8

Ka Nupepa Kuokoa

- 1862 "Na mea hou o Hawaii nei." Buke 1, Helu 37 (Augate 9, 1862): 2. *Na Mele Aimoku, na Mele Kupuna a me na Mele Ponoī o ka Moi Kalakaua I: Dynastic Chants, Ancestral Chants, and Personal Chants of King Kalākaua I*. 1886. Reprint, 2001. Hawaiian Historical Society, Honolulu.

Kalākaua, David

- 1888 *The Legends and Myths of Hawaii: The Fables and Folk-Lore of a Strange People*. Charles L. Webster and Company, New York.

Kamakau, Samuel M.

- 1992 *Ruling Chiefs of Hawaii*. Kamehameha Schools Press, Honolulu.

Kamakawiwo'ole, Israel and The Makaha Sons of Ni'ihau

- 2008 *Waipahe'e Falls*. Tropical Music, Inc., Honolulu.

Kamehameha Schools

- 1994 *Life in Early Hawai'i: The Ahupua'a*. Kamehameha Schools Press, Honolulu.
Electronic document, <http://ulukau.org/elib/collect/ahu/index/assoc/D0.dir/doc3.pdf>

Kapa'a Elementary School

- 1983 *Kapa'a School 1883-1933: A "Century of Knowledge."* Kapa'a Elementary, Kapa'a, Kaua'i.

Kaua'i Historical Society

- n.d. Photograph of Kealia Sugar Mill area. Kauai Historical Society, Līhu'e, Kaua'i.
n.d. Kealia Reminisce. Kauai Historical Society, Līhu'e, Kaua'i.

Kawaikini

- 2018 *Our Vision*. New Century Public Charter School Kawaikini. Webpage, <https://kawaikini.com/about-us/our-vision/>.

Kawelu, Kathleen L.

- 2015 *Kuleana and Commitment: Working Toward a Collaborative Hawaiian Archaeology*. University of Hawai'i Press, Honolulu.

King, Robert D.

- 1935 Districts in the Hawaiian Islands. In *A Gazetteer of the Territory of Hawaii*, compiled by John Wesley Coulter. University of Hawaii Research Publications, No. 11. University of Hawai'i, Honolulu.

Knudsen, Eric A. and Gurre P. Noble

- 1946 *Teller of Hawaiian Tales*. Reprint. Mutual Publishing, Honolulu.

Komori, Eric

- 1993 *Inadvertent Exposure of Burial on "Donkey Beach" at Homaikawaa, Kaua'i, TMK 4-4-7-004:006, site 50-30-08-1899*. Report on file at State Historic Preservation Division, Kapolei, Hawai'i.

Landgraf, Anne Kapualani

- 1994 *Nā Wahi Pana O Ko'olau Poko: Legendary Places of Ko'olau Poko*. Fred Kalani Meinecke, translator. University of Hawai'i Press, Honolulu.

Lydgate, John M.

- 1991 William E. Rowell's Reminiscences of Waimea. In *The Kauai Papers*. Kauai Historical Society, Līhu'e, Hawai'i.

Malo, David

- 1951 *Hawaiian Antiquities (Moolelo Hawaii)*. Second edition. Nathaniel B. Emerson, translator. Bishop Museum Press, Honolulu.

McGregor, Daviana Pomaikai

- 1996 An Introduction to the Hoa'āina and Their Rights. *The Hawaiian Journal of History*, vol. 30 (1996):1-27.
2010 Hawaiian Sustainability. *The Value of Hawai'i: Knowing the Past, Shaping the Future*. Craig Howes and Jon Osorio, ed. University of Hawai'i Press, Honolulu.

Minerbi, Luciano

- 2003 Cultural Assessments and the Planning Process. *Planning Advisory Service (PAS) Memo*, October 2003:1-6. American Planning Association, Chicago.

Nader, Laura, editor

- 1996 *Naked science: Anthropological inquiry into boundaries, power, and knowledge*. Routledge, New York.

Nakuina, Moses K.

