

**FINAL—Archaeological Inventory Survey of TMK: (3) 6-4-038:011 (por.), Waimea Ahupua‘a, South Kohala District, Island of Hawai‘i**



**Prepared For:**

Group 70 International  
925 Bethel Street, 5th Floor  
Honolulu, Hawaii 96813



April 2015





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**Prepared By:**

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## MANAGEMENT SUMMARY

An archaeological inventory survey was conducted for TMK: (3) 6-4-038:001 (por.) in Waimea Ahupua‘a, South Kohala District, on the Island of Hawai‘i. This was done in preparation for ground disturbance associated with construction of an agricultural park, cemetery, equestrian center, golf facility, and necessary site improvements for utilities, infrastructure, and road access. The archaeological work included a pedestrian survey that covered 100% of the parcel, as well as test excavations consisting of three test units and ten trenches. The entire property was utilized as ranch land and little remains on the surface. Stratigraphy consists entirely of natural deposits, with bedrock as shallow as 22 cm below surface.

One archaeological site was found. Site 50-10-06-30195 is a surface alignment of cobbles, in fair condition. Site 30195 is significant under Criterion d of HAR §13-284-6(b) for its potential to yield important information on history or prehistory. No further work is recommended for Site 30195. Archaeological monitoring should be conducted during future ground disturbance only in the vicinity of the site.



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## INTRODUCTION

At the request of Group 70 International, Keala Pono Archaeological Consulting conducted an archaeological inventory survey of TMK: (3) 6-4-038:011 (por.) in Waimea Ahupua'a, South Kohala District, on the island of Hawai'i. Plans for the parcel include construction of an agricultural park, cemetery, equestrian center, golf facility, and necessary site improvements for utilities, infrastructure, and road access. The archaeological inventory survey was designed to identify any historic properties that may be located on the property in anticipation of the proposed construction.

This report is drafted to meet the requirements and standards of state historic preservation law, as set out in Chapter 6e of the Hawai'i Revised Statutes and SHPD's draft *Rules Governing Standards for Archaeological Inventory Surveys and Reports*, §13–276. The report begins with a description of the project area and a historical overview of land use and archaeology in the area. The next section delineates methods used in the fieldwork, followed by the results of the archaeological survey. Project results are summarized and recommendations are made in the final section. Hawaiian words, flora and fauna, and technical terms are defined in a glossary at the end of the document.

### Project Location and Environment

The Waimea Nui project is located on Hawai'i Island in the district of Kohala Waho, or South Kohala; in the Kohala land division called Waimea; in the Waimea subdivision of Pu'ukapu. Around Pu'ukapu are the other Waimea subdivisions of 'Ala'ōhi'a, Noho'āina, Paulama, Pauweanui, Po'okanaka, Pukalani, and Pu'uka'ali'ali. TMK: (3) 6-4-038:011 is a 191.711-acre (77.58 ha) parcel owned by Hawaiian Home Lands. The parcel is bounded by Hi'iaka Street on the north, Hawaiian Home Lands parcels on the east and south, and undeveloped ranchland on the west. The archaeological inventory survey covers 161.65 acres (65.42 ha) of the property (Figures 1 and 2).

The project site is situated in the northern part of the Big Island of Hawai'i below the southern slopes of the Kohala Mountains, at an elevation of 2,000–3,000 feet (600–900 m), approximately 11 miles (18 km) from the coast. Temperatures here usually range from 60–70° Fahrenheit (15.5–21.1° C). There are several streams flowing down from the Kohala Mountains toward the project site, such as the Lanimaomao, the Waikoloa, and the Kohākōhau, but none of these streams enter the project area. The region has a mean annual rainfall of approximately 30–40 inches (75–100 cm) per year with most months seeing 2–4 inches (5–10 cm) of rain (Giambelluca et al. 1986:99).

The soils in the project area are of the Waimea-Kikoni-Naalehu association. These consist of "Very deep, nearly level to steep, well drained soils that have a medium-textured to moderately fine textured subsoil; on uplands" (Sato et al. 1973:oversize map). Particularly, Waimea very fine sandy loam, 6–12% slopes, (WMC) predominates (Figure 3). There are also small portions of Kikoni very fine sandy loam, 0–3% or 3–12% slopes, (KfA and KXC respectively) in the northern and eastern parts of the project area (Sato et al. 1973) (see Figure 3)

As unimproved pasture, the flora of the region consist mostly of 'a'ali'i, 'ilima, cactus, and various grasses, although only grasses remain within the specific project area. The land in the study area is relatively flat, with a few low, rocky knolls and has fared well as pasture lands in recent history.

### The Undertaking

The Waimea Hawaiian Homesteaders' Association (WHHA) and its subsidiary organization, the Waimea Nui Community Development Corporation (WNCDC) have been actively conceptualizing for over 40 years a community development project to address the cultural, economic, and social needs of the Waimea area and of Waimea Homestead families in particular (Figure 4). The Waimea

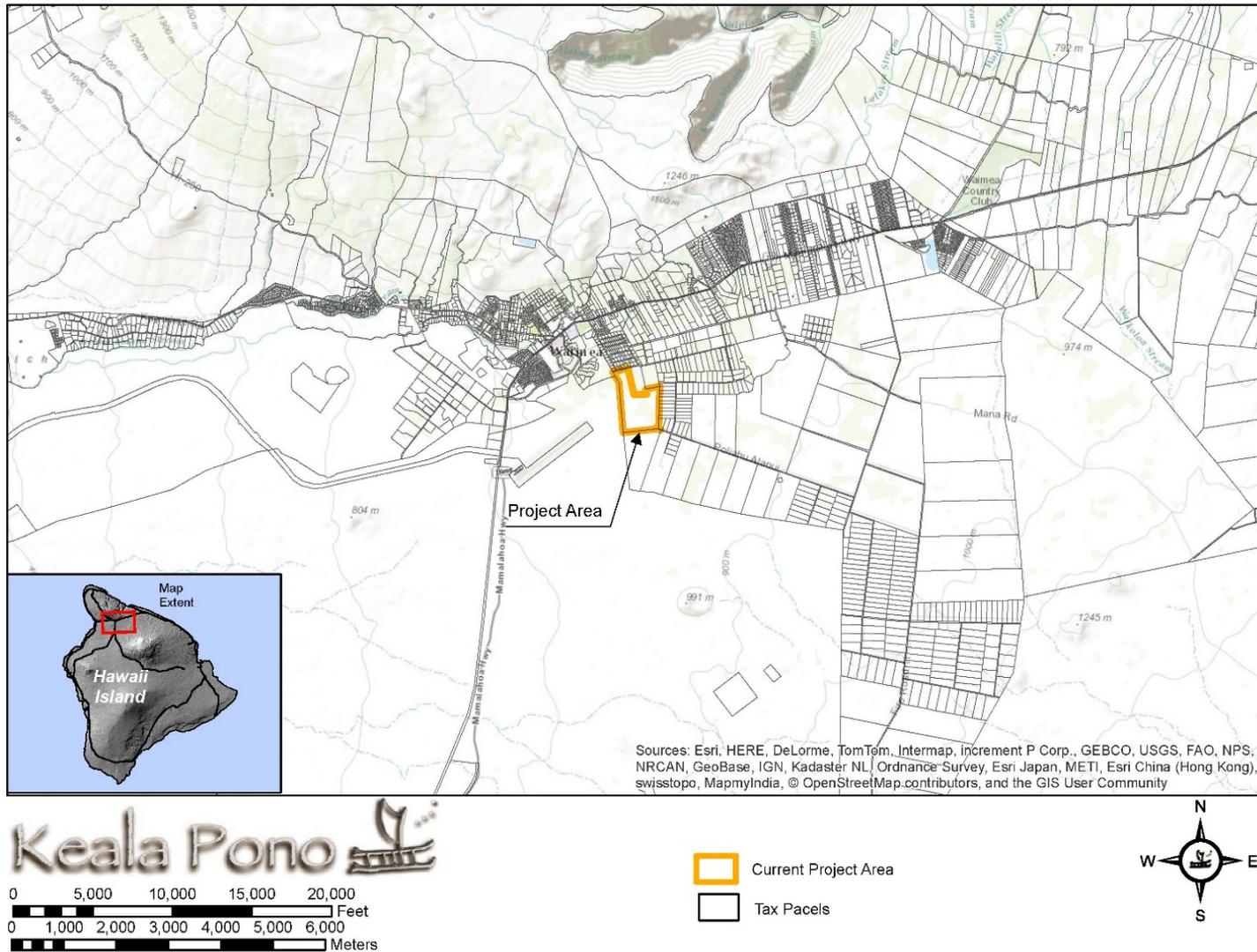


Figure 1. Project area on a 7.5 minute USGS Waimea quadrangle map with TMK overlay.

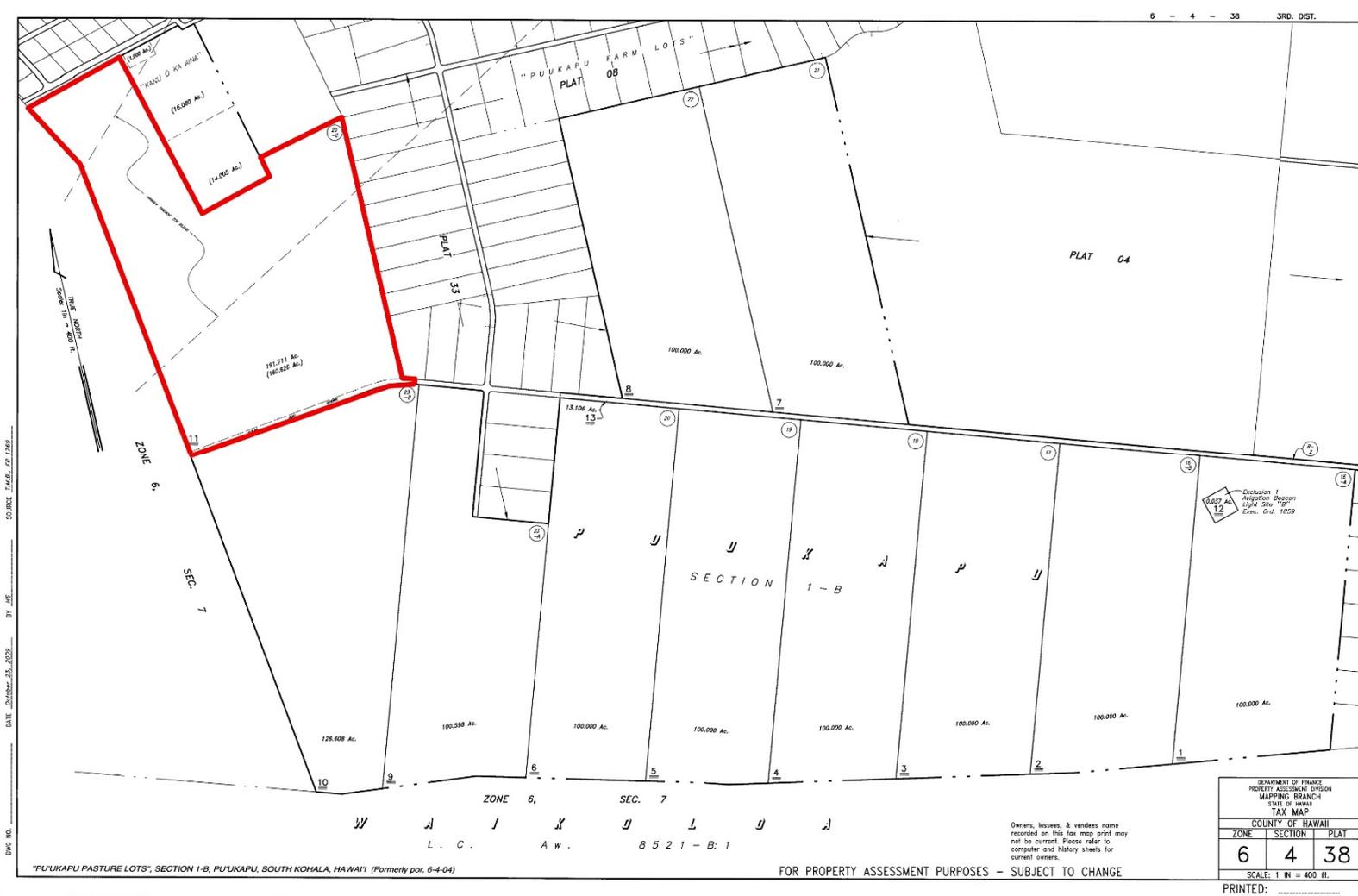


Figure 2. Project area (in red) on TMK plat map.

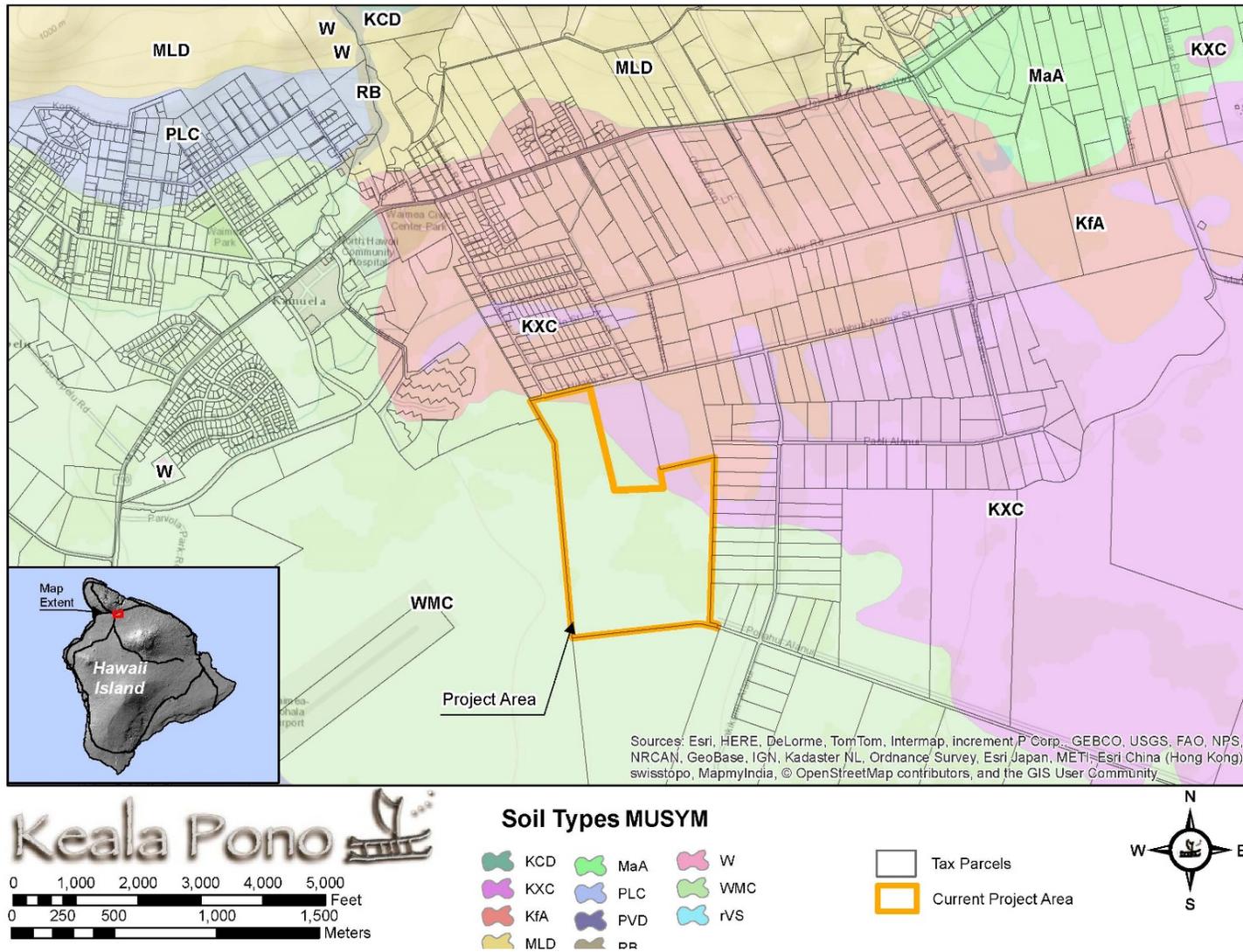


Figure 3. Soils in the vicinity of the project area.



**DHHL Waimea Nui  
Development Plan**

Development Plan of the Waimea Nui Community Development Initiative  
Pu'ukapu, Waimea, Kohala Waho, Hawai'i Island  
TMK (3)-6-4-38:011 (POR.)



11 December 2014

Figure 4. Conceptual plan for Waimea Nui.

Nui Regional Community Development Initiative (WNR-CDI) was developed based upon the ideas and concepts articulated by the homestead community. It also incorporates the long-term visions of both WHHA and the Department of Hawaiian Home Lands (DHHL), as outlined in the DHHL Waimea Regional Plan from 2012. The WNR-CDI proposes the following:

**Homestead Cemetery/Chapel** - Currently, there is no dedicated cemetery in the region for homesteaders to lay family members to rest. The closest cemetery options are over an hour away in Hilo or Kona, which has essentially forced families to opt for cremation in order to keep deceased family close by. A cemetery/chapel with a columbarium will allow the homestead community to perform proper burials in Waimea that are more aligned with Hawaiian values and protocol.

**Community Agriculture Park** – By partnering with various Federal and State agencies, the WNCDC is developing farm training programs on site. Agricultural greenhouse lots and associated facilities in the community agriculture park will allow the community to build a base of farmers, increase food self-sufficiency, and revitalize the local agriculture industry. An anaerobic biodigester will provide a proven renewable energy source at a fraction of the cost of current electricity rates for the refrigeration, sanitation, and processing of agricultural products through the use of biomass waste from farmers on-site and the adjacent equestrian center.

**Equestrian Center** - Waimea has a longstanding ranching and paniolo history. The equestrian center will provide recreational opportunities for the community while revitalizing the rich tradition in horse riding. The facility will serve as a venue for a host of community events such as calf roping; team roping; leisure riding, barrel racing, and jumping. Animal waste will be sustainably disposed of and used in the anaerobic digester for additional energy production.

**Golf Facility** - The proposed golf facility, which includes a par-3 course, driving range, and club house, will provide a recreational and economic opportunity to generate jobs and additional financial resources to support WNCDC operations and future planning of the area.

The WNR-CDI will enable the homestead community to meet their goals of self-sufficiency through a dedicated program of economic opportunities centered on agricultural, equestrian, and recreational activities while also ensuring a reserved space for those that lie in eternal rest.

## BACKGROUND

A brief historic review for the Waimea area is provided below, to offer a better holistic understanding of the use and occupation of the project area. In the attempt to record and preserve both the tangible (i.e., traditional and historic archaeological sites) and intangible (i.e., *mo'olelo*, *'ōlelo no'eau*) culture, this research assists in the discussion of anticipated finds. Research was conducted at the Hawai'i State Library, the University of Hawai'i at Mānoa libraries, the SHPD library, and online on the Huapala database, Papakilo database, Ulukau database, Waihona 'Aina database, and the State of Hawai'i Department of Accounting and General Services (DAGS) website. Historical maps, archaeological reports, and historical reference books were among the materials examined.

### Waimea in traditional times

The history of Waimea begins with the history of Hawai'i Island:

Hawai'i was another child of Papa and Wākea, their first-born child. He was the brother of Ho'ohoku-kalani. Hawai'i became the ancestor of the people of Hawai'i; the ancient name of Hawai'i island was Lono-nui-ākea. (Kamakau 1991:129)

Much of the oral accounts that narrate the events from the first peopling of Hawai'i to the recent period of written documentation has been lost in time. However, there are other means by which Hawai'i's history has been preserved. One often overlooked source of history is the information embedded in the Hawaiian landscape. Hawaiian place names “usually have understandable meanings, and the stories illustrating many of the place names are well known and appreciated... The place names provide a living and largely intelligible history” (Pukui et al. 1974:xii).

Among the places in Waimea with names which have been explicitly defined and connected to stories are 'Ala'ōhi'a, Noho'āina, Paulama, and Pukalani. 'Ala'ōhi'a, or “fragrant 'ōhi'a,” is an 'ili of Waimea that was said to have been covered in 'ōhi'a with unusually large flowers. Noho'āina, or “live on the land,” is an 'ili that was once cultivated in sweet potatoes grown by *ali'i*. Paulama, or “extinct *lama*,” is an 'ili that supported a grove of sacred *lama* trees that were frequented by native birds. Pukalani, or “heavenly gate,” is a grassy plain that was used as a gathering place.

Pukui, Elbert, and Mookini's *Place Names of Hawaii* translates Pu'ukapu as “Sacred hill” and Waimea as “Reddish water (as from erosion of red soil)” (Pukui et al. 1974:199, 226). However, many elders familiar with the area attribute the red tint not to the red soil, but to the natural color added as the water seeps through the *hāpu'u* forest on the slopes of the Kohala Mountains. The fern plants there are a natural source of red dye, and so they say the reddish tint comes from that vegetation. Perhaps the red tint comes from both the soil and the *hāpu'u*.

### Subsistence and Traditional Land Use

Waimea has an environment naturally conducive to intensive upland farming, and this supported a sizable village in ancient Hawai'i.

The population of Waimea became the most significant in density, scattered among fields adjacent to streams that provided year-round water for consumption... The availability of dependable irrigation systems gave Waimea a unique advantage whereby both dryland and irrigated *kalo* (taro) could be grown.

The early Waimea inhabitants resided typically within a *pā hale* (fenced house lot) with a sleeping house and adjacent protected cooking facility. The *pā pōhaku* (stone wall)

surrounded the *pā hale*, and likely included within was a *kīhāpai* (garden). The farming plot (*‘apana*) of the householder was located elsewhere within the agricultural zone of the respective *ahupua‘a*. These prehistoric farmed areas have become known as the Waimea Field System.