- 1990 *The Wind Gourd of La‘amaomao*. First edition. Esther T. Mookini and Sarah Nākoa, translators. Kalamakū Press, Honolulu.

Nishimoto, Michi Kodama, Warren S. Nishimoto, and Cynthia A. Oshiro

- 1984 *Hanahana: An Oral History Anthology of Hawaii’s Working People*. University of Hawai‘i at Mānoa, Honolulu.

NOAA (National Oceanic and Atmospheric Administration)

- 2017 Native Hawaiian Cultural Heritage. *Papahānaumokuākea Marine National Monument*. Website, <https://www.papahanaumokuakea.gov/heritage/>.

Nogelmeier, M. Puakea

- 2001 *He Lei no ‘Emalani: Chants for Queen Emma Kaleleonālani*. Trans. Mary Kawena Pukui, Theodore Kelsey, and M. Puakea Nogelmeier. Queen Emma Foundation and Bishop Museum Press, Honolulu.

Office of Hawaiian Affairs

- 2015 *Papakilo Database*. Office of Hawaiian Affairs cultural and historical database. Electronic document, <http://papakilodatabase.com/main/index.php>

Office of Environmental Quality Control (OEQC)

- 2012 *Guide to the Implementation and Practice of the Hawaii Environmental Policy Act*. State of Hawai‘i, Honolulu.

O’Hare, Constance R., David W. Shideler, and Hallett H. Hammatt

- 2003 *Burial Treatment Plan For Site 50-30-08-2074 Keālia Ahupua‘a, Kawaihau District, Kaua‘i Island, Hawai‘i (TMK 4-7-03:1 Portion)*. Cultural Surveys Hawai‘i, Inc., Kailua, Hawai‘i.
- 2009 *Archaeological Literature Review and Field Inspection Report for the Proposed Diamond Head Tower Moana Surfrider Hotel Redevelopment Project, Waikīkī Ahupua‘a, Kona District, O‘ahu, TMK: [1] 2-6-001:012, por.* Cultural Surveys Hawai‘i, Inc., Kailua, Hawai‘i.

Parham, James

- 2008 Atlas of Hawaiian Watersheds and Their Aquatic Resources. “Introduction – Island age and stream morphology.” Hawaii Division of Aquatic Resources and Bishop Museum. Electronic document, http://www.hawaiiwatershedatlas.com/intro_streams.html.

Pauketat, Timothy R.

- 2001 *The Archaeology of Traditions*. University Press of Florida, St. Augustine, Florida.

Perzinski, David, Matt McDermott, and Hallett H. Hammatt

2000a *Archaeological Inventory Survey and Sub-Surface Testing of the Approximately 300 Acre Keālia Makai Parcel, Keālia Ahupuaʻa, Kawaihau District, Kauaʻi Island (TMK 4-7-04:6)*. Cultural Surveys Hawaiʻi, Inc., Kailua, Hawaiʻi.

2000b *Burial Treatment Plan for Site 50-30-08-1899 at Palikū Beach (Donkey Beach), Ahupuaʻa of Keālia, Kawaihau District, Kauaʻi Island, (TMK 4-7-04:6)*. Cultural Surveys Hawaiʻi, Inc., Kailua, Hawaiʻi.

Pukui, Mary Kawena

1983 *ʻŌlelo Noʻeau: Hawaiian Proverbs & Poetical Sayings*. Bishop Museum Press, Honolulu.

1995 *Na Mele Welo: Songs of Our Heritage*. University of Hawaiʻi Press, Honolulu.

Pukui, Mary Kawena and Caroline Curtis

1949 *Pikoi, and Other Legends of the Island of Hawaiʻi*. Compiled by Mary Kawena Pukuʻi and retold by Caroline Curtis. Kamehameha Schools, Honolulu.

Pukui, Mary Kawena, E.W. Haertig, and Catherine A. Lee

1972 *Nānā i ke Kumu (Look to the Source)*. Volumes 1 and 2. Hui Hānai, Honolulu.

Pukui, Mary Kawena and Laura C.S. Green

1995 *Folktales of Hawaiʻi*. Bishop Museum Press, Honolulu.

Pukui, Mary K. and Samuel H. Elbert

1986 *Hawaiian Dictionary*. Second edition. University of Hawaii Press, Honolulu.

Pukui, Mary K., Samuel H. Elbert, and Esther Mookini

1974 *Place Names of Hawaii*. University of Hawaii Press, Honolulu.

Relph, E.C.

1976 *Place and Placelessness*. Pion, London.

Rice, William Hyde

1974 *Hawaiian Legends*. Bishop Museum Bulletin 3. Bernice Pauahi Bishop Museum, Honolulu; originally published 1923, Kraus Reprint, Millwood, New York.

1977 *Hawaiian Legends*. Bishop Museum Special Publication 63. Bernice Pauahi Bishop Museum, Honolulu.

Rosenberg, Jennifer

2018 "A Brief Timeline of the 1950s." *ThoughtCo*, 5 September 2018, <https://www.thoughtco.com/1950s-timeline-1779952>.

Schmitt, Robert C.

1969 The Population of Northern Kauai in 1847. In *Hawaii Historical Review, Selected Readings*, 1969, edited by Richard A. Greer. Hawaiian Historical Society, Honolulu.

1973 The Missionary Censuses of Hawaii. *Pacific Anthropological Records* 20. Honolulu.

Shintani, Terry

1993 *The Waiʻanae Book of Hawaiian Health*. Waianae Coast Comprehensive Health Center, Waianae.

Sholin, Carl E., Kelly R. Yeates, and Thomas S. Dye

- 2012 *Archaeological Monitoring Report for the Keālia Beach Corridor Transmission Line Reconfiguration at Kūhiō Highway (Hawai'i State Highway 56), Keālia Ahupua'a and Kapa'a Ahupua'a, Kawaihau District, Island of Kaua'i, TMK: (4) 4-7-003 and (4) 4-6-014.* T.S. Dye & Colleagues, Archaeologists, Inc., Honolulu.

Skinner, Charles M.

- 1900 *Myths & Legends of Our New Possessions & Protectorate.* J.P. Lippincott Company, Philadelphia and London.

Soboloski, Hank

- 2016 Ernest Krull's Dairy. *The Garden Island*. Online newspaper, 7 September 2014, http://thegardenisland.com/lifestyles/island_history/ernest-krull-s-dairy/article_b4f38906-3633-11e4-b86d-0019bb2963f4.html
- 2018 Ginger Beralas's Lihue Plantation Train Ride. *The Garden Island*. Online newspaper, 5 August 2018, <http://www.thegardenisland.com/2018/08/05/lifestyles/ginger-beralass-lihue-plantation-train-ride/>.

Soehren, Lloyd

- 2002–2010 *A Catalog of Kaua'i Place Names Including Ni'ihau, Lehua and Ka'ula Compiled from the Records of the Boundary Commission and The Board of Commissioners to Quiet Land Titles of the Kingdom of Hawaii.* Hawaiian Place Names. Online Database at Ulukau, The Hawaiian Electronic Library. Available online, <http://ulukau.org>.

Stahl, J.D.

- 1986 Moral Despair and the Child as a Symbol of Hope in Pre-WWII Berlin. *Children's Literature*. 14. pp. 83-104.

State of Hawai'i Commission on Water Resource Management

- 1993 *Hawai'i Streams: Nā Kahawai o Hawai'i.* Commission on Water Resource Management, Department of Land and Natural Resources, Honolulu.

Stokes, John F.G.

- 1991 *Heiau of the Island of Hawai'i.* Tom Dye, editor. Bishop Museum Press, Honolulu.

Takaki, Ronald

- 1983 *Pau Hana: Plantation Life and Labor in Hawaii.* University of Hawaii Press: Honolulu.

Taylor, Clarice B

- 1995 *Hawaiian Almanac.* Mutual Publishing: Honolulu.

Thrum, Thomas G.

- 1907 *Hawaiian Almanac and Annual for 1907.* Thomas G. Thrum Publishing, Honolulu.