Rudimentary farming of the ‘Ōuli flats between Lanikepu and Keanu‘i‘omanō Streams *makai* (towards the ocean) of the [Waimea-Kohala] airport began as early as A.D. 1100–1200. The southernmost swales reflect the presence of housing and agriculture about A.D. 1300–1400. Substantial evidence, however, points to the cultivation of walled, irrigated fields coupled with permanent habitation during the period from A.D. 1600 to 1800. (Bergin 2004:16–19)

Handy et al. note that Waimea was well suited for the planting of *‘uala* (1991:283). They elaborate on the cultivation of traditional crops: “Dry taro used to be planted along the lower slopes of the Kohala Mountains on the Waimea side, up the gulches and in the lower forest zones” (1991:532). Naturalist, Archibald Menzies, describes fertile plantations in the uplands of Waimea in 1793, which likely extended back into pre-contact times:

A little higher up, however, than I had time to penetrate, I saw in the verge of the woods several fine plantations, and my guides took great pains to inform me that the inland country was very fertile and numerously inhabited. Indeed, I could readily believe the truth of these assertions, from the number of people I met loaded with the produce of their plantations and bringing it down to the water side to market...(Menzies 1920 [1793]:56)

There was a dramatic increase in extensive cultivation in the centuries just before Western contact. This coincided with the reign of Chiefs Alapa‘inui and Kalani‘ōpu‘u of the Waimea-Kawaihae area followed by Kamehameha and his construction of Pu‘ukoholā Heiau. It is suggested that during this pre-contact period, the strain on food resources had been pushed to its limits (Bergin 2004).

Pu‘ukoholā is not the only *heiau* connected to the area. Whereas Pu‘ukoholā is nearer to the coast at Kawaihae, there was another older *heiau* which stood further inland at Waimea. It was a women’s *heiau* built under the direction of High Chiefess Hoapiliahae. This *heiau* was described in the accounts of the missionary Lorenzo Lyons in the 1820s:

This [the wind of Waimea] is the piercing wind that so suddenly meets the traveler who makes his upward way from the heat of Kawaihae; and as he nears Waimea he comes upon a region once held sacred. Vivid were the rainbows of the Lanikepu hills, and red the rain, uakoko, that fell upon their slopes, for in the forest that was then their background was a *heiau* --- a women’s *heiau*, the only one; and by these lovely tinted tokens the gods honored it, and signified their approval.

Founded, dedicated and consecrated by the very high chiefess Hoapiliahae, it was attended exclusively by young virgins. There, in the sanctity of the cool highland forest, they performed the sacred ceremonies, learning also the science of healing so that they might eventually minister to others. And the names of the five rains of the *heiau* were given to the five children of Hoapiliahae.

On a nearby ridge stood another *heiau*, builded there by the great Akua Makuakua who had come from far off Kahiki. He it was who, flying to a hillside to watch the rainbows, found there the beautiful goddess Wao, clad only in her long, silky hair. Love came swiftly and was mutual, and after glorious wedding festivities the couple went to live a Hokuula, the hill of the red planet.

But to bear each of her children Wao returned to the Waimea hills, thereby made sacred. On these occasions a tabu was proclaimed, the forbidden ground extending down across the plains to whatever place a stone happened to stop rolling when started above by her servants. Stones they were themselves, these retainers, all through the night hours, for so Wao transformed them until daylight, when they became human again. (Doyle 1953:42, 43)

### *Mo'olelo*

In Lorenzo Lyons' account, he does not connect the Waimea *heiau* with any particular deity. However, there are other stories of Waimea which connect the landscape to Uli, the goddess of sorcery, and to Lono, the god of agriculture and heavy rains.

A story published in the Hawaiian language newspaper, *Ka Hoku o Hawai'i*, in the early 1900s, narrated the legend of Ka-Miki and his brother Maka'iole. In this legend, the two brothers had been training to be warriors and were traveling around Hawai'i Island. Near the end of their training, their great-grandmother instructed the brothers to visit their ancestor Laninuiku'iamamaoloa who lived near Lanimaomao stream in Waimea. This ancestor of theirs, Laninuiku'iamamaoloa, was the guardian of sacred objects to be used in the brothers' end-of-training ceremony. Among the sacred objects were the 'awa mixing bowl called Hōkū'ula and the 'awa strainer called Kalauokahuli. Kalauokahuli, the 'awa strainer, was noted to be on the plains of Waikoloa, while Hōkū'ula, the 'awa mixing bowl, was at the hill closer to Waipi'o. Both were in the lands of north Hawai'i around Waimea. Furthermore, the 'awa bowl of Hōkū'ula was said to belong to Lono-Makahiki and associated with rituals connected to the agricultural god (Wilkinson et al. 2012:13, 14).

The ancestor woman named Laninuiku'iamamaoloa noted above is also mentioned in another story where she is identified as Uli, the goddess of sorcery. In this *mo'olelo*, which comes from the Kamohoalii Collection, Laninuiku'iamamaoloa also goes by the name of Lanimaomao. This is the name of an important stream in the area today. It is said that Lanimaomao lived in the Mahiki forested area of Waimea. She was prayed to for heavy rains, a weather phenomenon also associated with the god Lono.

Yet another story connected to Waimea is one associated with the goddess Hi'iakaikapoliopele, sister of the volcano goddess Pele. As Hi'iaka traveled from Puna in the south toward Kohala in the north, she was denied passage by Mahiki. This Mahiki is the same namesake of the forested area in Waimea today, but in this story, the Mahiki refers to a horde of ill-tempered creatures. The leader of this horde was the dragon-like creature named Mo'olau. Hi'iakaikapoliopele "resolved once and for all to make an end of this arrogant nuisance and to rid the island of the whole pestilential brood of imps" (Emerson 1997[1915]:50). The goddess was supported by a supernatural legion of male and female relatives which Pele called in to battle to support her sister. Mo'olau and the ill-tempered Mahiki were destroyed. Here is a chant which memorializes this battle and calls to mind the darkness of Mahiki with the cries of the malevolent horde in Waimea. Notice that the name of the sorcery goddess from the previous story is in this chant below:

O Kini Akua o Wai-mea,	Wai-mea's myriads of godlings,
O ka Lehu Akua o Mana.	Thy four hundred thousand, Mana.
Kini wale Wai-mea	Wai-mea thrills with the snarl of
I ka pihe o ke 'kua o Uli, e.	witch-gods:
Po wale Mahiki;	Night's shadows brood over Mahiki;
A ia Mahiki ke uwa la no, e!	The uproar keeps on in Mahiki!
	(Emerson 1997[1915]:55)

## Oli

Waimea's rightful place in Hawaiian pre-contact history is bolstered by its appearance in traditional chants such as the one quoted above. These expressions of folklore have not lost their merit in today's society. They continue to be referred to in contemporary discussions of Hawaiian history, Hawaiian values, and Hawaiian identity.

Other chants that mention Waimea do not hearken back to the distant time of the gods. Some chants only go back to the more recent era of Kamehameha the Great. This is fitting since Kamehameha was from Kohala and his warriors trained in Waimea. One of the most famous of these Kamehameha chants is *Hole Waimea*. The words, translation and background of the chant can be found on the huapala.org website (Kanoa-Martin 2012).

### Hole Waimea

Hole Waimea i ka ihe a ka makani	Waimea strips the spears of the wind
Hao mai nā'ale a ke Kīpu'upu'u	Waves tossed in violence by the Kīpu'upu'u rains
He lā'au kala'ihi 'ia na ke anu	Trees brittle in the cold
I 'ō'ō i ka nahele o Mahiki	Are made into spears in Mahiki forest
Kū aku i ka pahu	Hit by the thrusts
Kū a ka 'awa'awa	Hit by the cold
Hanane'e ke kīkala o kō Hilo kini	The hips of Hilo's throngs sag
Ho'i lu'ulu'u i ke one o Hanakahi	Weary, they return to the sands of Hanakahi
Kū aku la 'oe i ka Malanai	Pelted and bruised by
A ke Kīpu'upu'u	The Kīpu'upu'u rains
Holu ka maka o ka 'ōhāwai a Uli	The petals of Uli sway
Niniau 'eha ka pua o ke koai'e	The flower of koai'e droops
Ua 'eha i ka nahele o Waikā	Stung by frost, the herbage of Waikā

Source: This is a mele inoa (name chant) for Kamehameha I, that was inherited by his son, Liholiho. This is a tale of the Kīpu'upu'u, a band of runners whose name is taken from the cold wind of Mauna Kea that blows at Waimea on the big island of Hawai'i. They were trained in spear fighting and went to the woods of Mahiki, a woodland in Waimea haunted by demons and spooks, and Waikā to strip the bark of saplings to make spears. Hole means to handle roughly, strip or caress passionately. In the forest they sang of love, not of work or war. Hanakahi is the district on the Hamakua side of Hilo, named for a chief whose name means profound peace. Malanai is the name of gentle wind. Pua o Koai'e is the blossom of the Koai'e tree that grows in the wild, a euphemism for delicate parts. Parts of this old chant, full of double entendre or kaona, was set to music by John Spencer and entitled Waikā. (Kanoa-Martin 2012)

Another Kamehameha chant is *Hea 'Oe Kahaiolama*. In this chant the chiefess Kalama is in dialogue with Kamehameha, and he assures her that indeed, all of Hawai'i Island is his:

### Hea 'Oe Kahaiolama

KAMEHAMEHA: Hea 'oe Kahaiolama.	KAMEHAMEHA: Where are you, O Kalama?
KALAMA: He maka'u mai au lā iā Ka'ahumanu.	KALAMA: I am afraid of Ka'ahumanu.
KAMEHAMEHA: Mai maka'u mai 'oe.	KAMEHAMEHA: Do not be afraid.
No'u o luna, no'u o lalo,	All above is mine, all below is mine,
No'u o Kohala,	Kohala is mine,
No'u o Hāmākua,	Hāmākua is mine,
No'u o Hilo,	Hilo is mine,

No‘u o Puna,	Puna is mine,
No‘u o Ka’ū,	Ka’ū is mine,
No‘u o Kona,	Kona is mine,
No‘u nā wahi āpau-o-loa	Everywhere is mine

CONTRIBUTOR: Mrs. Kaimu Kihe, Pu‘uanahulu, North Kona, Hawai‘i. Mele kake.  
(Bacon and Napoka 1995:194, 195)

And finally, the last two chants here are very similar, yet from different sources. Notice that both of these chants are accompanied by a type of string-figure game that was once familiar throughout the islands. And in both of these chants, as the string figures are being made, the words to these chants call out different features on the landscape around Hawai‘i Island. One of these string-figure chants is called *He Huaka‘i Ka‘apuni ma Hawai‘i*; here is a portion of that chant:

He Huaka‘i Ka‘apuni ma Hawai‘i	Ramble Round Hawai‘i
Kū e ho‘opi‘o ka lā	The rising sun travels in an arc
Ka lā i ke kula o Ahu‘ena	reaches the flatlands of Ahu‘ena
Komo i ka la‘i o Kai-lua e...	enters Kai-lua’s gentle landscape...
‘O Kohala:	Kohala last:
‘O Kohala-iki, ‘o Kohala-nui	lesser Kohala, greater Kohala
‘O Kohala-loko, ‘o Kohala-waho	inner Kohala, outer Kohala
‘O Pili, ‘o Ka-lā-hiki-ola	and then Pili and Ka-lā-hiki-ola
Nā pu‘u haele lua o Kohala	companion hills traveling as a twain

Kohala last: The district included shoreland, an extinct volcano, a mountainous upland famous for its strong dry wind, ‘Apa‘apa‘a.

Ka-lā-hiki-ola: The hill named Ka-lā-hiki-ola, ‘the life-bringing sun’, gave its name to the surrounding area.” (Pukui and Korn 1973:187–191)

The other chant is called *Na Moku ‘Eono o Hawai‘i Nei*, a portion of which is presented here:

Nā Moku ‘Eono o Hawai‘i Nei	
Ka lā, ka lā, i ke kula o Ahu‘ena...	The sun, the sun shines on the plain of Ahu‘ena...
Noho i Kohala,	Kohala is reached,
‘O Kohala nui, ‘o Kohala iki,	Great Kohala, lesser Kohala,
‘O Kohala ‘āina ua ha‘aheo,	Kohala, a land that is proud of its rain,
I ka ua ‘Āpa‘apa‘a.	The ‘Āpa‘apa‘a rain.
‘O Pili me Kalāhikiola,	There lie Pili and Kalahikiola,
‘O nā pu‘u haele lua,	There the two-sided hills,
‘O nā pu‘u noho i uka...	The hills that remain inland...

CONTRIBUTOR: Z.P. Kalokuokamaile, Nāpō‘opo‘o, South Kona, Hawai‘i. Mele hei.  
[String-figure chant.] (Bacon and Napoka 1995:96–99)

### **‘Ōlelo No‘eau**

Waimea’s place in pre-contact Hawaiian history has also been preserved in *‘ōlelo no‘eau*, or traditional proverbs and wise sayings. In 1983, Mary Kawena Pukui published a volume of close to 3,000 *‘ōlelo no‘eau* that she collected throughout the islands. The introductory chapter of that book reminds us that if we know these proverbs and wise sayings well, then we will know Hawai‘i well (Pukui 1983). Most of the *‘ōlelo no‘eau* concerning Waimea point out the cold weather conditions of the region. But aside from the details of each saying, the simple fact that Waimea is memorialized

in these proverbs is a testament to the significance of the entire place. Here are the traditional sayings from Pukui's book which mention Waimea either in its text or in its explanation:

(757) Hele pō'ala i ka anu o Waimea.

*Going in a circle in the cold of Waimea.*

Said of a person who goes in circles and gets nowhere. Waimea, Hawai'i, is a cold place and when foggy, it is easy for one unfamiliar with the place to lose his way.

(777) Hemahema Kahuwā me Waimea.

*Kahuwā and Waimea are awkward.*

These places are in the upland, where people are said to be awkward in handling canoes.

(1571) Ka ua Kīpu'upu'u o Waimea.

*The Kīpu'upu'u rain of Waimea.*

An expression often used in songs of Waimea, Hawai'i. When Kamehameha organized an army of spear fighters and runners from Waimea, they called themselves Kīpu'upu'u after the cold rain of their homeland.

(1593) Ka ua Paliloa o Waimea.

*The Tall-cliffs rain of Waimea.*

The rain of Waimea, Hawai'i, that sweeps down the cliffs.

(1748) Ke Kīpu'upu'u hō'anu 'ili o Waimea.

The Kīpu'upu'u rain of Waimea that chills the skin of the people.

(2913) Waimea, i ka ua Kīpu'upu'u.

*Waimea, land of the Kīpu'upu'u rain.*

Waimea, Hawai'i, is famed in old *mele* for its cold Kīpu'upu'u rain.

Other 'ōlelo no 'eau in Pukui's compilation refer to the larger district of Kohala of which Waimea is a part. Whereas the Waimea proverbs and wise sayings focus on rain, the Kohala proverbs and wise sayings focus on wind. In addition, the Kohala 'ōlelo no 'eau refer to other aspects of the land and the characteristics of the people there:

(211) 'A'ohē u'i hele wale o Kohala.

*No youth of Kohala goes empty-handed*

Said in praise of people who do not go anywhere without a gift or a helping hand. The saying originated at Honomaka'u in Kohala. The young people of that locality, when on a journey, often went as far as Kapua before resting. Here, they made *lei* to adorn themselves and carry along with them. Another version is that no Kohala person goes unprepared for any emergency.

(875) He pā'ā kō kea no Kohala, e kole ai ka waha ke 'ai.

*A resistant white sugar cane of Kohala that injures the mouth when eaten.*

A person that one does not tamper with. This was the retort of Pupukeya, a Hawai'i chief, when the Maui chief Makakuikalani made fun of his small stature. Later used in praise of the warriors of Kohala, who were known for valor.

(1171) I 'ike 'ia no o Kohala i ka pae kō, a o ka pae kō ia kole ai ka waha.

*One can recognize Kohala by her rows of sugar cane which can make the mouth raw when chewed.*

When one wanted to fight a Kohala warrior, he would have to be a very good warrior to succeed. Kohala men were vigorous, brave, and strong.

(1256) Ipu lei Kohala na ka Moa'ekū.

*Kohala is like a wreath container for the Moa'e breeze.*

Kohala is a windy place.

(1313) Kahilipulu Kohala na ka makani.

*Kohala is swept, mulch and all, by the wind.*

Kohala is a windy place.

(1455) Ka makani 'Āpa'apa'a o Kohala.

*The 'Āpa'apa'a wind of Kohala.*

Kohala was famed in song and story for the 'Āpa'apa'a wind of that district.

(1813) Kohala 'āina ha'aheo.

*Kohala, land of the proud.*

The youths, *lei*-bedecked, were proud of their handsome appearance and of their home district.

(1814) Kohala ihu hakahaka.

*Kohala of the gaping nose.*

Kohala is full of hills, and the people there are said to breathe hard from so much climbing.

(1815) Kohala i ka unupa'a.

*Kohala of the solid stone.*

The people of Kohala were known for their firm attitudes.

(1816) Kohala, mai Honoke'ā a Keahualono.

*Kohala, from Honoke'ā to Keahualono.*

The extent of Kohala.

(1973) Le'i o Kohala i ka nuku na kānaka.

*Covered is Kohala with men to the very point of land.*

A great population has Kohala. Kauhikama once traveled to Kohala to spy for his father, the ruling chief of Maui. While there, he did not see many people for they were all tending their farms in the upland. He returned home to report that there were hardly any men in Kohala. But when the invaders from Maui came they found a great number of men, all ready to defend their homeland.

(1975) Lele au la, hokahoka wale iho.

*I fly away, leaving disappointment behind.*

Said of one who is disillusioned after giving many gifts. Waka'ina was a ghost of North Kohala who deceived people. He often flew to where people gathered and chanted. When he had their attention he would say, "I could chant better if I had a tapa cloth." In this way he would name one thing after another, and when all had been given him he would fly away chanting these words.

(1988) Lele o Kohala me he lupe la.

*Kohala soars as a kite.*

An expression of admiration for Kohala, a district that has often been a leader in doing good works.

(2220) Na 'ilina wai'ole o Kohala.

*The waterless plains of Kohala, where water will not remain long.*

After a downpour, the people look even in the hollows of rocks for the precious water.

(2276) Nani ka waiho a Kohala i ka la'i.

*Beautiful lies Kohala in the calm.*

An expression of admiration for Kohala, Hawai'i, or for a person with poise and charm -- especially a native of that district.

(2365) 'Ohi hāpuku ka wahie o Kapa'au.

*Anything was gathered up as fuel at Kapa'au.*

Said of one who takes anything and everything. At one time Kohala suffered a drought and food became scarce. The women did their best to raise food at 'Āinakea while the men traveled far in search of some means of relieving the famine. In order to cook their meager, inferior crops, the women used whatever they found for fuel --- dried sugar-cane leaves, grasses, potatoes, and so forth.

(2533) 'Ope'ope Kohala i ka makani.

*Kohala is buffeted by the wind.*

(2811) 'Uala ne'ene'e o Kohala.

*Ne'ene'e potato of Kohala.*

A person who hangs around constantly. *Ne'ene'e*, a variety of sweet potato, also means "to move up closer."

## Historic Waimea

The island of Hawai'i witnessed multiple changes in its political rule in the years just prior to Western contact. In the early 18<sup>th</sup> century, Chief Alapa'i ruled the entire island of Hawai'i. But due to internal strife, it became divided with Alapa'i ruling the northern part of the island and Kalani'ōpu'u ruling the southern districts of Ka'ū and Puna. In 1754, Alapa'i died, and his son Keawe'ōpala inherited the governance of Alapa'i's lands. However, later that same year, Kalani'ōpu'u wrested control of Keawe'ōpala's lands, and because of that, Kalani'ōpu'u became the ruler of the entire island. When Kalani'ōpu'u died in 1782, the governance of Hawai'i went to his son Kīwala'ō. However, it wasn't long before Kīwala'ō's rule was challenged by Kamehameha, the son of Kalani'ōpu'u's brother. In a subsequent battle between Kīwala'ō's and Kamehameha's forces, Kīwala'ō was killed, and Kamehameha took his place. Following that decisive battle, the governance

of Hawai‘i Island was divided into three parts. Kamehameha ruled the north half of the island from Hāmākua to Kohala to Kona. Keawema‘uhili, the brother of the deceased Chief Kalani‘ōpu‘u, ruled out of Hilo, and Keōuakū‘ahu‘ula, a son of Kalani‘ōpu‘u, ruled the districts of Ka‘ū and Puna. Eventually, Keawema‘uhili was killed by Keōuakū‘ahu‘ula’s forces, and then Keōuakū‘ahu‘ula was defeated by Kamehameha’s army. After that, Kamehameha had complete rule over the entire island, and from there he went on to conquer the rest of the Hawaiian Islands (translations in italics by D. Duhaylonsod):

Ho‘i akula ‘o Alapa‘i i Hawai‘i i ke kaua, a ua lanakila ‘o Alapa‘i ma luna o nā ali‘i o Hawai‘i, a ua luku ‘ia nā ali‘i o Hawai‘i, a ua hui ‘ia i ho‘okahi aupuni ma lalo o Alapa‘i. (Kamakau 1996[1866]:1)

*Alapa‘i returned to Hawai‘i Island to do battle, and Alapa‘i emerged victorious over the chiefs of Hawai‘i Island, the chiefs were slaughtered, and the entire kingdom was gathered as one under Alapa‘i.*

I ke kaua ‘ana i Mahinaakāka ke kū ka‘awale ‘ana o Kalani‘ōpu‘u e noho mō‘ī no Ka‘ū me Puna, no ka mea, he ali‘i kama‘āina ‘o Kalani‘ōpu‘u no Ka‘ū, a ‘o kona one hānau ia o kona mau mākuā. Ho‘i maila ‘o Alapa‘i a noho ma Hilo, a hala ka makahiki, ho‘i maila ‘o ia a noho ma Waipi‘o. A pau kona noho ‘ana ma Waipi‘o. Ho‘i maila ‘o Alapa‘i me nā ali‘i a hiki ma Waimea, a ‘o kekahi po‘e, ma kai o ka ‘au wa‘a, a pae i Kawaihae. Ho‘i akula ‘o Alapa‘i mai Waimea aku a Lanimaomao, loa‘a ihola i ka ma‘i... Ma Kikiako‘i, make ihola ‘o Alapa‘i. I ka A.D. 1754, noho ali‘i ihola ‘o Keawe‘ōpala no ke aupuni o Hawai‘i (Kamakau 1996[1866]:13).

*From the battle at Mahinaakāka, Kalani‘ōpu‘u emerged as the king of Ka‘ū and Puna, because Kalani‘ōpu‘u was a native chief of Ka‘ū, and it was the birthplace of his parents. Alapa‘i returned to Hilo, and after some time, he went to live at Waipi‘o. After living at Waipi‘o, Alapa‘i and his chiefs went to Waimea, and others, by way of canoes, landed at Kawaihae. Alapa‘i went from Waimea to Lanimaomao, he became ill... At Kikiako‘i, Alapa‘i died. In the year 1754, Keawe‘ōpala (the son of Alapa‘i) became the ruler of Hawai‘i.*

‘Ōlelo aku ke kahuna ma hope o Kalai‘ōpu‘u [another name for Kalani‘ōpu‘u], ‘o Holo‘ae ka inoa, [“]Eia ka mea e make ai ‘o Keawe‘ōpala, aia a make ‘ē ke kahuna ma mua o Keawe‘ōpala, a laila, lilo ke aupuni iā ‘oe, no ka mea, ‘o ke kahuna ka mea e pa‘a ai ke aupuni iā Keawe‘ōpala.[“]... ua hopu ‘ia ke kahuna o Keawe‘ōpala, ua pepehi ‘ia a kālua ‘ia e Kalani‘ōpu‘u me ka ho‘omāinoino ‘ia... I ka makahiki A.D. 1754, ua lilo holo‘oko‘a ke aupuni o Hawai‘i iā Kalani‘ōpu‘u (Kamakau 1996[1866]:13, 14).

*The kahuna under Kalai‘ōpu‘u, whose name was Holo‘ae, spoke, “Here is the way Keawe‘ōpala will die, first his priest must die, and then, the kingdom will go to you, because it is the priest who keeps the kingdom securely under Keawe‘ōpala’s rule... the priest of Keawe‘ōpala was captured, and he was tortured, killed and burned in the pit by Kalani‘ōpu‘u... In the year 1754, the entire kingdom of Hawai‘i went under the rule of Kalani‘ōpu‘u.*

I ka pau ‘ana o ka wā hī ‘ahi o Kalae, mana‘o ihola ‘o Kalani‘ōpu‘u e ho‘i i Kona, akā, ua loa‘a ‘ē ‘o ia i ka ma‘i, no laila, ho‘i maila ‘o ia a noho ma Ka‘iliki‘i i Waio‘ahukini ma Pākini; māhuahua loa ka ma‘i, a make nō ma laila. I ka iwakāluakumamāiwa makahiki [ia] o kona noho ali‘i ‘ana ma luna o ke aupuni o Hawai‘i. A ‘o nā makahiki a pau o kona ola ‘ana, he kanahikukumamāiwa, a make ihola ‘o ia i ka malama ‘o Ianuari, i ka A.D. 1782 (Kamakau 1996[1866]:62).

*When he was finished trolling for 'ahi at Kalae, Kalani'ōpu'u decided to return to Kona, but he became sick, and therefore, he went to stay at Ka'iliki'i in Waio'ahukini at Pākini; the illness intensified, and he died there. His reign over the kingdom of Hawai'i lasted twenty-nine years. And he lived for seventy-nine years, and died in the month of January, 1782.*

I ka noho 'ana o Kalani'ōpu'u ma Kohala, ua ho'oholo ihola nā ali'i a me nā kuhina, e kauoha 'ia ke keiki ho'oilina o ke aupuni (Kalanikauikeaoulīkīwala'ō)... Aia a make 'o Kalani'ōpu'u, a laila, e ili aku ke aupuni i ka ho'oilina (Kamakau 1996[1866]:59, 60).

*When Kalani'ōpu'u was staying at Kohala, the chiefs and the cabinet members decided, and the command would be given that the child Kīwala'ō would be the next heir to the kingdom... Kalani'ōpu'u died, and then, the heir inherited the kingdom.*

I ko Kamehameha mā hiki 'ana mai ma hope, ua ho'omaka mua aku 'o Ke'eaumoku i ke kaua i ko Kīwala'ō mau koa... A 'ike akula 'o Ke'eaumoku iā Kīwala'ō e huli ana i lalo, kokolo akula 'o ia me ka leiomano ma ka lima, a papa'i a'ela ma ko Kīwala'ō kani'ā'i, a make loa ihola ia... 'O ke 'auhe'e ihola nō ia o nā ali'i a me nā koa o Kīwala'ō. 'O Keōuakū'ahu'ula ho'i a me kekahi po'e ali'i... holo akula i Ka'ū, a lilo ihola 'o Keōuakū'ahu'ula i mō'i no Ka'ū a me Puna... 'O Keawema'uhili nō ho'i ke ali'i kapu i ke au o Alapa'inui... a hele akula a hiki i Hilo, a lilo ihola 'o ia i ali'i no kekahi hapa o Hilo, a me kekahi hapa ho'i o Puna, a pēlā nō ho'i 'o Hāmākua... Lilo ihola 'o Kona, Kohala a me kekahi hapa o Hāmākua iā Kamehameha. Lilo ihola ka mokupuni 'o Hawai'i i mau aupuni 'ekolu, a 'ekolu nō ho'i mau mō'i (Kamakau 1996[1866]:73, 74).

*When Kamehameha arrived later, [his warrior-general] Ke'eaumoku had already started the battle with Kīwala'ō's warriors... Ke'eaumoku saw Kīwala'ō facing down, he crawled with a leiomano weapon in his hand, and struck at Kīwala'ō's throat, and Kīwala'ō died... The chiefs and the warriors of Kīwala'ō fled. Keōuakū'ahu'ula and some chiefs sailed to Ka'ū, and Keōuakū'ahu'ula became the king of Ka'ū and Puna... Keawema'uhili also, he was a sacred chief from the time of Chief Alapa'i... Keawema'uhili went to Hilo, and he became the chief of parts of Hilo, Puna, and Hāmākua... Kona, Kohala, and a portion of Hāmākua became lands of Kamehameha. The island of Hawai'i was divided into three kingdoms, and with three kings.*

Ki'i maila 'o Keōuakū'ahu'ula e kaua iā Keawema'uhili. Kaua ihola lāua i kinohi, a he'e 'o Keawema'uhili; a kaua hou ihola ma 'Alae, ma Hilo Palikū, ua pepehi 'ia 'o Keawema'uhili, a make pū ihola kekahi ali'i, 'o Kāo'o kona inoa, he kaiko'eke nō ho'i nona (Kamakau 1996[1866]:105).

*Keōuakū'ahu'ula came to do battle against Keawema'uhili. They fought in the beginning, and Keawema'uhili fled; and they fought again at 'Alae, at Hilo Palikū, Keawema'uhili was killed, together with another chief named Kāo'o, who was a brother-in-law of his.*

Ki'i akula 'o Keaweaeheulu a me Kamanawa, nā kuhina o Kamehameha, iā Keōuakū'ahu'ula, ka mō'i o ka 'ao'ao hikina o ka mokupuni 'o Hawai'i... nīnau ihola 'o Keōua, 'He aha kā 'olua huaka'i?' Pane a'ela 'o Keaweaeheulu mā, 'I ki'i mai nei nō māua iā 'oe, 'o 'oe nō ke keiki a ko māua kaikua'ana haku; i ki'i mai nei iā 'oe, e holo kākou i Kona, a hui pū me kō kaikaina... E ho'opau i ke kaua 'ana ma waena o 'olua... Holo akula nō lākou nei a kokoke e pili i Mailekini ma Kawaihae... Kū maila nō ho'i 'o Keōuakū'ahu'ula a kāhea mai iā Kamehameha, 'Eia au lā.' Kāhea mai nō ho'i 'o Kamehameha, 'Kū mai, a hele mai e 'ike kāua.' Kū a'ela nō ho'i 'o Keōuakū'ahu'ula me ka mana'o e lele mai i uka; e hou mai ana 'o Ke'eaumoku i ka pololū... A 'o Keōua a me kekahi po'e 'ē a'e ma ko lākou wa'a, ua pau loa lākou i ka make... I ka make 'ana o

Keōuakū‘ahu‘ula, ke keiki a Kalani‘ōpu‘u, ka mō‘ī o Hawai‘i, a kau ‘ia ‘o ia ma Pu‘ukoholā ma Kawaihae, a laila, ua holo‘oko‘a ke aupuni o ka mokupuni ‘o Hawai‘i iā Kamehameha (Kamakau 1996[1866]:110–113).

*Keaweāheulu and Kamanawa, the cabinet members of Kamehameha, went to get Keōuakū‘ahu‘ula, the king of the eastern side of Hawai‘i Island... Keōua asked, “Why have you two journeyed?” The two travelers answered, “We have come to get you, you are the child of our older brother, Chief [Kalani‘ōpu‘u]; we have come to get you that we may all sail to Kona and meet with your younger brother [cousin Kamehameha]... to put an end to the warfare between you two... They all sailed and approached close to Mailekini at Kawaihae... Keōuakū‘ahu‘ula stood and called out to Kamehameha, “Here I am.” Kamehameha called back in return, “Stand up and come, let us see.” Keōuakū‘ahu‘ula stood up with the thought of fleeing inland; (Kamehameha’s warrior uncle) Ke‘eaumoku threw his spear... Keōua and the other people on that canoe, they all died... At the death of Keōuakū‘ahu‘ula, who was the child of Kalani‘ōpu‘u, the former king of Hawai‘i, Keōuakū‘ahu‘ula was placed on the sacrificial heiau of Pu‘ukoholā at Kawaihae, and then, the entire kingdom of Hawai‘i Island became under the one rule of Kamehameha.*

Prior to Kamehameha’s reign, in 1778 during the reign of Chief Kalani‘ōpu‘u, the British sailor James Cook arrived in the Hawaiian Islands. He is credited as being the first Westerner to do so (Kamakau 1996[1866]). An estimated 105,000 natives were living on Hawai‘i Island at the time with more than 23,000 living in Kohala, the district in which Waimea is situated (Bergin 2004:21).

### **Historic Land Use**

After the arrival of foreigners to Hawai‘i’s shores, the islands were transformed culturally, politically, and economically. In the case of Waimea, numerous changes were spurred by the activities of ranchers, whalers, missionaries, sandalwood traders, and other agricultural businessmen. The transformation of Waimea was further shaped by the Māhele, a royal proclamation which replaced the traditional land tenure system with a Western capitalist one. And the final outside force which affected Waimea, though not as much as some other parts of the islands, was the establishment of the U.S. government and military presence.

### ***Ranching***

In 1792, another British sailor, Captain George Vancouver, arrived and anchored at Hawai‘i Island. Vancouver had previously visited the islands as a sailor on Captain Cook’s earlier voyages. When he came back as a captain, Vancouver brought gifts of cattle, goats, and sheep for the king, Kamehameha. Kamehameha instituted a *kapu* or strict taboo on these gifts of livestock. Anyone caught harming the livestock could be put to death. As a result, the cattle and goats and sheep multiplied copiously across Waimea and the rest of the lands of north Hawai‘i Island. Many walls and enclosures had to be built to protect the people’s cultivated crops from destruction from the animals. In 1803, the horse was also introduced to the island (Bergin 2004).

After the *kapu* over the cattle was lifted in 1815, the king appointed the American newcomer, John Palmer Parker, to be his authorized cattle hunter. Three years later, Parker married Keli‘i Kipikane Kaolohaka, a great-granddaughter of Kamehameha. The hunting of animals, and especially the salting and corning of beef and the procurement of hides and tallow, became a booming industry. This business was notably fueled by the demand from the visiting whaling ships. The immensity of this operation is shown when the numbers are tallied:

The salted beef, hide, and tallow export industry grew to become a major component of commerce. Forty to fifty-nine whaling ships called annually at Kawaihae in the mid-1850s, taking aboard 1,500 barrels of salt beef, 5,000 barrels of sweet potatoes, 1,200 bullock

hides, and 35,000 pounds of tallow on an average. Between Waimea and Kawaihae, South Kohala became the center of the cattle industry (Bergin 2004:32).

In 1832, the first of numerous Mexican cowboys arrived on Hawai'i Island to lend their experience and skills in handling cattle. These Mexican cowboys inherited their expertise from generations of ranching, first introduced to America from the Iberian Peninsula in Spain. However, the introduction of cattle and horses and later ranching operations entered America from Europe in the 1500s and 1600s. This industry then made its way to Hawai'i from America in the 1800s. It is important to realize that there was a span of perhaps 200 years for ranching in "New Spain" to evolve into something uniquely different from Old Spain. This evolution had a direct effect on the development of the Hawaiian *paniolo*, or Hawaiian cowboy. Much of the current literature notes that the Hawaiian style of ranching has its roots in Spain and the American Southwest, although the differences between these two birthplaces of ranching are not explicitly stated. Many of Hawai'i's pioneer *vaqueros*, or Mexican cowboys, were not entirely Spanish, but instead they were *mestizos*, persons of mixed Spanish and Native American bloodlines. An interesting line of research would be to determine which characteristics from the Native American background became an integral part of the Mexican ranching culture, differentiating it from the European Spanish ranching culture. After this analysis, perhaps a clearer picture of Hawaiian ranching practices can be made, giving separate and proper credit to their New World and Old World origins.

While the *vaqueros* were busy teaching their cowboy skills to Hawaiians in the 1800s, Parker became a leader in the industry. In 1847, he established the Parker Ranch, an enterprise which would later become one of the greatest ranches under the American flag. As intrinsic as the contributions of the Mexican cowboys are to the story of the *paniolo* and Hawaiian ranching, so are the contributions of the Parker Ranch and the Parker family to *paniolo* history in Hawai'i. But besides the Parkers, there were other important families who have also added to the rich history of the Hawaiian cowboy. These other families include, among others, the Bell, the Fay, the Lindsey, the Purdy, and the Stevens *'ohana*. The patriarchs and matriarchs of these aforementioned families with Anglo-American names married into the Native Hawaiian population, creating generations of descendants connected to the land on many levels.

### ***Missionaries***

Overlapping with the arrivals of foreign sailors, whalers, and cowboys to the islands was the equally significant arrival of Christian missionaries. Leading the cause to evangelize the Pacific were the American Board of Foreign Missions and the London Mission Society. The landing of the American Board of Foreign Missions on Hawai'i's shores in 1820 could not have come at a more opportune time. Just a year earlier, King Kamehameha had died, his son Liholiho became the new king, and soon after that, the ancient traditional religion was abolished by the new king (Ellis 1963).

One of the most famous early missionaries was Lorenzo Lyons, who arrived in the islands in 1832 and later erected his church in Waimea. His written descriptions of the natural environment of Waimea are priceless. They depict a landscape filled with wind, rain, and running water, a description that matches the oral accounts of the area since time immemorial. The following passages about Waimea were originally written in the manuscript journals of Lorenzo Lyons (Doyle 1953):

Waimea (Waikoloa) was a place of solitude, but a solitude by no means voiceless. The hours were few in the 365 days of the year when there was not 'a sound of going' in the mulberry trees. Normally the pliant boughs were strained and lashed by a northeast wind having the force of a full gale. The diapason of the weird music it made was the dominant fact of consciousness. Often for days at a time the wind was charged with fine drops of rain --- Scotch mist we called it --- and then its voice took on a fiercer, more uncompromising tone. This is the 'ua puupuu of Waimea'. The rain that raises the 'goose flesh.' The epithet,

like the local epithets of Homer, is inseparable in poetic speech from the place. Even within the house the fierce impact of those minute raindrops driven by the violent wind gusts against unsheltered window panes makes a wild music like that of a driving sleet storm in New England.

During the winter months come westerly breezes, swaying backward the mulberry boughs to which the more prevalent trades have given a permanent set toward the west, adding to the aeolian music a new and distant note. Beginning with a lispings whisper it swells to an inarticulate outcry of protest. Only rarely does this west wind approach the force of a gale [a Kona storm], when the clashing and boughs give to the music a martial motif. Great branches may finally be torn from trees which have withstood for decades the westward urge of the more violent trade winds.

Whenever the voice of the wind is hushed, there is heard a sustaining deep note --- the sound of a series of cascades in the glen which brings down from the Kohala mountain the Waikoloa stream. Within a half mile, the fall must aggregate all of six or seven hundred feet, the water leaping 5, 10, even 20 feet at a time, to plunge into the deep excavation worn in the solid rock at the foot of the cascade. It is the monotone of this music rising and falling in volume of sound with capricious changes in the breezes that in the night lulls one to slumber. On quiet nights at Waikoloa when the stream is in freshet from a rain storm mauka, the sound gains in depth and volume, becoming impressive and even awe inspiring. At such times the stream which passes close to the mission premises --- under normal conditions merely a purling brook --- is a foaming, roaring torrent, sweeping along in its course not only branches of trees, but even great rocks torn from its bed. (Doyle 1953:41, 42)

Another early missionary to Hawai'i Island who left us with invaluable written accounts of Waimea was William Ellis. Ellis arrived in the islands in 1822. In both Ellis' descriptions and in those of Lorenzo Lyons, the flora of Waimea do not appear to have been damaged yet by the introduction of foreign livestock. Ellis notes the lushness of Waimea's lands (Ellis 1963):

Here [at Waimea] a number of villages appeared on each side of the path, surrounded with plantations, in which plantains, sugar-cane, and taro, were seen growing unusually large. (Ellis 1963[1827]:253)

Mr. Thurston was informed that the inhabitants of the plantations, about seven miles in the interior, were far more numerous than on the shore... Mr. Thurston set out on a visit to the inland district of Waimea, having been furnished with a guide... Mr. Thurston walked on to Kalaloo, the residence of the chief of Waimea, Kumuokapiki (Stump of Cabbage). Leaving Kalaloo he walked on to Waiakea, from thence to Waikaloo, Pukalani, and Puukapu, which is sixteen or eighteen miles from the sea-shore, and is the last village in the district of Waimea... The soil over which he had travelled was fertile, well watered, and capable of sustaining many thousand inhabitants. In his walks he had numbered 220 houses, and the present population is probably between eleven and twelve hundred... In this district, and throughout the divisions of Hamakua and Kohala, together with the greater part of Hiro, the plough might be introduced with advantage, and the productions of intertropical climates raised in great abundance and excellent quality, as the sugar-cane and other indigenous plants, grown at Waimea, are unusually large. (Ellis 1963[1827]:288, 289)

### *Sandalwood*

One very important entry not to be overlooked in the writings of William Ellis is his mention of the sandalwood trade taking place on Hawai'i Island. Ellis documents that a multitude of people from

Waimea had been ordered to harvest sandalwood trees from the Kohala Mountains. It was arduous labor that required the men to carry these huge harvested trees to the coastline for shipping (Ellis 1963):

[At Kawaihae] we were roused by vast multitudes of people passing through the district from Waimea with sandal wood, which had been cut in the adjacent mountains for Karaimoku, by the people of Waimea, and which the people of Kohala, as far as the north point, had been ordered to bring down to his storehouse on the beach, for the purpose of its being shipped to Oahu.

There were between two and three thousand men, carrying each from one to six pieces of sandal wood, according to their size and weight. It was generally tied on their backs by bands made of ti leaves, passed over the shoulders and under the arms, and fastened across their breast. When they had deposited the wood at the storehouse, they departed to their respective homes. (Ellis 1963[1827]:286, 287)

Undoubtedly, the deforestation caused by the unbridled logging of sandalwood altered the landscape of Waimea. Other notable ventures which transformed the environment of Waimea include the cultivation and procurement of sugarcane, cotton, and *pulu*. In addition, rampant livestock grazing depleted the natural vegetation of Waimea, and this was countered by introducing various invasive plant species that suited the needs of the ranchers. The introduced invasive plant species would eventually supplant countless endemic and indigenous ones. All of these business interests which developed throughout the 1800s left Waimea's post-contact landscape exhaustively different from what it looked like in the pre-contact era (Wilkinson et al. 2012; Bergin 2004).

### **Māhele Land Tenure**

By 1848, the third monarch of the Kamehameha dynasty, born Kauikeaouli, was the ruler of the islands. That year he enacted one of Hawai'i's most transformative proclamations ever, the Māhele. This proclamation by the king divided the lands throughout Hawai'i and set aside land ownership for three groups of people: the king, the chiefs, and the commoners. This was a sweeping departure from the traditional land tenure system which originally fostered common stewardship rather than private ownership:

THE MAHELE is rightfully considered one of the most significant chapters in the modern history of Hawai'i. Several legislative acts during the period 1845–1855 codified a sweeping transformation from the centuries-old Hawaiian traditions of royal land tenure to the western practice of private land ownership. (Moffat and Fitzpatrick 1995)

The king enacted the Māhele intending for it to provide the Native Hawaiian population with an irrevocable land base they would own. The process that the commoners needed to follow to secure their land titles consisted of filing a claim with the Land Commission; having their land claim surveyed; testifying in person on behalf of their claim; and submitting their final Land Commission Award (LCA) to get a binding royal patent. However, in actuality, the vast majority of the native population never received any land commission awards recognizing their land holdings due to several reasons, such as their unfamiliarity with the process, their distrust of the process, and/or their desire to cling to their traditional way of land tenure regardless of how they felt about the new process. In 1850, the king passed another law, this one allowing foreigners to buy land. This further hindered the process of natives securing lands for their families.