Toth, Catherine

- 2015 Crazy for Kulolo: Kauai's Dessert Staple. *Hawai'i Magazine*. 27 May 2015. Electronic document, <http://www.hawaiimagazine.com/content/crazy-kulolo-kauais-dessert-staple>.

Trask, Mililani

- 2012 Hawaiian Perspectives GMOs and Cultural Values. *Facing Hawai'i's Future*. Hawai'i SEED, Koloa.

UH SOEST

- 1982 UH SOEST Keālia Coast aerial photograph. University of Hawai'i at Mānoa School of Ocean and Earth Science and Technology–Coastal Geology Group. Online at <http://soest.hawaii.edu/>

Ulukau

- 2014 *Māhele Database*. Hawaiian Electronic Library, <http://ulukau.org/cgi-bin/vicki?l=en..>

United States Office of War Information

- 1943 *Japanese-American volunteers. First man to have applied for voluntary induction at local board 2, Lihue, Kauai, Hawaii when formation of the AJA [Americans of Japanese ancestry] combat regiment was announced, Tatsuo Truruda, twenty-four, of Kealia was also one of the first in the territory to take his physical examination. Examining him is Major Malcolm A. Jones, president of the examining board. Tsuruda, active in Boy Scout activities on the Garden Isle, was a clerk at the Lihue Plantation Company. Both his father and mother are American citizens.* March 1943, *Library of Congress*, <https://www.loc.gov/resource/fsa.8b06593/>.

USDA (U.S. Department of Agriculture)

- 2001 Soil Survey Geographic (SSURGO) database. U.S. Department of Agriculture, Natural Resources Conservation Service. Fort Worth, Texas. <http://www.ncgc.nrcs.usda.gov/products/datasets/ssurgo/> (accessed March 2005).

USGS (U.S. Geological Survey)

- 1910 Kapaa USGS Survey 7.5-Minute Series Topographic Quadrangle. USGS Information Services, Denver, Colorado.
- 1996 Kapaa USGS Survey 7.5-Minute Series Topographic Quadrangle. USGS Information Services, Denver, Colorado.
- 2011 USGS Orthoimagery (aerial photograph). USGS Information Services, Denver, Colorado.

Vizenor, Gerald

- 1999 *Manifest Manners: Narratives on Postindian Survivance*. University of Oklahoma Press: Lincoln.

Waihona 'Aina

- 2000 *The Māhele Database*. Electronic document, <http://waihona.com> (accessed 10 April 2014).

Walker, R.J.

- 1995 *Contestation of Power and Knowledge in the Politics of Culture*. Keynote address, Twentieth Annual University of Hawai'i Pacific Islands Studies Conference. Honolulu Hawai'i, 6-9 December.

Westervelt, W.D.

- 1915 *Legends of Gods and Ghosts*. G.H. Ellis Press, Boston.

Wianecki, Shannon

- 2012 The Sacred Spine. *Maui Nō Ka ‘Oi Magazine*, September-October 2012. Electronic document, <https://mauimagazine.net/the-sacred-spine/>.

Wichman, Frederick B.

- 1985 *Kaua‘i Tales*. Bamboo Ridge Press, Honolulu.
- 1998 *Kaua‘i Ancient Place Names and Their Stories*. University of Hawai‘i Press, Honolulu.
- 2001 *Pele Mā: Legends of Pele from Kaua‘i*. Bamboo Ridge Press, Honolulu.

Wilcox, Carol

- 1996 *Sugar Water: Hawaii’s Plantation Ditches*. University of Hawaii Press, Honolulu.

Wilcox, Carol, Kimo Hussey, Vicky Hollinger, and Puakea Nogelmeier

- 2003 *He Mele Aloha: A Hawaiian Songbook*. ‘Oli‘Oli Productions, LLC, Honolulu.

Young, Peter T.

- 2016 Plantation Camps. *Images of Old Hawai‘i*. 29 January 2016. Electronic document, <http://imagesofoldhawaii.com/plantation-camps/>.