Regarding the lands of Waimea, there were no LCAs within the project area, although according to the Waihona 'Aina database, 20 awards may have been made for the *'ili* of Pu'ukapu (Table 1). Nevertheless, there has been documentation of a land dispute from 1865 which sheds some light on

**Table 1. Māhele Awards in the ‘Ili of Pu‘ukapu, Ahupua‘a of Waimea**

<b>LCA</b>	<b>Claimant</b>	<b>Island</b>	<b>District</b>	<b>Ahupua‘a</b>	<b>‘Ili</b>	<b>Awarded</b>
3672	Mana	Hawai‘i	Kohala, South	Waimea	Pu‘ukapu	1
3675	Mahuka	Hawai‘i	Kohala, South	Waimea	Pu‘ukapu, Waipio	1
3685	Mahoe	Hawai‘i	Kohala, South	Waimea	Pu‘ukapu	1
3686	Moluhi	Hawai‘i	Kohala, South	Waimea	Pu‘ukapu	1
3733	Imoehalau	Hawai‘i	Kohala, South	Waimea	Pu‘ukapu	1
3842	Paukumoku	Hawai‘i	Kohala, South	Waimea	Pu‘ukapu	1
3923	Naihe	Hawai‘i	Kohala, South	Waimea	Maiialaa, Pu‘ukapu	1
4130	Kanakaole	Hawai‘i	Kohala, South	Waimea	Pu‘ukapu	1
4132	Kaina	Hawai‘i	Kohala, South	Waimea	Pu‘ukapu	1
4183	Kaluahinenui	Hawai‘i	Kohala, South	Waimea	Pu‘ukapu	1
04183B	Kanaue	Hawai‘i	Kohala, South	Waimea	Pu‘ukapu	1
4210	Kalua	Hawai‘i	Kohala, South	Waimea	Pu‘ukapu	1
04210B	Wawaeluhi	Hawai‘i	Kohala, South	Waimea	Pu‘ukapu	1
4212	Kualehelehe	Hawai‘i	Kohala, South	Waimea	Pu‘ukapu	1
4214	Hanehane	Hawai‘i	Kohala, South	Waimea	Pu‘ukapu	1
4218	Kaohimaunu	Hawai‘i	Kohala, South	Waimea	Pu‘ukapu	1
4227	Kaulunui	Hawai‘i	Kohala, South	Waimea	Pu‘ukapu	1
4230	Kukahekahe	Hawai‘i	Kohala, South	Waimea	Pu‘ukapu	1
4233	Kahuhu, E	Hawai‘i	Kohala, South, Hāmākua	Waimea, Kaloaha	Pu‘ukapu, Pu‘ulama,	1
04348B	Purday, Harry	Hawai‘i	Kohala, South	Waimea	Pu‘ukapu	1

the original ownership of the project site. One of the witnesses, a person named Cross, claimed that Pu‘ukapu once belonged to Chief Kalaimoku, but by 1865, this person wasn’t sure who the present owners were. Another witness in the same land dispute, a person named Mi 1<sup>st</sup>, claimed that the Pu‘ukapu land was firmly kept by Kamehameha I. It is possible that the Pu‘ukapu-Waimea lands were passed down from Kamehameha I to his son, Kamehameha III. It was mentioned in the journal entry of Lorenzo Lyons in 1849:

The King [Kamehameha III] owns Waimea, and has ordered all who have cattle, hogs, sheep, goats, horses, pasturing on his land to pay a certain rate per head. At this new regulation the people groan. (Doyle 1953:153)

Kamehameha III, in turn, entrusted administration of his Waimea lands to William Beckley, a part-Hawaiian of royal blood who had grown up with the king. Under William Beckley’s authority, the Hawaiian kingdom government started to take over much of the cattle industry. Beckley’s guidance of the crown’s involvement in the cattle industry perhaps led to John Palmer Parker’s lease of the Waimea lands to build his ranch.

Notice that in the above quote taken from a previous study, the exact end-date of Parker's lease of lands belonging to the crown is uncertain. What is certain is that Parker Ranch still utilized these lands well into the 20<sup>th</sup> century. This continuity of the ranch survived the American-backed overthrow of the Hawaiian monarchy in 1893 and the subsequent annexation of Hawai'i as an American territory in 1898.

### **Historic Maps**

Historic maps help to paint a picture of Waimea in times past and illustrate the changes that have taken place in the region over the years. Note that place names are spelled as they are shown on each map.

The earliest map found for this area likely dates to the mid-late 1800s (Figure 5). Pu'ukapu is depicted in script lettering, with the points "Kaala," "East Base," and "West Base" surrounding it. Waimea Village is shown near West Base, but the settlement does not appear very developed.

The next map dates to 1913 (Figure 6). It shows the Pu'ukapu Homestead area with streets and land parcels laid out in modern fashion. Pu'u Kakanihia is labeled on the west side of the subdivision, and an abandoned pipeline runs through the west side. An abandoned ditch snakes through the homesteads, extending from the Upper Hamakua Ditch to the Pu'ukapu Reservoir. A new ditch is also shown, including a weir at its bend. The 10.6-acre Paiakuli Pond is illustrated on the southwest side of the homesteads.

A 1914 map shows land usage to the west of the project area (Figure 7). Place names depicted in Pu'ukapu are Nohoaina, Alaohia, Pukalani, and Paulima. A cattle pen and two corn fields are illustrated to the west in Waikōloa.

A 1928 map of government lands in Waimea shows more development of the area (Figure 8). Several small LCAs are shown to the northwest of the project area, including LCA 987, 988, 2271, 4026, 4037, and 4198. The "road to Kona" is now illustrated, with a racetrack shown on the *mauka* side of the road. Several ranch pipelines are also depicted.

The Pu'ukapu Homesteads are next shown in 1945 (Figure 9). The Lyons Ditch and a branch of this ditch flow from a dam in Waikoloa Stream. The U.S. military camp Tarawa is depicted between the Waimea and Pu'ukapu Homesteads. Among the features illustrated are the division headquarters, a hospital, a school, an ice plant, a recreation field, a gasoline storage area, and several pipelines. Also shown on this map are the Waimea Public Park, a bakery, a Roman Catholic Church, and a Church of the Latter Day Saints.

A land classification map for the Waimea Plain shows the area in 1947 (Figure 10). The LCAs depicted in the 1928 map are still shown, with two more added: LCA 3682 and 4233. The roads to Kona and Kohala are now labeled as the "Gov't Main Road." Paiakuli Pond and the new Upper Hamakua Ditch with its weir are still shown. A tree nursery and forest ranger station are illustrated in the *mauka* section of the Pu'ukapu Homesteads.

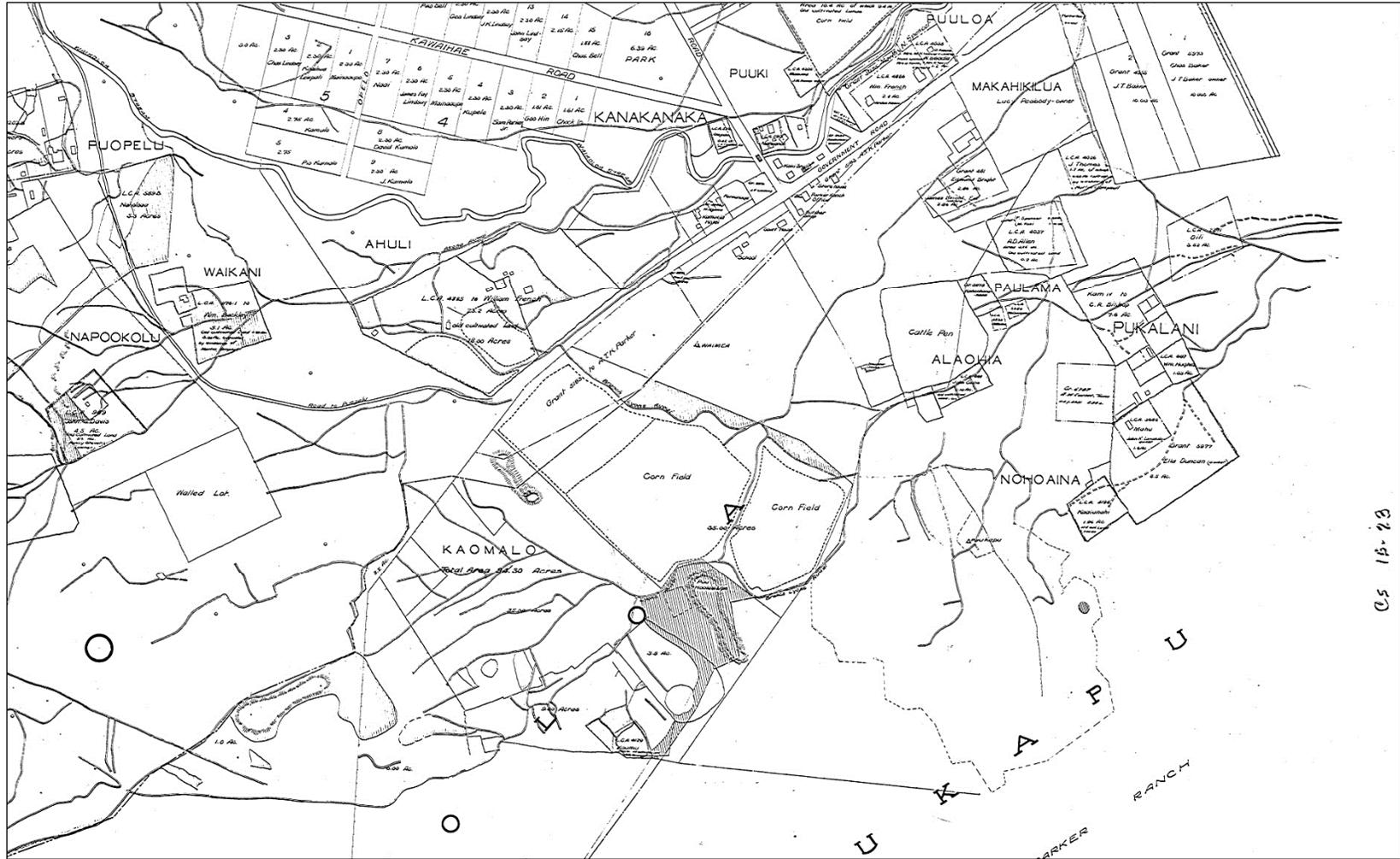
### ***Mele***

Like the traditional chants from ancient times that give us a window into pre-contact Hawai'i, the modern songs of today also provide a glimpse of the specific recent time and place that they were written in. It is interesting that the poetic references to Waimea from the days of old have found their way into the modern song compositions. Such is the case with the songs *I Ka Luna O Waimea*, *Hanohano E*, and *Na Kuahiwi Kaulana*. The rain of Waimea is still personified with the proper





Figure 6. Portion of a Pu'ukapu Homesteads map (Kanakanui and Lutz 1913). The project area is off the map to the southwest (bottom left of the map).



C.S. 15-23

Figure 7. Portion of a Hawaii Territory Survey map of Waimea (Wall 1914). The project area is off the map to the east (bottom right of the map).

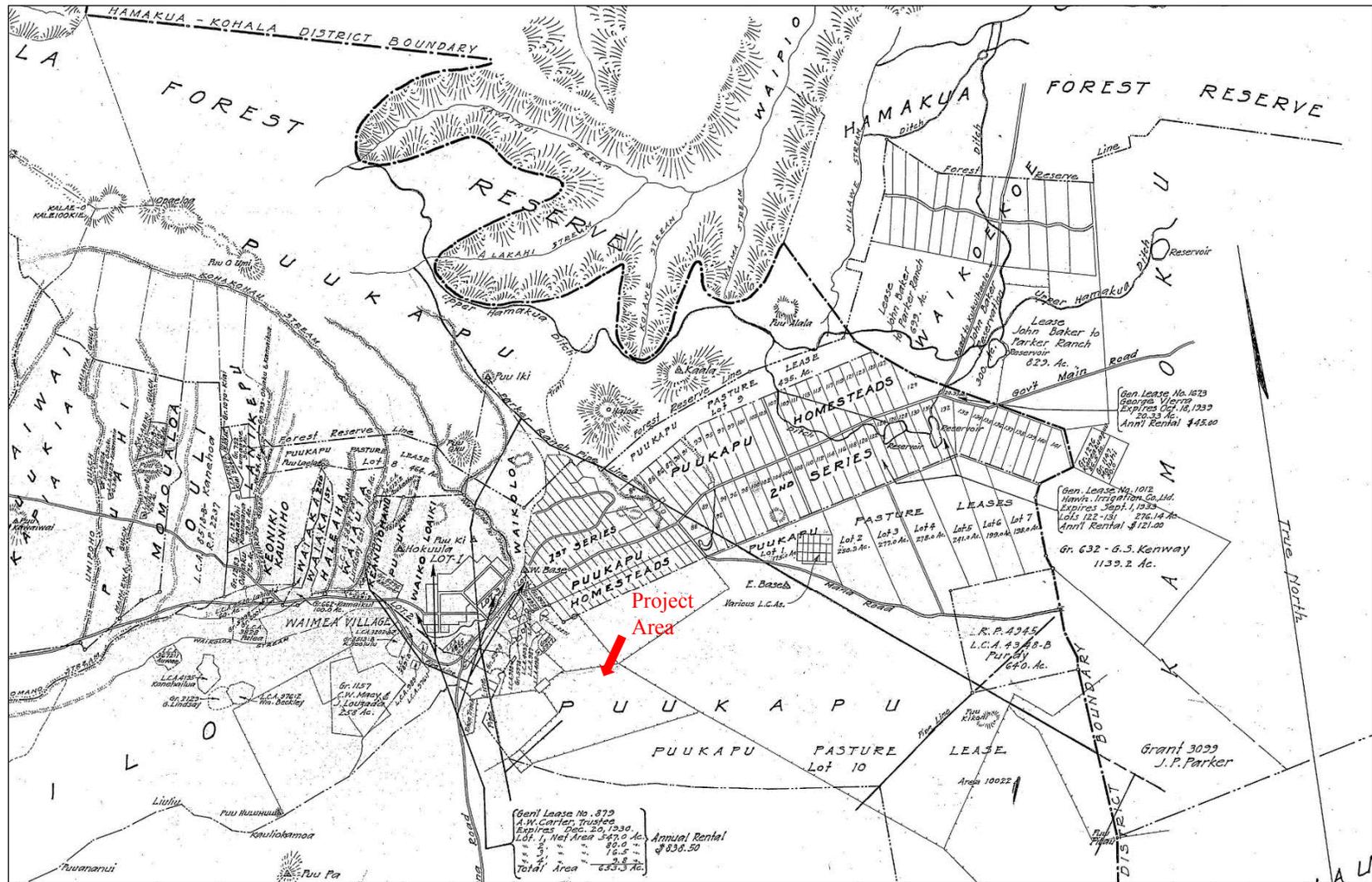


Figure 8. Portion of a Waimea Government Lands map (Wall 1928).

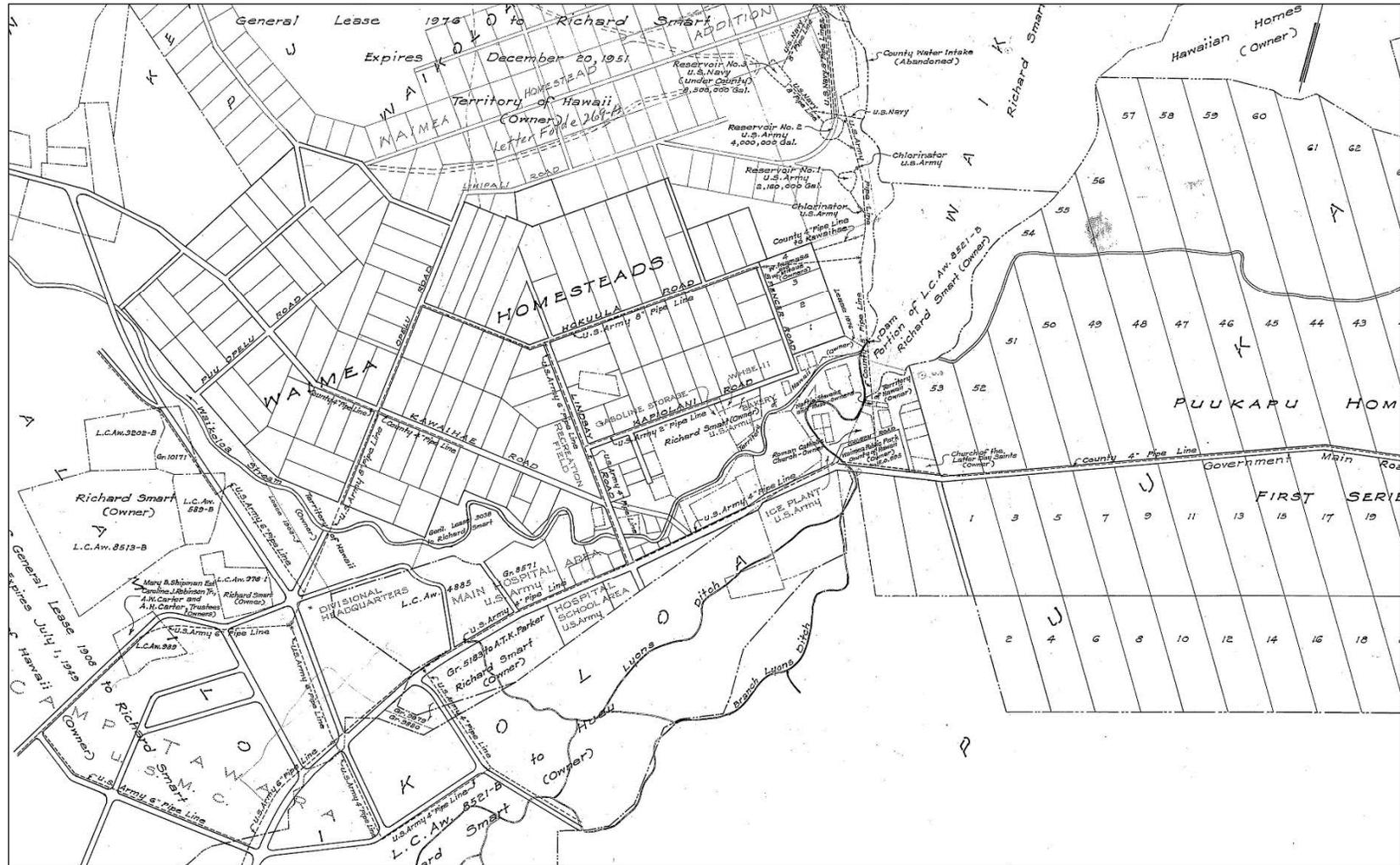


Figure 9. Portion of a South Kohala map (Marks 1945). The project area is off the map to the south (bottom of the map).

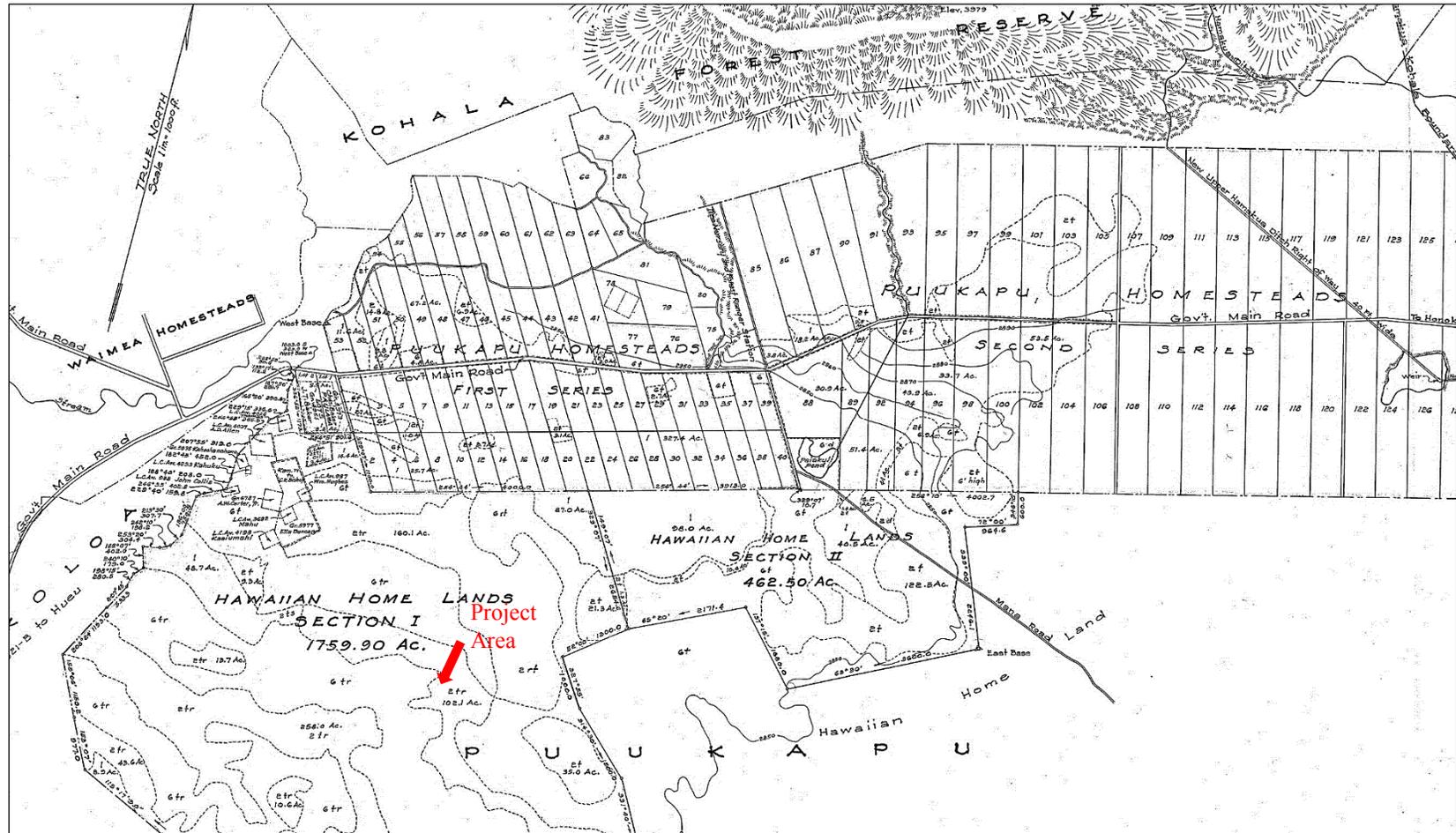


Figure 10. Portion of a land classification map of Waimea (Marks 1947).

name, Kīpu‘upu‘u, and the wind of Kohala is similarly still called ‘Āpa‘apa‘a. Portions of the three songs are included here:

I Ka Luna O Waimea by Keali‘ikaleo‘olaeaenuikaumanamana VIII Blaisdell

Aia i ka luna o Waimea	There, in the heights of Waimea
Pumehana ho‘i kāua	You and I share warmth
I ka ua e kipu‘upu‘u	From the cold rain
Me ka noe e a ka uhiwai	And the mist and fog

Source: Keali‘i Blaisdell’s CD “Malumaluakua” -This was written (07/08/2008) about a naughty little dream of Keali‘i and his wife up in Waimea, Hawai‘i. Having a lot of kaona, shall we say PG-13 rating? Translated by Keali‘i Blaisdell, Copyright 2008, Keali‘i Blaisdell (Lyrics and translation to this song and all other songs in this section along with their accompanied descriptions are from the [www.huapala.org](http://www.huapala.org) database compiled by Kanoa-Martin).

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Hanohano E (traditional song)

Hanohano e o Kohala e	Majestic Kohala
I ka makani e apa‘apa‘a e	In the gales
Hanohano e o Waimea e	Majestic is Waimea
I ka ua e kipu‘upu‘u e	In the hard, cold rain

Source: McKee Collection “Sonny Cunha Music Book” Translated by Mary Pukui

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Nā Kuahiwi Kaulana by Bill Lincoln

Ho‘o komo i kau apo a‘o Mahukona	Let us go to Mahukona and
I ka nuku kaulana o ka ‘āina	Enter this famous land
Ahuwale nā Kuahiwi o Kohala	Mountains of Kohala are in plain view
Ke holo a‘ela mai uka a ke kai	That run from the uplands to the sea
Hu‘i hu‘i kai hona ao Waimea	Water of Waimea is cold
Me ka wai ili ula	The water burns the skin
Ka ua Kipu‘upu‘u	The chilly rain Kipu‘upu‘u
I ka ku‘i kā ‘olu o Kawaihae	The smooth pounding sea of Kawaihae
Ke one pua kea i ke kai	The white sand and whispering sea
hāwanawana	
Alawa a‘e ua	Let us glance up
I ka nani a‘o Maunakea	At the beauty of Mauna Kea
Pumehana i ka poli kaupu a‘o	Think of the heat in the heart of Mauna
Maunaloa	Loa
E ae ou Hualalai e ku‘u mai la	There is the top of Hualalai
Nā kuahiwi kaulana i ke kapa‘au	The famous mountains where the gods
	dwell

Source: G.Cooke collection Translation by Kanani Mana

A beautiful addition to the the musical compositions written about Waimea is the inclusion of songs that reference the *paniolo*, or Hawaiian cowboy. This is undoubtedly unique to the few locales throughout the islands where ranching dominated the community. Songs written about, for, and by Hawaiian cowboys are probably even more prominent in the Waimea-Kohala area where Hawai'i's cattle industry thrived. The following three songs are associated with the *paniolo*. The first, *Ka Waimea Swing*, mentions the partying of a cowboy in Waimea. The second, *Lepe 'Ula'ula*, is a Waimea love song about a cowboy. And the third, *Waiomina*, celebrates the victories that the handful of Hawaiian cowboys stunned the world with when they traveled to Wyoming to compete in the annual cowboy competitions at Cheyenne. Here are the three songs:

Ka Waimea Swing by Thelma Sproat Bugbee, Music by Irmgard 'Aluli

Eia lā ka pō o ka wela lā  
 Nui ana o ka le'ale'a lā  
 E'oni ana nā po'e sure kēla!  
 Hele hula nā wāwae  
 Me ka Waimea swing  
 Me ka Waimea swing

This is the gala night  
 Fun and gaiety running high  
 Everyone in action for sure!  
 All the dancing feet moving  
 In the Waimea swing  
 In the Waimea swing

U'i nā pua lei like 'ole lā  
 Pūlehulehu nā pua aia lā  
 Kani nā kīkala ma kāma'a lā  
 Aia cowboy me ka Waimea swing  
 Me ka Waimea swing

Flower lei(s) of beauty unmatched  
 Bounty of floral beauty gathered here  
 Harmony of jingling spurs and boots  
 That's a cowboy dancing the Waimea swing,  
 The Waimea swing

Kani wāhie mai ne nā pila lā  
 Hū maila kani waiolina lā  
 Hui nā 'ukulele kīkā hō'alu lā  
 Kani maila e ka Waimea swing  
 E ka Waimea swing

Music breaks into the beauty and gaiety  
 Pouring forth harmony in violins  
 Mingling with 'ukulele and slack-key guitar  
 Raising the echo of the Waimea swing,  
 The Waimea swing

Ma 'ane'i mai a ma 'ō aku lā  
 Huli 'ākau a huli hema lā  
 Hene mai nā 'aka 'ana lā  
 Holo 'ana (Hī! Hū!)  
 O ka Waimea swing  
 O ka Waimea swing

Swing this way then that way  
 To the right and to the left  
 Rippling laughter mingles  
 With shouts, "Hee, Hoo!"  
 Of the Waimea swing  
 Of the Waimea swing

Ha'ina mai ka puana lā  
 Eia lā ka pō o ka wela lā  
 E 'oni ana nā po'e sure kēla!  
 Hele hula nā wāwae  
 Me ka Waimea swing  
 Me ka Waimea swing

This is the story told  
 The gala night of whoopee  
 Everybody in action for sure!  
 All the dancing feet moving  
 In the Waimea swing  
 In the Waimea swing

Source: Hailama Farden from Kani ka pila! The musical legacy of Irmgard Keali'iwahinealohanohokahaopuamana Farden 'Aluli. Translation by Thelma Bugbee

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Lepe ‘Ula‘ula by Kaimanahila

Lepe ‘ula‘ula lepe o ka moa  
Ke hua kūlina `ai a ka pelehu

The red comb of the rooster  
The corn eating turkey

Keiki mai au no Kawaihae  
No ke kipuka `ili lawe a lilo

I am a lad from Kawaihae  
With a winning lasso

‘Elua wale iho ho‘i māua  
Ka hau hāli‘i a‘o Waimea

Just the two of us  
Covered by the dew of Waimea

I laila māua kukuni e ka hao  
Kokope e ka ‘i‘o kupu kuku‘i e ka  
papa niho

There, we two used the branding iron  
Scraped the flesh from the gums

Mai nō ‘oe a ho‘opoina  
I ka lawe ha‘aheo ake kipuka `ili

Never forget  
The lasso and the proud catch

Ha‘ina `ia mai ana ka puana  
Lepe ‘ula‘ula lepe o ka moa

Tell the refrain  
The red comb of the rooster

Source: This Waimea love story tells of a Big island cowboy who uses his lariat to capture the object of his affection. Translator unknown

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Waiomina by Helen Parker

Kaulana Ikua me Ka‘aia, lā  
Na‘eu kīpuka `ili  
Na āiwaiwa ‘o Eulopa, lā  
Waimea e ka `eu  
Ka ua Kīpu‘upu‘u  
Kahua Waiomina

Famous are Ikua and Ka‘aia  
Both mischievous with the lariat  
Both experts in Europe  
Waimea full of gusto  
The hard rain named Kipu‘upu‘u  
To the stadium of Wyoming

‘Olua nā moho puna ke ao, lā  
Na‘eu kīpuka `ili  
‘A‘ohe kupu‘eu nanā e a‘e, lā  
Waimea e ka `eu  
Ka ua Kīpu‘upu‘u  
Me ke anu a‘o Kaleponi

Both are delegates to the world championship  
Both mischievous with the lariat  
No expert to excel you  
Waimea full of gusto  
The hard rain named Kīpu‘upu‘u  
To the cold of California

Na ke kelekalapa i ha‘i mai, lā  
Na `eu kīpuka `ili  
Ikua e ka moho puni ke ao, lā  
Waimea e ka `eu  
Ka ua Kīpu‘upu‘u

A telegraph brought us the word  
Of your mischievous lariats  
Ikua is the champion of the world  
Waimea full of gusto  
The hard rain named Kīpu‘upu‘u

Nā kuahiwi `ekolu  
Piha hau‘oli ou mau kini, lā  
Na `eu kīpuka `ili  
Kaulana ka ua Kīpu‘upu‘u, lā  
Waimea e ka `eu  
Nā kuahiwi `ekolu  
Kahua Waiomina

And the three mountains  
Your people are full of happiness  
Of your mischievous lariats  
Famous is the Kipu‘upu‘u rain  
Waimea full of gusto  
The three mountains  
The stadium of Wyoming

Ha'ina hou mai ka puana, lā	Tell the refrain
Na 'eu kīpuka 'ili	Of your mischievous lariats
Ke kaula 'ili a'o kani ka uwepa, lā	The sound of the lariats
Waimea e ka 'eu	Waimea full of gusto
Nā kuahiwi 'ekolu	The three mountains
Waimea e ka 'eu	Waimea full of life

Source: Penny Keli'i - When the Waimea paniolo went to Cheyenne in 1907, they scouted the world's largest rodeo and decided they could compete and probably do well. They signed up to compete and returned the next year, 1908, with approximately 5 or 6 paniolo. They were well received and the Hersig Ranch loaned some of their best horses to our paniolo to use in the competition. Rancher Hersig was a good friend of Eben Low. Eben Low competed with only one hand, his right hand had been yanked off years before while roping cattle in Hawai'i. Jack Low, Eben's brother, had an asthma attack but competed anyway placing 6<sup>th</sup> in the competition. Ikua Purdy's average roping time was 56 seconds, and won him 1<sup>st</sup> place, stunning the rest of the competing cowboys. Archie Kaaua came in 3<sup>rd</sup>.

Finally there is the song *Nani Waimea*. This song is simply a proud tribute to the area. The composer is moved to express his love for his home there. Here is a portion of this musical tribute:

Nani Waimea by Sam Koki

Nani Waimea	Beautiful Waimea
Ku'u home Kamuela	My home in Kamuela
Lei o ka heke	Best wreath
Lei o Hawai'i	Wreath of Hawai'i
Ku'u pua milimili	My flower to caress
Anuanu Humu'ula ē	Coolness of Humu'ula
Ku'u 'āina aloha	Land that I love
'Āhē nani Waimea	Yes, Waimea is beautiful

Source: Humu'ula is a place name on the slopes of Mauna Kea.

### Contemporary History

The first half of the 1900s saw Parker Ranch dominating the Waimea countryside. By then, Waimea had a few stores and a boarding house, but the economy was centered on its shipment of cattle to the outside markets. Under the management of A.W. Carter, more lands were purchased; more irrigation ditches were constructed; and a concentrated effort was made to breed better cattle and horses. Carter even ventured to train horses for polo and to provide cavalry horses for the U.S. military. He was succeeded as manager of the ranch by his son A.H. Carter in 1937 (Wilkinson et al. 2013).

In 1943, the Army leased from Parker Ranch approximately 91,000 acres of land for military training. Both the Army and the Marines utilized this land for battle maneuvers. The military 'camp' was initially named Camp Waimea, but then it was called Camp Tarawa. Its center of operations was located south of today's Waimea Town, near the current project site at Pu'ukapu. The camp was abandoned in 1946 after the end of World War II. The camp infrastructure went into ruins, and the lands reverted back to Parker Ranch. When Parker Ranch's lease expired, these former Crown Lands reverted to the Department of Hawaiian Home Lands (Wilkinson et al. 2013).

The project area lies within Sector 15 of the Waikoloa Maneuver Area Formerly Used Defense Site (FUDS). This is a 123,000 acre area of Waimea and Waikoloa acquired by the Navy in 1943 (U.S. Army Corps of Engineers 2013). Approximately 50,000 troops were sent there from 1943–1945 to participate in live fire training exercises and troop maneuvers. Although surface clearing of unexploded ordnance (UXO) was conducted in 1946 and again in 1954, munitions and explosives are still being discovered in the Former Waikoloa Maneuver Area FUDS. To date, more than 22,600 acres of the Waikoloa Maneuver Area have been surface cleared of UXO, with a wide variety of munitions, explosives, and military debris removed. Clean up and investigative studies are ongoing.

Today, the lands of Waimea around this project site are still under the Department of Hawaiian Home Lands and designated for community and agricultural use. The current lessees use the land for cattle grazing.

### ***The Hamakua Ditch***

An offshoot of the Upper Hamakua Ditch runs through the Pu‘ukapu Homesteads, to the east of the project area. The main ditch was completed in January 1907 to divert water from tributaries of Wailoa Stream in Waipi‘o Valley for use as irrigation in sugarcane fields and for fluming at the sugar mills of the Hāmākua Coast (Wilcox 1996). At first, the ditch was not properly lined, and by 1915 average flow decreased by more than half, with the flumes and associated mountain trails badly deteriorating. The ditch was repaired at high cost and “boasted some of the best dressed-stone work in Hawaii” (Wilcox 1996:149). By 1921 much of the ditch had been rerouted and other parts were enlarged so by that time, none of the original ditch was in use. Even with the repairs, the ditch was unsuccessful, in part because of the inconsistent water source.

The Upper Hamakua Ditch was appropriated by the territorial government in 1948, but further repairs were not undertaken until the late 1980s. At this time the Alakahi and Ko‘iawe sections were reconstructed and the Pu‘u ‘Alalā section was abandoned. Water was diverted to homes and farms in Waimea, including the Pu‘ukapu Homesteads and the Lālāmilo Farm Lots. Nothing is left of the original 1907 ditch, although a few miles of the 1915 ditch can still be seen today (Wilcox 1996:150).

### **Previous Archaeology**

The undertaking of archaeological work in the areas around Waimea has only started relatively recently, although a large amount of work has taken place. The following chronological review of archaeological studies summarizes reports found in the SHPD Kapolei library (Figure 11 and Table 2).

In 1981, an archaeological survey was conducted at the proposed Lālāmilo Agricultural Park (Clark 1981). A total of 321 historic properties were identified, and all were associated with the Waimea agricultural system. All of the irrigation ditches, to include the well-known “Akona’s ‘Auwai”, were designated as Site 9179.

In 1983, 4,561 archaeological features were identified during an investigation of the Mudlane-Waimea-Kawaihae road corridor (Clark and Kirch 1983). Numerous habitation and agricultural sites were recorded along with one dendritic irrigation system, possibly connected to “Akona’s ‘Auwai”, and designated as Site 2684. A portion of Section 4 of the extensive project area overlaps with the current study. Although no archaeological sites were found within the current area of study, 20 sites were located along Section 4 (Sites 8800–8819). These include C-shaped and U-shaped shelters, alignments, enclosures, terraces, walls, platforms, mounds, and agricultural fields.

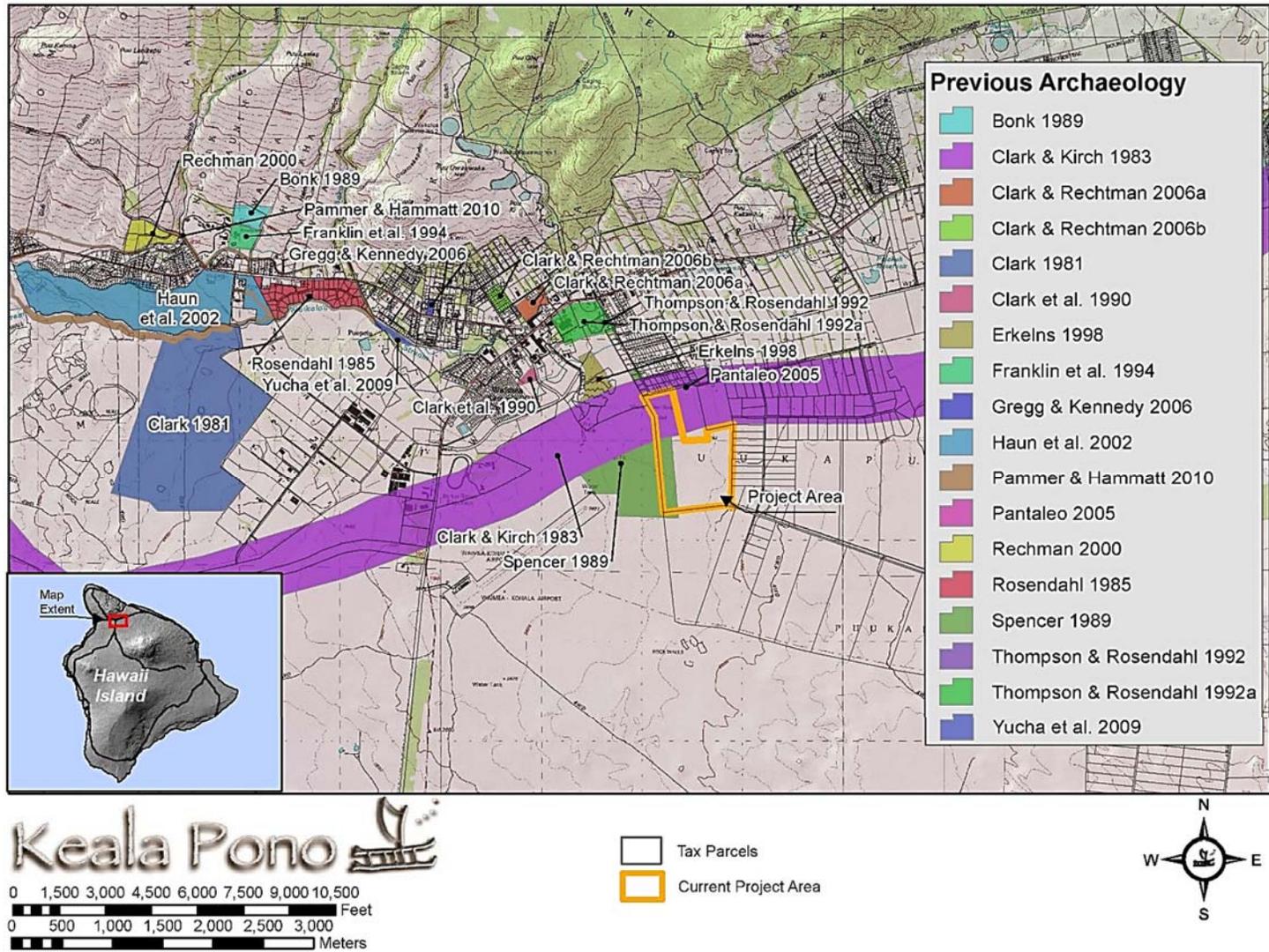


Figure 11. Previous archaeological studies in the vicinity of the project area.

**Table 2. Previous Archaeological Studies in the Vicinity of the Project Area**

<b>Author</b>	<b>Year</b>	<b>Location</b>	<b>Work Completed</b>	<b>Findings</b>
Clark	1981	Near Lālāmilo Agricultural Park	Archaeological Survey	Identified 321 historic properties associated with the Waimea agricultural system. All irrigation ditches including “Akona’s ‘Auwai” designated as Site 9179.
Clark and Kirch	1983	Mudlane-Waimea-Kawaihae road corridor	Archaeological Investigation	Identified 4,561 archaeological features. Dendritic irrigation system designated as Site 2684.
Rosendahl	1985	Kawaihae Reservoir No. 1	Archaeological Reconnaissance	No findings.
Hammatt and Borthwick	1986	Lālāmilo Houselots	Archaeological Reconnaissance	Identified eight historic properties typical of the Waimea agricultural system.
Hammatt et al.	1988	Lālāmilo Houselots	Archaeological Inventory Survey and Subsurface Testing	Recorded artifacts and midden dating to the late prehistoric period.
Bonk	1989	Near Hawai‘i Preparatory Academy	Archaeological Reconnaissance	Identified various agricultural terraces.
Hammatt and Shideler	1989	Lālāmilo Houselots and Ka La Loa Subdivision	Data recovery	Documented possible sweet potato farming with agricultural intensification over several centuries.
Spencer	1989	Lālāmilo	Archaeological Investigation	No findings.
Clark et al.	1990	Waimea School	Archaeological Testing and Data Recovery	Recovered charcoal samples dating to AD 1449–1674.
Thompson and Rosendahl	1992a	North Hawai‘i Community Hospital	Archaeological Inventory Survey	Identified an agricultural field complex (Site 18054) and an irrigation system (Site 16095).
Thompson and Rosendahl	1992b	Waimea Elderly Housing	Archaeological Inventory Survey	Further documented Site 16095, previously recorded irrigation system.
Barrera	1993	Sandalwood Estates	Archaeological Inventory Survey	Identified an agricultural field complex (Site 14948).
Barrera	1994	Lanikepu and ‘Ōuli	Archaeological Inventory Survey	Identified 43 properties from the pre-contact and historic periods including trails, walls, burials, ‘animal barriers’, agricultural, and habitation sites.
Franklin et al.	1994	Hawai‘i Preparatory Academy	Archaeological Inventory Survey	Identified a historic habitation terrace (Site 19648), a cemetery (Site 19649), and five mixed habitation-agricultural sites (Sites 19643–19647).

**Table 2. (continued)**

<b>Author</b>	<b>Year</b>	<b>Location</b>	<b>Work Completed</b>	<b>Findings</b>
Erkelens	1998	Pukalani	Archaeological Investigation	Identified a breaking corral (Site 19419), a veterinary office (Site 19418), the Pukalani stables and blacksmith shop (Site 19417), the Duncan-Lanakila Cemetery (Site 19416), and the <i>kuleana</i> lots (Site 8812).
Nees and Williams	1998	Camp Tarawa	Archaeological Monitoring	Identified a C-shaped feature (Site 21325), an enclosure remnant (Site 21326), and 96 WWII artifacts and artillery fragments.
Wolforth	1999	North Hawai'i Community Hospital	Data Recovery	Recorded subsurface features and collected sediment samples.
Rechtman	2000	TMK: 3-6-2-001:091	Archaeological Inventory Survey	Identified a historic trash dump (Site 18579) and several agricultural features (Site 18581).
Haun et al.	2002	DHHL at Lālāmilo	Archaeological Inventory Survey	Documented 819 features (walls, mounds, enclosures, platforms, irrigation ditches, and field boundaries) within 76 historic properties.
Kikiloi et al.	2002	Waimea Trails and Greenway	Literature Review and Field Inspection	Assessed five areas according to potential for cultural resources, terrain type, and degree of urbanization.
Pantaleo	2005	Kanu O Ka 'Aina Learning Center at Pu'ukapu	Archaeological Assessment	No findings.
Clark and Rechtman	2006a	TMK: 3-6-5-004:025 and 063	Archaeological Inventory Survey	Identified an <i>'auwai</i> (Site 26682), a wooden structure (Site 26683), and two historic walls (Sites 26680 and 26681).
Clark and Rechtman	2006b	TMK: 3-6-5-4:029, 030, and 050	Archaeological Monitoring	Documented a stone-concrete decorative feature (Feature H of previously recorded Site 24168).
Gregg and Kennedy	2006	TMK: 3-6-5-002:043	Archaeological Assessment	No findings.
Yucha et al.	2009	Waimea Trails and Greenway	Archaeological Inventory Survey	Identified a concrete ford and connecting roadway (Site 26873), an earthen ditch determined to be part of "Akona's 'Auwai" (Site 26872), and WWII infrastructure from Camp Tarawa (Site 26871).
Pammer and Hammatt	2010	Waimea Trails and Greenway	Literature Review and Field Inspection	Identified seven historic properties consisting of alignments, enclosures, walls, and terraces.
McElroy et al.	2014	Current Project Area	Cultural Impact Assessment	Conducted ethnohistorical interviews and archival research.

In 1985, an archaeological reconnaissance survey was done at Kawaihae Reservoir No.1 (Rosendahl 1985). No historic properties were found, and no further work was recommended.

In 1986, a reconnaissance survey was conducted at the proposed site of the Lālāmilo house lots (Hammatt and Borthwick 1986). Eight historic properties were identified, and they were determined to be similar to the Waimea Agricultural System. As a follow up to the reconnaissance survey, 12 acres were designated for further work and inventoried in 1988. Subsurface testing indicated that the area was a habitation-agricultural complex, and the artifacts and midden that were uncovered dated the site to the late prehistoric period (Hammatt et al. 1988). In 1989, data recovery and radiocarbon dating of these properties suggested possible sweet potato farming with a gradual intensification of agriculture in the area over several centuries (Hammatt and Shideler 1989).

Also in 1989, an archaeological reconnaissance survey was completed near the Hawai‘i Preparatory Academy in Waimea (Bonk 1989). Various agricultural terraces were recorded but no irrigation ditches were found. Also, no habitation sites were identified in the survey. Additional mapping of the terraces and data recovery were recommended.

Also in 1989, an archaeological investigation was conducted at Lālāmilo for an irrigation pipeline and for a livestock distribution and management area (Spencer 1989). A portion of this investigation overlaps with the west side of the current area of study. No historic properties were observed, and no further work was recommended.

In 1990, archaeological testing and data recovery was conducted at Waimea School (Clark et al. 1990). Focusing on the previously recorded Site 8808, three irrigation ditches were studied, and it was concluded that there was a possible mix of historic and pre-historic construction. Charcoal samples from a lower subsurface lens yielded dates in the range of AD 1449–1674.

In 1992, an inventory survey was conducted for potential sites of the North Hawai‘i Community Hospital (Thompson and Rosendahl 1992a). Among the sites identified were an agricultural field complex, Site 18054, and an irrigation system, Site 16095. The irrigation system was further documented after additional adjacent lands for the Waimea Elderly Housing were surveyed (Thompson and Rosendahl 1992b). Archaeological monitoring was recommended.

In 1993, an archaeological inventory survey was conducted on approximately 50 acres of the Sandalwood Estates (Barrera 1993). A complex of agricultural field borders were recorded through subsurface testing. The complex was designated as Site 14948, and no further work was recommended.

In 1994, an inventory survey was conducted for the campus expansion of Hawai‘i Preparatory Academy Waimea (Franklin et al. 1994). Seven archaeological sites were identified, two of which were determined to be significant, Site 19649, a cemetery, and Site 19648, a historic habitation terrace. The other five sites had a mix of habitation and agricultural functions. These were given the site numbers 19643–19647.

Also in 1994, an inventory survey was conducted over 250 acres in Lanikepu and ‘Ōuli (Barrera 1994). A mix of 43 pre-contact and historic properties were identified, comprised of trails, walls, burials, ‘animal barriers’, and agricultural and habitation sites.

In 1998, land around the *kuleana* lots in Pukalani were investigated (Erkelens 1998). Five historic properties were identified: the *kuleana* lots, Site 8812; the Duncan-Lanakila Cemetery, Site 19416;

the Pukalani stables and blacksmith shop, Site 19417; a veterinary office, Site 19418; and a breaking corral, Site 19419.

Also in 1998, while monitoring the investigation of unexploded ordnance at Camp Tarawa, two historic properties and approximately 96 WWII-era artillery fragments and other artifacts were identified (Nees and Williams 1998). The two sites recorded were an enclosure remnant, Site 21326, and a C-shaped feature, Site 21325.

In 1999, subsurface features were identified during a data recovery project at the North Hawai'i Community Hospital (Wolforth 1999). In addition, sediment samples were collected for palynological analysis and radiocarbon dating while investigating an irrigation ditch of the Lālāmilo Field System.

In 2000, there was a survey of TMK: 3-6-2-001:091, in the vicinity of the project area (Rechtman 2000). Several previously recorded sites were assessed, and two new sites were identified: a historic trash dump, Site 18579; and several agricultural features, Site 18581.

In 2003, an area was surveyed in Lālāmilo for the Department of Hawaiian Home Lands (Haun et al. 2002). Numerous mounds, walls, enclosures, platforms, irrigation ditches, and field boundaries were identified, for a total of 819 features within 76 historic properties.

Also in 2002, a field inspection and literature review was conducted for the proposed Waimea Trails and Greenway Project (Kikiloi et al. 2002). The project area was broken down and categorized into five different zones based on the potential for cultural resources, terrain type, and degree of urbanization.

In 2005, an archaeological assessment was conducted of 15 acres in Pu'ukapu for the proposed Kanu O Ka 'Aina Learning Center (Pantaleo 2005). No cultural resources were identified in the surface survey or during subsurface testing. No further archaeological work was recommended.

In 2006, an archaeological inventory survey was conducted on TMK: 3-6-5-004:025 and 3-6-5-004:063 (Clark and Rechtman 2006a). Four historic properties were identified: a historic wooden structure probably erected in WWII; an *'auwai* which ran parallel to the Waikōloa Stream; and two historic walls.

Also in 2006, archaeological monitoring was carried out during the construction of the Waimea Parkside Residential Subdivision (Clark and Rechtman 2006b). No new sites were identified during the monitoring, but a decorative pond-like feature was recorded and added as Feature H to the previously recorded Site 24168. In addition, midden, historic trash, and two adze fragments were documented in the area.

In another project in 2006, no historic properties were observed during an archaeological assessment of TMK: 3-6-5-002:043 (Gregg and Kennedy 2006).

In 2009, there was a survey of several portions of TMK: 3-6-5-003:004 in the Waimea Trails and Greenway Project area (Yucha et al. 2009). Three historic properties at the Waikōloa Stream were recorded: a concrete ford and connecting roadway, Site 26873; an earthen ditch, Site 26782; and a WWII-era site associated with Camp Tarawa, Site 26871. This latter site was made up of two features, a damaged concrete bridge and a paved road remnant. Site 26783 was determined to be a remnant of a 20<sup>th</sup> century roadway, and Site 26782 was found to be part of the previously recorded "Akona's 'Auwai". Furthermore, Site 26782 was recommended for preservation due to meeting the Hawai'i Register's Criteria a and d of site significance.

In 2010, 14 historic properties were documented in other work for the Waimea Trails and Greenway Project while conducting a literature review and field inspection for some trail developments (Pammer and Hammatt 2010). Of the 14 sites documented, seven were previously recorded, and seven were newly identified sites. It was stated that more data is needed to assess the significance of the newly identified sites. Two of the previously recorded sites, Site 18588 and Site 18590, were recommended for preservation.

A cultural impact assessment was also conducted for the current project area (McElroy et al. 2015). Results show that the project area was once the location of Christmas Paddock, a ranching compound where horses were kept, although the interviewees say that there are no material remains of the paddock today. (see Community Consultation section).

### **Summary and Settlement Patterns**

Waimea, on the island of Hawai‘i, has its origin at the dawn of time when the earth mother Papa and the sky father Wākea dwelled together, and Hawai‘i was born. This same Hawai‘i was to become the ancestor of the Hawaiian people (Kamakau 1991).

Evidence such as radiocarbon dating, avifaunal extinctions, and vegetation change suggest that the major colonization of the Hawaiian Islands occurred around AD 700–800 (e.g., Athens et al. 2002:57). The initial settlers came from other Pacific Islands looking for a new home that was accessible to the sea and able to sustain their new population with drinking water and food resources. Although the Waimea area was rich with water and food resources, it was relatively far from the canoe landing sites on the shores and far from the abundance that the ocean provided. Rudimentary farming in this upland area of Hawai‘i Island didn’t start until AD 1100–1200, many centuries after initial colonization of the islands (Bergin 2004). Initial habitation on the *makai* edges of Waimea commenced around AD 1300–1400, and its permanent upland habitation along with the more intense and complex agricultural systems developed there during the 1600s–1800s (Bergin 2004).

The expansion of settlement to the interior of Waimea and its accompanying intensification of agriculture marked a pre-contact era that was full of political and economic change. Waimea saw a relatively quick succession of rulers in the 1700s from Chief Alapa‘inui (Alapa‘i) to Chief Keawe‘ōpala to Chief Kalani‘ōpu‘u to Chief Kalanikauikeaolikīwala‘ō (Kīwala‘ō) and finally to King Kamehameha who eventually united all the Hawaiian Islands under his throne (Kamakau 1996[1866]). By the time of Kamehameha’s rule, Western explorers had just found their way to Hawai‘i. The arrival of Westerners spurred Waimea’s growth of sandalwood harvesting and various agricultural ventures; the introduction of Waimea’s Christian missions; and the development of Waimea’s ranching industry which also helped support the whaling industry at Hawai‘i Island’s ports.

As Western capitalism transformed Waimea into the following century, it was complemented with the proclamation of the Māhele and other new laws in the mid-1800s concerning land ownership (Moffatt and Fitzpatrick 1995). Most, if not all, of Waimea remained in the hands of the *ali‘i* as Crown Lands, and the *ali‘i*, interested in supporting the flourishing ranching industry, leased a major portion of the Waimea Crown Lands to ranchers. Among those ranchers was John Palmer Parker who started Waimea’s successful Parker Ranch, an enterprise which dominated the Waimea landscape throughout most of the 20<sup>th</sup> century.

Prior to the start of the 20<sup>th</sup> century, the Hawaiian monarchy was overthrown and there was a subsequent annexation of Hawai‘i as an American territory. As a result, the Crown Lands were confiscated by the self-appointed Provisional Government and later given to the U.S.-appointed Territorial Government (Kame‘eleihiwa 1992). However, as stated above, the ranching operations

in Waimea continued throughout the 20<sup>th</sup> century. For a short time period around the Second World War, Parker Ranch leased a portion of its Waimea lands to the U.S. military for training purposes. A military camp was built, first called Camp Waimea and later renamed Camp Tarawa. After the war, the military training there ceased and the land went back to Parker Ranch operations. When Parker Ranch's lease expired in the 1980s, these former Crown Lands of Waimea became administered by the State Department of Hawaiian Home Lands where it remains today designated for community and agricultural use.

### **Anticipated Finds and Research Questions**

Previous research has identified a wide range of activities that were carried out traditionally and historically in Waimea, including both dry and wetland cultivation, habitation, cattle ranching, and military use. It follows that a variety of archaeological remains may be found during the current survey. These might include traditional agricultural features such as stone terraces, subsurface pondfield deposits, and/or ditches. Habitation features such as temporary or permanent shelters or house foundations may also be encountered. Trails are another site type that may also be found.

Historic-era archaeological resources might also be identified, including vestiges of cattle ranching or military use of the area. These may include the remains of ranch houses, military structures, animal pens, cattle walls, faunal remains, and/or ceramic, glass, and metal artifacts. Of particular interest are any materials associated with Christmas Paddock, a ranching compound known to have been located on the project area.

Research questions will broadly address the identification of the above archaeological resources and may become more narrowly focused based on the kinds of resources that are found. Initial research questions are as follows:

1. Have any pre-contact archaeological remains survived historic and modern use of the parcel?
2. If so, what are the nature of these remains and where are they located?
3. Are there any vestiges of historic-era use of the project area, including Christmas Paddock or other ranching uses?

Once these basic questions are answered, additional research questions may be developed in consultation with SHPD, tailored to the specific kinds of archaeological resources that occur on the parcel.

## METHODS

Archaeological inventory survey was conducted on September 19–22, 2014, and again on April 12, 2015, for a total of five days. Archaeologists participating in the September survey included Windy McElroy, PhD; Lokelani Brandt, BA; Leischene Calingangan, BA; Jeffrey Lapinad; and U‘ilani Macabio, BA. Lizabeth Hauani‘o, BA, completed the work in April, which consisted of excavating an additional test unit at Site 30195, per SHPD request. Either four or five archaeologists were present per day for the September survey. McElroy served as Principal Investigator, overseeing all aspects of the project.

For the pedestrian survey, the ground surface was visually inspected for surface archaeological remains, with transects walked for the entire project area. Of the 161.65-acre (65.42 ha) survey area, 100% was covered on foot. Wire fences marked the boundaries of the property and also divided it into several paddocks where livestock is currently grazing.

Vegetation was sparse throughout the property, consisting entirely of low grass, which did not limit the survey effort at all (Figure 12). Because of the high visibility, the spacing between archaeologists was relatively wide, approximately 5–8 m apart. Archaeological sites and their boundaries were identified visually, with any feature possibly made or used by humans and more than 50 years old considered a site.

The one archaeological site that was identified was mapped with tape and compass, measured, described, photographed, and excavated. Controlled test units (TU) were excavated by hand at the site and in one other area. Vertical provenience was measured from the surface and all sediment was screened through 1/8 inch mesh.

Mechanical test trenches (TR) were excavated in ten arbitrary locations throughout the survey area to determine the presence or absence of cultural deposits and document stratigraphy over a wide area. A mini excavator was used for digging of the trenches (Figure 13). Vertical provenience was measured from the surface, and trenches were excavated to bedrock where possible. For both the units and trenches, profiles were drawn and photographed, and sediments were described using Munsell soil color charts and a sediment texture flowchart (Thien 1979). Excavations and site locations were recorded with a 3 m-accurate Garmin GPSmap 62st, and all units and trenches were backfilled after excavation.

The scale in all field photographs is marked in 10 cm increments. The north arrow on all maps points to magnetic north. Throughout this report rock sizes follow the conventions outlined in *Field Book for Describing and Sampling Soils*: Gravel <7 cm; Cobble 7–25 cm; Stone 25–60 cm; Boulder >60 cm (Schoeneberger 2002:2–35). The only material collected consists of animal bone from TU 1. This was analyzed by Sara Collins of Pacific Consulting Services, Inc. and is temporarily being curated at the Keala Pono office.



**Figure 12. Pedestrian survey, showing spacing of archaeologists and vegetation in the project area. Orientation is to the northeast.**



**Figure 13. Excavation of TR 5 with mini excavator. Orientation is to the southeast.**

## RESULTS

Pedestrian survey and subsurface testing were conducted in the 161.65-acre (65.42 ha) project area (Figure 14, Table 3). One historic property was found, Site 50-10-06-30195, an alignment. The entire project area is currently used for livestock grazing, thus very little of the archaeological record remains on the surface. Excavation of ten test trenches did not yield any evidence of subsurface cultural deposits or features. The project area is potentially a contributing element to a larger historic district that includes historic ranching infrastructure such as fences, pastures, paddocks, waterlines, corrals, and other ranching infrastructure from Parker Ranch elsewhere in Waimea.

### Community Consultation

Community consultation for this project took the form of speaking with community members and conducting a cultural impact assessment (McElroy et al. 2014). A total of four ethnographic interviews with *kūpuna* were completed. The interviewees were Sonny Keakealani, Alan “Uku” Lindsey, Mark Yamaguchi, and an anonymous *kupuna*. Interviews were conducted in person by Keala Pono Ethnographer and Waimea resident, U’ilani Macabio, BA.

The *kūpuna* did not offer much information on the specific project area. They did note that the project area was once a compound for horses known as Christmas Paddock. They stated that there are no material remains of the paddock today and they did not know of any archaeological sites in the area. Archival research did not yield much information on Christmas Paddock. Only the following passage was found that describes how ranch manager A.W. Carter named the paddock:

Mr. Carter and his men worked all one day, surveying, staking and fencing a large paddock near the headquarters of the Ranch. Late that evening, while still in his office, Mr. Carter was approached by his fence foreman who said, ‘Kalikimaka all pau’. Mr. Carter then realized that the day was Christmas (Kalikimaka), a fact he had lost sight of in his desire to complete the job, but he appreciated the humor of the subtle rebuke and retained the name for the paddock. (Brundage 1971:75)

The consultants shared a wealth of information on various topics. Several misconceptions about place names were explained. These include the history of the naming of Mahukona, Holoholokū, Honokāne, and Kanehūa. The consultants did not say that the project area was or is a place for plant gathering, but they did expand upon traditional uses for plants, particularly the *koali*, or morning glory. They also shared several *mo’olelo* and *mele* and reminisced of their younger days and of working on the ranch. They noted that Waimea has changed over time, with regard to the weather, flora and fauna, as well as the lifestyle that was practiced.

The *kūpuna* were generally supportive of the Waimea Nui Community Development Initiative but shared several concerns and recommendations. These included the need to construct another road into the area; concerns about cultural practices hindered by laws and regulations; concerns about further development; concerns about where the water will come from for the development; recommendations to utilize traditional place names; recommendations to hold a blessing before construction begins; and recommendations to work together in the planning process.

In addition to the cultural impact assessment, consultation was conducted with Michael Hodson of the Waimea Hawaiian Homestead Association via email throughout the course of the project. Hodson lived near the subject property since 1989 and was also a police officer that patrolled the area. He witnessed bulldozing on the southeast side of the project area. The grading and removal of large boulders created the level yards outside the subject parcel and the material was dumped in the southeast corner of the project area, creating the uneven topography seen today.

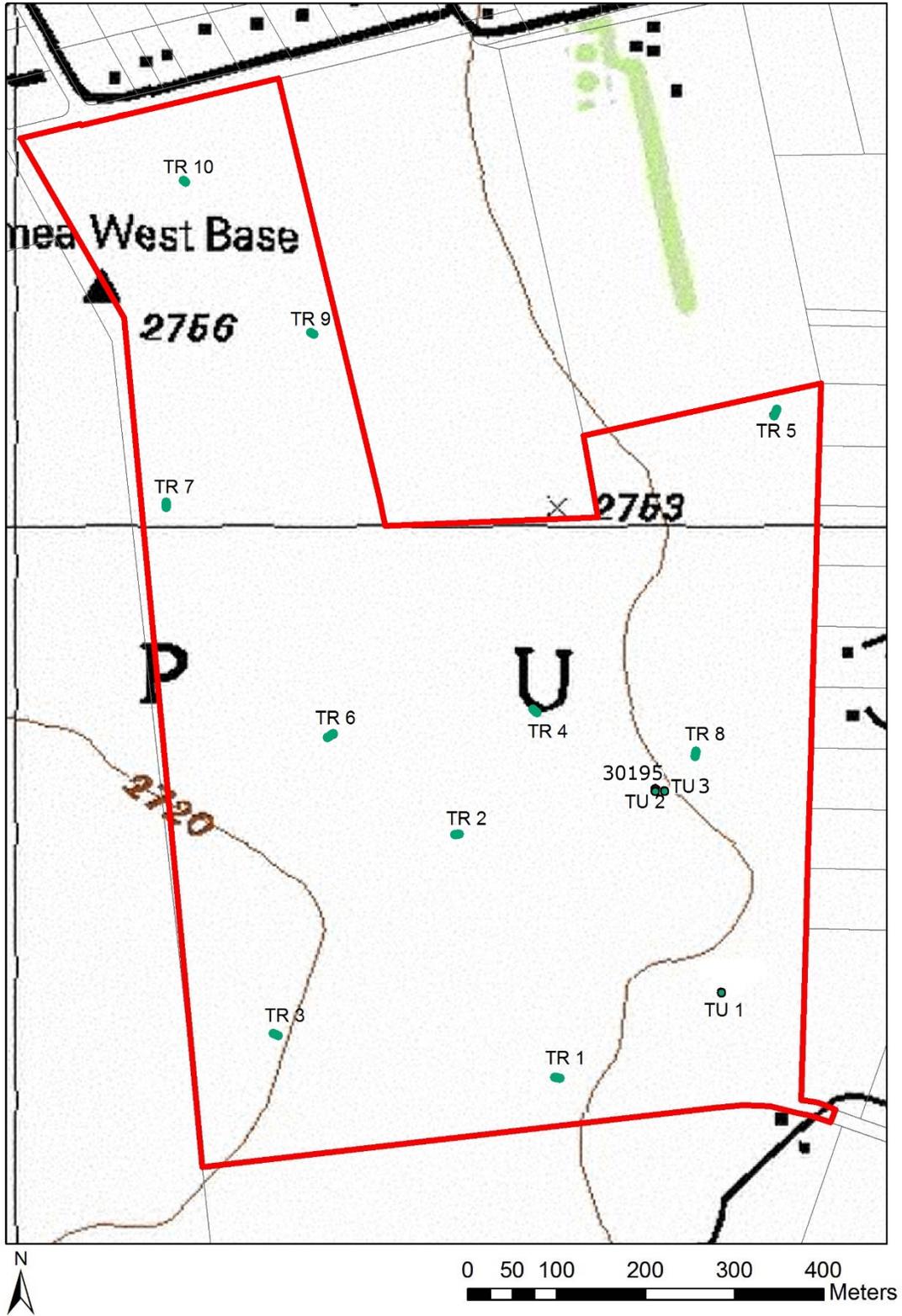


Figure 14. Location of Site 30195, Test Units 1–3, and Trenches 1–10 on a USGS Waimea quadrangle.

**Table 3. Sediment Descriptions**

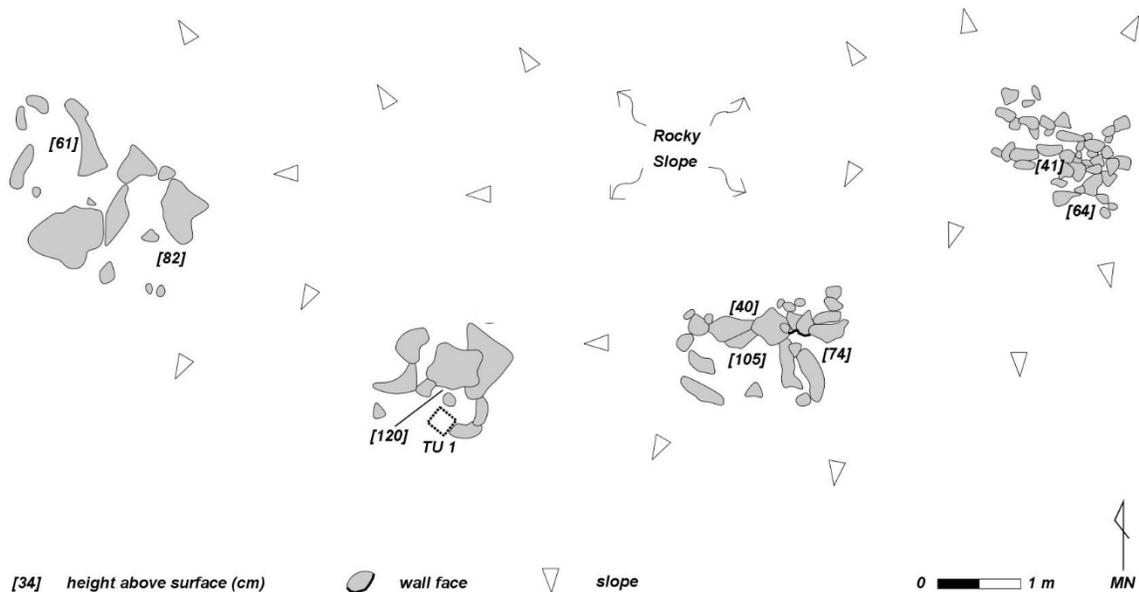
<b>Location</b>	<b>Layer</b>	<b>Depth (cmbs)</b>	<b>Color</b>	<b>Description</b>	<b>Interpretation</b>
TU 1	I	0–22	2.5Y 4/4	Silt loam; 15% roots; 20% basalt cobbles and gravel; faunal material, metal fragment; base of excavation.	Natural
TU 2	I	0–10	10YR 3/3	Sandy loam; 50% roots; 10% basalt cobbles and gravel; smooth, abrupt boundary.	Natural
	II	10–30	2.5Y 4/4	Silt loam; 15% roots; 20% basalt cobbles and gravel; base of excavation.	Natural
TU 3	I	0–8	10YR 4/4	Sandy loam; 50% roots; 20% basalt cobbles and gravel; smooth, abrupt boundary.	Natural
	II	8–36	7.5 YR 4/6	Silt loam; 10–20% roots, decreasing with depth; 30–50% basalt gravel and cobbles, increasing with depth; base of excavation.	Natural
TR 1	I	0–16	10YR 3/3	Sandy loam; 50% roots; 10% basalt cobbles and gravel; smooth, abrupt boundary.	Natural
	II	16–100	7.5YR 4/6	Silt loam; 15% roots; 10% basalt cobbles and gravel; base of excavation.	Natural
TR 2	I	0–12	10YR 3/3	Sandy loam; 50% roots; 10% basalt cobbles and gravel; smooth, abrupt boundary.	Natural
	II	12–110	7.5YR 4/6	Silt loam; 15% roots; 8% basalt cobbles and gravel; base of excavation.	Natural
TR 3	I	0–170	10YR 3/4	Loam; 10% roots; 1% basalt cobbles and gravel; base of excavation.	Natural
TR 4	I	0–15	10YR 3/3	Sandy loam; 50% roots; 10% basalt cobbles and gravel; smooth, abrupt boundary.	Natural
	II	15–120	7.5YR 4/6	Silt loam; 10% roots; 20% basalt cobbles and gravel; base of excavation.	Natural
TR 5	I	0–86	7.5YR 4/6	Silt loam; 10% roots; 10% basalt cobbles and gravel; base of excavation.	Natural
TR 6	I	0–93	7.5YR 4/4	Silt loam; 15% roots; 8% basalt cobbles and gravel; base of excavation.	Natural
TR 7	I	0–136	7.5YR 4/4	Silt loam; 15% roots; 5% basalt cobbles and gravel; base of excavation.	Natural
TR 8	I	0–112	2.5Y 4/4	Silt loam; 10% roots; 8% basalt cobbles and gravel; base of excavation.	Natural
TR 9	I	0–130	10YR 4/6	Silt loam; 15% roots; 2% basalt cobbles and gravel; base of excavation.	Natural
TR 10	I	0–110	10YR 4/4	Silt loam; 10% roots; 8% basalt cobbles and gravel; base of excavation.	Natural

## TU 1

TU 1, a 50 x 50 cm test unit, was placed within an area that was initially thought to be a possible modified outcrop (Figure 15). The purpose of the unit was to collect data that might inform on the age and function of the site and to determine if the site was utilized by humans or is merely a natural feature.

The test unit was excavated to 22 cmbs, where bedrock was encountered (Figure 16). Soil consisted of 2.5Y 4/4 (olive brown) silt loam with 15% roots and 20% basalt cobbles and gravel. The only items found were faunal remains at 0–20 cmbs in the northeast corner of the unit, with an unidentified piece of metal below them.

The faunal remains were collected and submitted to Pacific Consulting Services, Inc. for identification. Analyses indicate that the remains are from a juvenile dog, likely all part of the same individual. The metal fragment was not fully excavated or collected due to concerns of unexploded ordnance. Community consultation later determined that the outcrop was in fact a bulldozer push pile that was constructed in the 1990s.



**Figure 15. Plan view drawing of TU 1 location.**

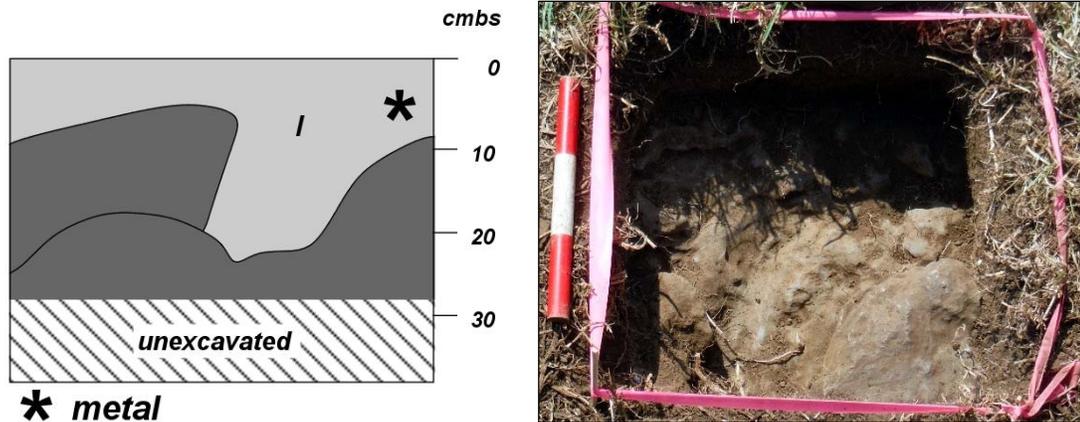


Figure 16. TU 1 north face profile drawing (left) and plan view photo (right). The dark shapes in the profile drawing are bedrock.

#### Site 50-10-06-30195

**Temporary Site No.** KP 2

**Formal Type:** Alignment

**Size:** 3.1 m long, 1.5 m wide, .21 m tall

**Shape:** L-shaped

**Construction:** Aligned

**Surface Remains:** None

**Subsurface Deposits:** None

**Condition:** Fair

**Function:** Undetermined

**Age:** Undetermined

**Significance Criteria:** d, May Yield Additional Information

**Mitigation:** Avoidance, No Further Work

Site 30195 is an L-shaped alignment that sits atop a low rise in the topography in the east-central portion of the project area (see Figure 14). It is composed of a single alignment of embedded cobbles, measuring 3.1 m long, 1.5 m wide, and .21 m high (Figures 17 and 18). No cultural material was found on the surface. The site is in fair condition, overgrown with grass but relatively intact. Its age and function, however are uncertain.

Two test units were excavated at the site. TU 2, a 50 x 50 cm test unit, was placed within the L-shaped portion of the alignment (see Figure 17). The purpose of the unit was to collect data that might inform on the age and function of Site 30195. The unit was excavated to 34 cmbs, where naturally-deposited, tightly packed rock hindered further excavation. Stratigraphy consisted of two natural layers (see Table 3), and no cultural material or deposits were encountered (Figure 19). Layer I consisted of 10YR 3/3 (dark brown) sandy loam with 50% roots and 10% basalt cobbles and gravel. It exhibited a smooth, abrupt boundary into Layer II. Layer II was a 2.5Y 4/4 (olive brown) silt loam with 15% roots and 20% basalt cobbles and gravel.

TU 3, another 50 x 50 cm test unit, was placed on the opposite side of the alignment from TU 2 (see Figure 17). The purpose of the unit was to collect data that might inform on the age and function of Site 30195. The unit was excavated to 36 cmbs, where naturally-deposited, tightly packed rock

hindered further excavation. Stratigraphy consisted of two natural layers (Figure 20; see Table 3), and no cultural material or deposits were encountered. Layer I consisted of 10YR 4/4 (dark yellowish brown) sandy loam with 50% roots and 20% basalt cobbles and gravel. It exhibited a smooth, abrupt boundary into Layer II, which was a 7.5YR 4/6 (strong brown) silt loam. It included 10–20% roots, decreasing with depth, and 30–50% basalt gravel and cobbles, increasing with depth. The rocks of the alignment extended to approximately 12 cmbs.

The age and function of Site 30195 remain undetermined. The site is significant under Criterion d of HAR §13-284-6(b) for its potential to yield important information on history or prehistory. Avoidance with no further work is recommended.

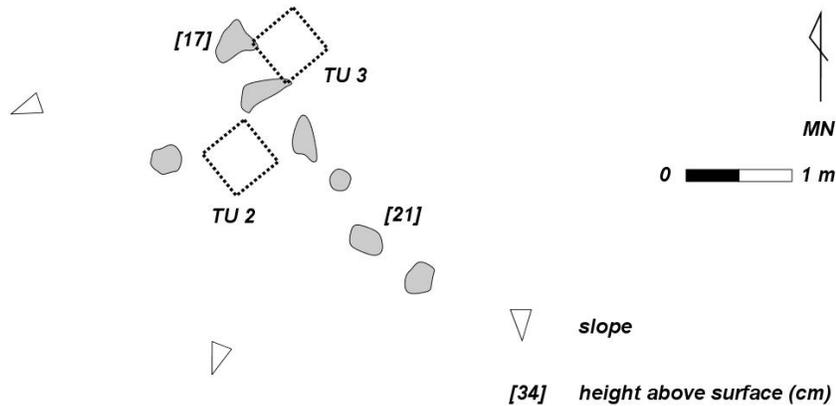


Figure 17. Plan view drawing of Site 30195.



Figure 18. Photograph of Site 30195 before excavation.

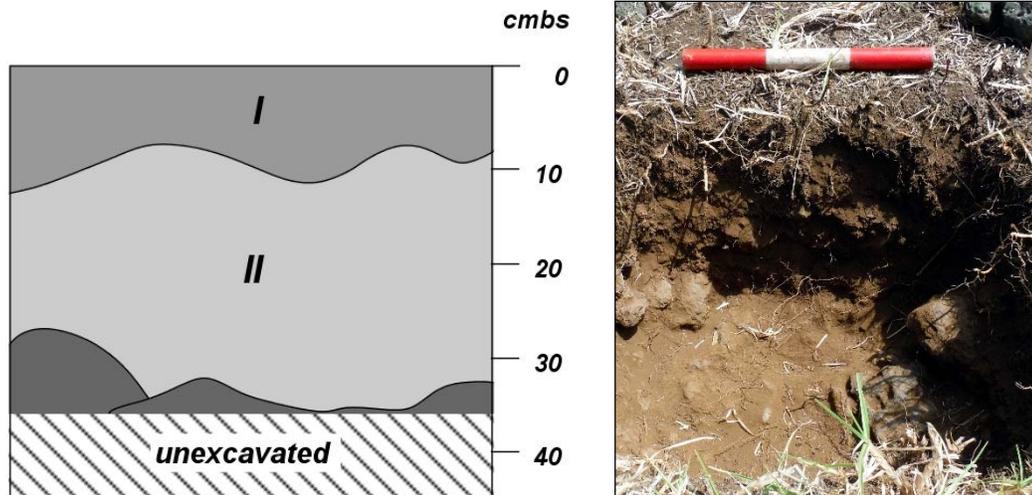


Figure 19. TU 2 northeast face profile drawing (left) and photo (right).

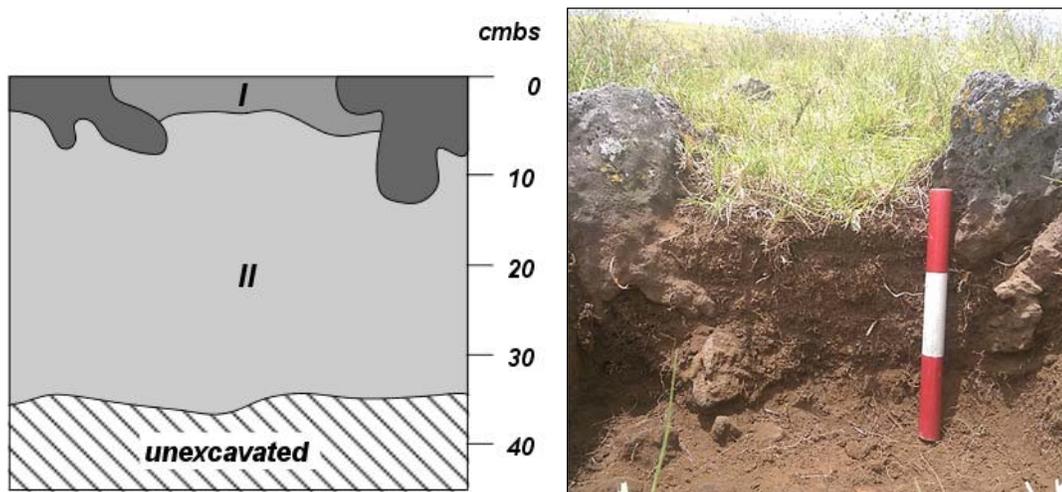
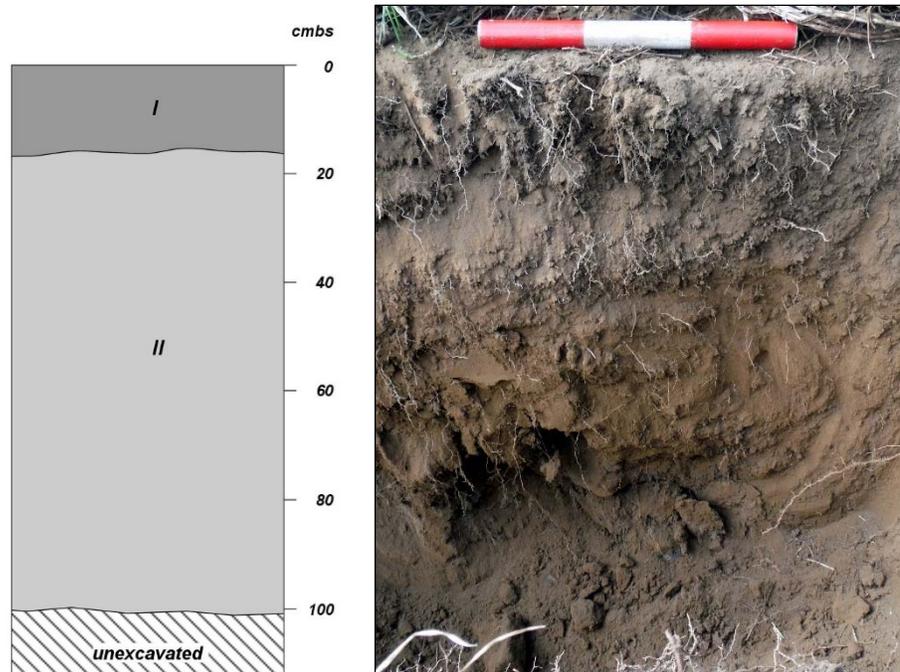


Figure 20. TU 3 southwest face profile drawing (left) and photo (right). The dark shapes at the top of the profile drawing are the bases of the alignment rocks that extend below the surface.

### Stratigraphic Trenches

A total of ten trenches were excavated throughout the project area to determine the presence or absence of subsurface cultural deposits or material and to document the stratigraphy over a large area (see Table 3 and Figure 14).

TR 1 was excavated on the south end of the project area (see Figure 14). The trench measured 5.6 m long and .55 m wide. It was excavated to 100 cm below surface (cmbs) to bedrock. Stratigraphy consisted of two natural layers, and no cultural deposits or material were identified (Figure 21). Layer I consisted of 10YR 3/3 (dark brown) sandy loam with 50% roots and 10% basalt cobbles and gravel. It exhibited a smooth, abrupt boundary into Layer II, which was a 7.5YR 4/6 (strong brown) silt loam. It included no roots and 10% basalt gravel and cobbles.



**Figure 21. TR 1 south face profile drawing (left) and photo (right).**

TR 2 was placed near the center of the property (see Figure 14). The trench measured 4.9 m long and .55 m wide. It was excavated to 60 cmbs on the west end and 110 cmbs on the east end, where bedrock was encountered throughout. Stratigraphy consisted of two natural layers, and no cultural deposits or material were found (Figure 22). Layer I consisted of 10YR 3/3 (dark brown) sandy loam with 50% roots and 10% basalt cobbles and gravel. It exhibited a smooth, abrupt boundary into Layer II, which was a 7.5YR 4/6 (strong brown) silt loam. It included 15% roots and 8% basalt gravel and cobbles.

TR 3 was located toward the southwest corner of the parcel (see Figure 14). It measured 4.9 m long and .55 m wide. The trench was excavated to 170 cmbs but bedrock was not encountered here. Stratigraphy consisted of a single natural layer with no cultural deposits or material (Figure 23). Layer I consisted of 10YR 3/4 (dark yellowish brown) loam with 10% roots and 1% basalt cobbles and gravel.

TR 4 was placed in the central portion of the project area (see Figure 14). The trench measured 5.8 m long, .55 m wide, and 120 cm deep. It was excavated to bedrock. Stratigraphy consisted of two natural layers, and no cultural deposits or material were identified (Figure 24). Layer I consisted of 10YR 3/3 (dark brown) sandy loam with 50% roots and 10% basalt cobbles and gravel. It exhibited a smooth, abrupt boundary into Layer II, which was a 7.5YR 4/6 (strong brown) silt loam. It included 10% roots and 20% basalt gravel and cobbles.

TR 5 was placed near the northeast corner of the property (see Figure 14). The trench measured 5.3 m long and .55 m wide. It was excavated to 86 cmbs where bedrock was encountered. Stratigraphy consisted of a single natural layer with no cultural deposits or material (Figure 25). Layer I consisted of 7.5YR 4/6 (strong brown) silt loam. It included 10% roots and 10% basalt gravel and cobbles.

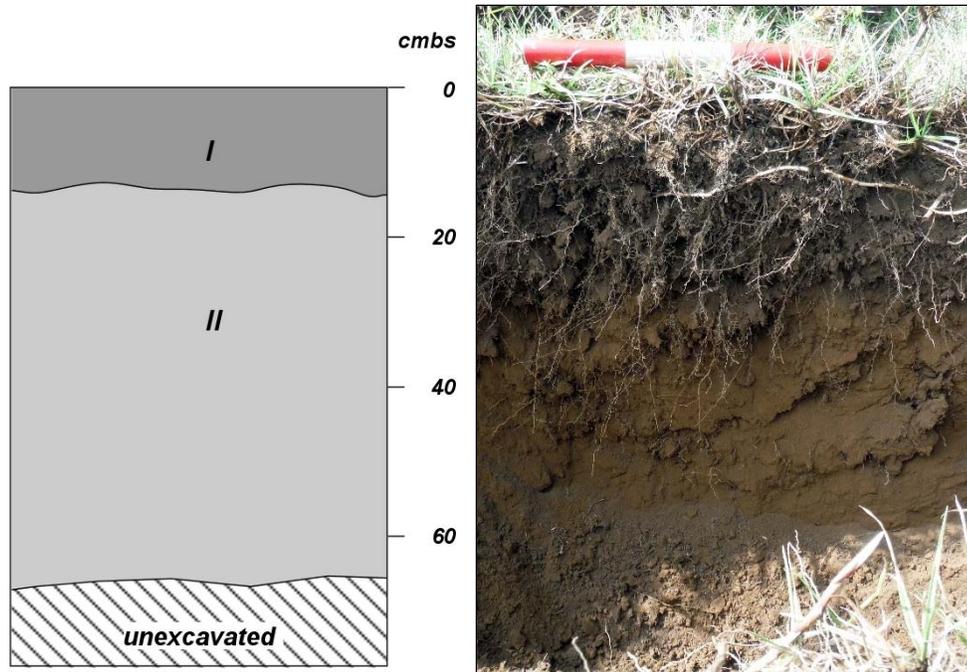


Figure 22. TR 2 west end, north face profile drawing (left) and photo (right).

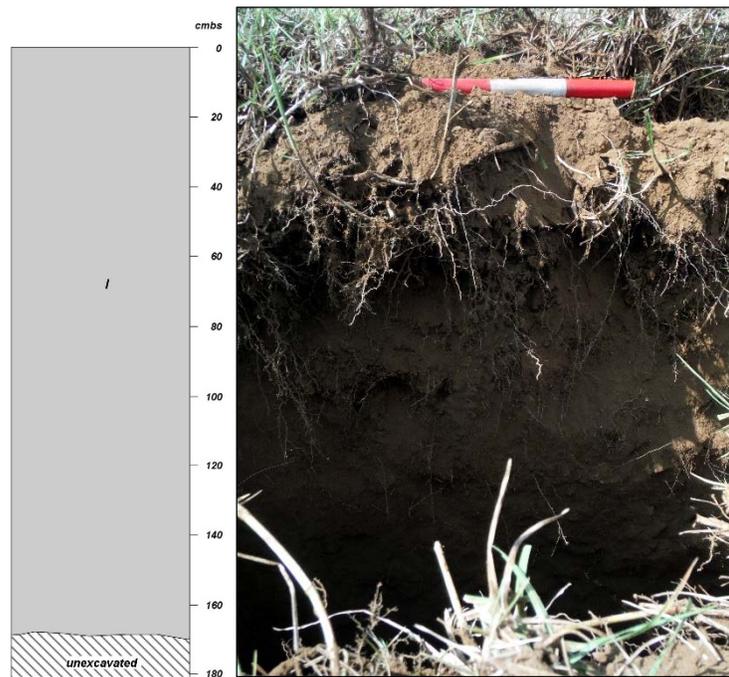


Figure 23. TR 3 south face profile drawing (left) and photo (right).

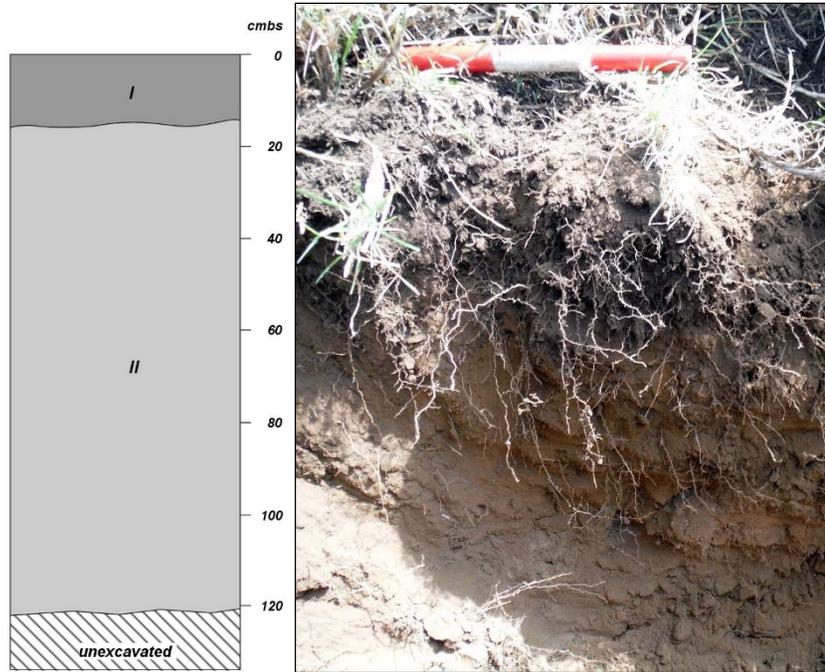


Figure 24. TR 4 north face profile drawing (left) and photo (right).

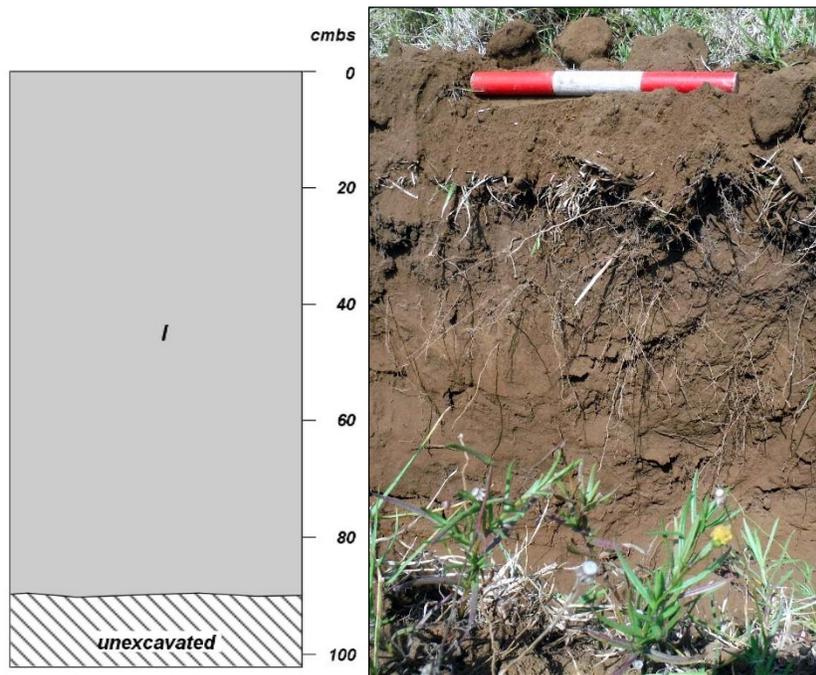


Figure 25. TR 5 east face profile drawing (left) and photo (right).

TR 6 was excavated in the central portion of the project area (see Figure 14). The trench measured 5.2 m long and .55 m wide. It was excavated to 93 cm below surface (cmbs) to bedrock. Stratigraphy consisted of a single natural layer, and no cultural deposits or material were identified (Figure 26). Layer I consisted of 7.5YR 4/4 (brown) silt loam with 15% roots and 8% basalt cobbles and gravel.

TR 7 was placed on the west side of the property (see Figure 14). The trench measured 5.1 m long and .55 m wide. It was excavated to 136 cmbs, where bedrock was encountered. Stratigraphy consisted of a natural layer with no cultural deposits or material (Figure 27). Layer I consisted of 7.5YR 4/4 (brown) silt loam with 15% roots and 5% basalt cobbles and gravel.

TR 8 was located on the east side of the parcel (see Figure 14). It measured 4.4 m long and .55 m wide. The trench was excavated to 112 cmbs to bedrock. Stratigraphy consisted of a single natural layer with no cultural deposits or material (Figure 28). Layer I consisted of 2.5Y 4/4 (olive brown) silt loam with 10% roots and 8% basalt cobbles and gravel.

TR 9 was placed in the north- central portion of the project area (see Figure 14). The trench measured 4.4 m long, .55 m wide, and 130 cm deep. It was excavated to bedrock. Stratigraphy consisted of one natural layer, and no cultural deposits or material were identified (Figure 29). Layer I consisted of 10YR 4/6 (dark yellowish brown) silt loam with 15% roots and 2% basalt cobbles and gravel.

TR 10 was placed at the far north end of the property (see Figure 14). The trench measured 4.0 m long and .55 m wide. It was excavated to 110 cmbs, where bedrock was encountered. Stratigraphy consisted of a single natural layer with no cultural deposits or material (Figure 30). Layer I consisted of 10YR 4/4 (dark yellowish brown) silt loam with 10% roots and 8% basalt cobbles and gravel.

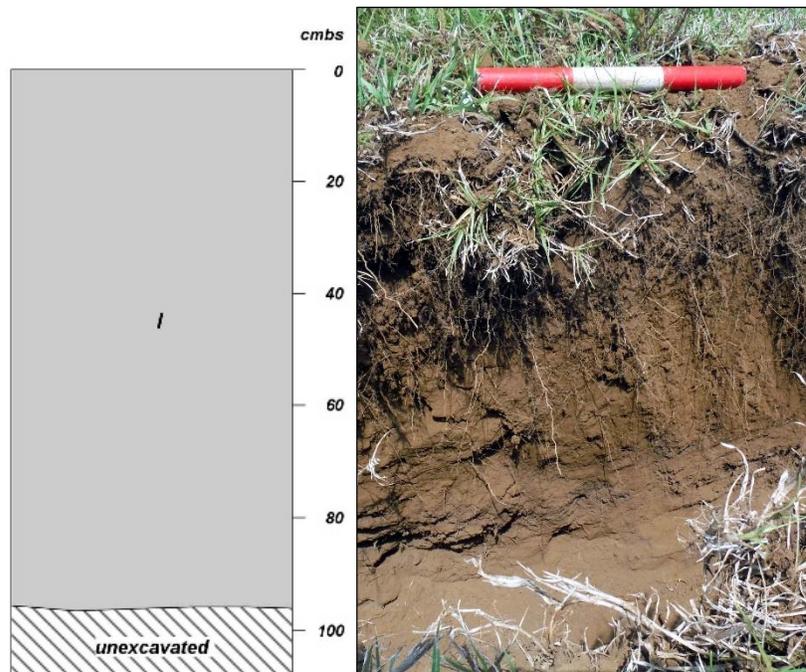


Figure 26. TR 6 northwest face profile drawing (left) and photo (right).

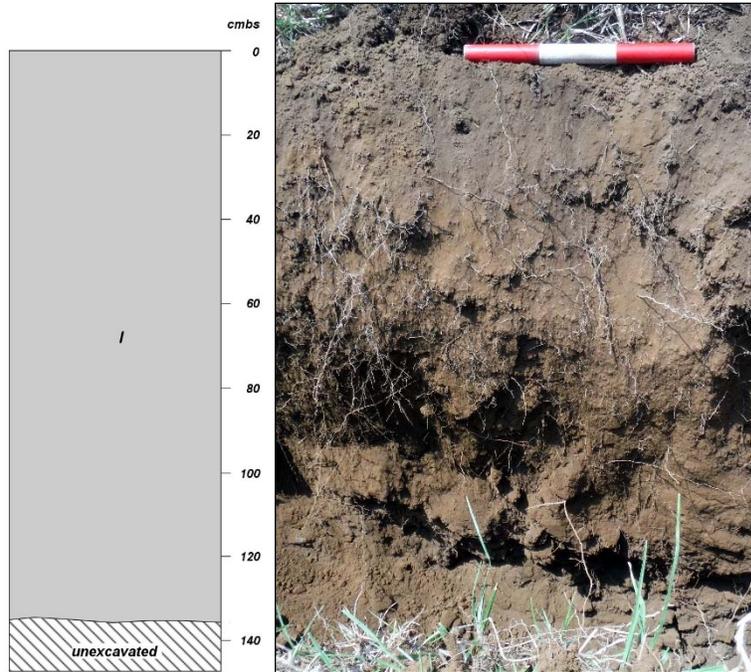


Figure 27. TR 7 west face profile drawing (left) and photo (right).

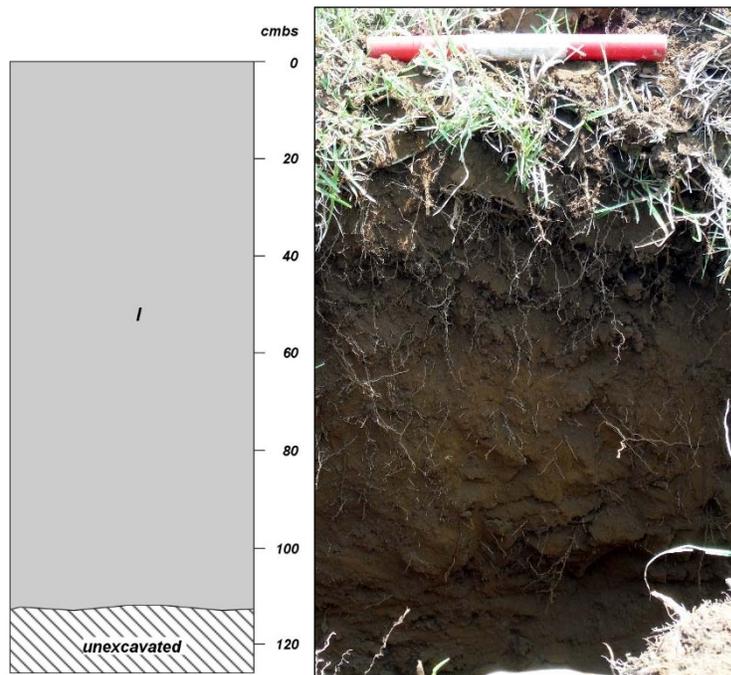
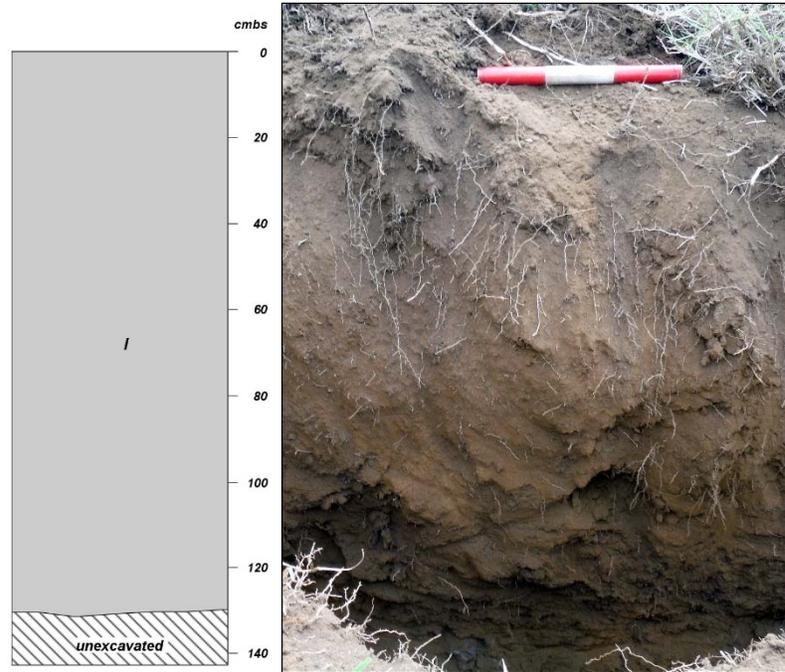
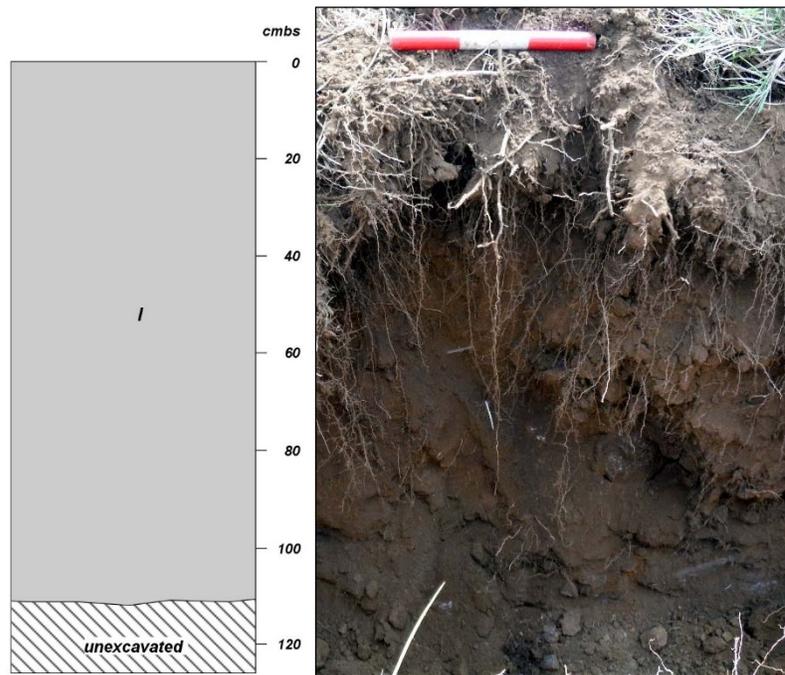


Figure 28. TR 8 southeast face profile drawing (left) and photo (right).



**Figure 29. TR 9 south face profile drawing (left) and photo (right).**



**Figure 30. TR 10 southwest face profile drawing (left) and photo (right).**

## Summary of Findings

Pedestrian survey of TMK: (3) 6-4-038:011 (por.) in Waimea Ahupua'a, identified one historic property: Site 50-10-06-30195, an alignment. Test units excavated at the site yielded no cultural material. Test trenches were excavated in ten locations throughout the parcel to determine the presence or absence of subsurface cultural material or deposits, and none were found. Stratigraphy consists entirely of natural deposits with bedrock below.

These findings provide meager evidence to answer the research questions outlined earlier:

1. Have any pre-contact archaeological remains survived historic and modern use of the parcel?  
One surface archaeological site was identified.
2. If so, what are the nature of these remains and where are they located?  
The age and function of Site 30195 is undetermined.  
The site is located in the eastern portion of the project area.
3. Are there any vestiges of historic-era use of the project area, including Christmas Paddock or other ranching uses?  
It is unclear whether the archaeological site is associated with Christmas Paddock or had ranching uses.

## SUMMARY AND RECOMMENDATIONS

An archaeological inventory survey was conducted for TMK: (3) 6-4-038:001 (por.) in Waimea Ahupua‘a, South Kohala District, on the Island of Hawai‘i. This was done in preparation for ground disturbance associated with construction of an agricultural park, cemetery, sports complexes, housing, and other facilities. The archaeological work included a pedestrian survey that covered 100% of the parcel, as well as test excavations consisting of three test units and ten trenches. The entire property was utilized as ranch land and little remains on the surface. Stratigraphy consists entirely of natural deposits, with bedrock as shallow as 22 cm below surface.

One archaeological site was found. Site 50-10-06-30195 is a surface alignment of cobbles, in fair condition. Excavation did not yield any cultural material. The age and function of the site are uncertain.

### Significance Determinations

To determine if a historic property is significant under Hawaii Administrative Rules (HAR) for historic preservation, or is eligible for NRHP listing, it must be assessed for significance according to HAR §13-284-6(b) and National Register Bulletin 15, respectively. According to Bulletin 15:

The quality of significance in American history, architecture, archaeology, and culture is present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association, and:

- A. That are associated with events that have made a significant contribution to the broad patterns of our history; or
- B. That are associated with the lives of persons significant in our past; or
- C. That embody the distinctive characteristics of a type, period, or method of construction or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or
- D. That has yielded, or may be likely to yield, information important in prehistory or history.

(National Park Service 1990:2)

To this set of criteria, HAR §13-284-6(b) adds Criterion e, which states that a property may be significant if it has:

an important value to the native Hawaiian people or to another ethnic group of the state due to associations with cultural practices once carried out, or still carried out, at the property or due to associations with traditional beliefs, events, or oral accounts – these associations being important to the groups history and cultural identity.

Site 50-10-06-30195 is significant under Criterion d, as further study may yield more information (Table 4). No further work is recommended, and Site 30195 should be avoided during construction. Archaeological monitoring is recommended for any ground disturbance near the site.

In sum, one archaeological site was found within the project area. Avoidance is recommended for Site 30195, and archaeological monitoring should be conducted in the vicinity. Given the absence

of surface and subsurface cultural deposits or features in other parts of the project area, archaeological monitoring in the rest of the project area is not recommended. An archaeological monitoring plan should be produced, to further detail these stipulations.

Although highly unlikely given historical use of the site, there is always a potential for an encounter with isolated human burial remains during construction activity in Hawai‘i. Although there was no evidence of the presence of human burials on-site, should human burial remains be discovered during construction activities, work in the vicinity of the remains should cease and the SHPD should be contacted and the applicable rules of HAR §13-300-40 shall be administered.

**Table 4. Significance Determination**

<b>Site</b>	<b>Description</b>	<b>Function</b>	<b>Criterion</b>	<b>Justification</b>	<b>Recommendation</b>
30195	Alignment	Undetermined	d	May yield information on history and prehistory.	Avoidance, Archaeological Monitoring

## GLOSSARY

<b>‘a‘ali‘i</b>	<i>Dodonaea viscosa</i> , the fruit of which were used for red dye, the leaves and fruits fashioned into <i>lei</i> , and the hard, heavy wood made into bait sticks and house posts.
<b>ahupua‘a</b>	Traditional Hawaiian land division usually extending from the uplands to the sea.
<b>‘āpana</b>	Piece, slice, section, part, land segment, lot, district.
<b>‘awa</b>	The shrub <i>Piper methysticum</i> , or <i>kava</i> , the root of which was used as a ceremonial drink throughout the Pacific.
<b>boulder</b>	Rock 60 cm and greater.
<b>cobble</b>	Rock fragment ranging from 7 cm to less than 25 cm.
<b>gravel</b>	Rock fragment less than 7 cm.
<b>hale</b>	House.
<b>hāpu‘u</b>	<i>Cibotium splendens</i> , a fern endemic to Hawai‘i; a forest fern to 5 m high.
<b>heiau</b>	Place of worship and ritual in traditional Hawai‘i.
<b>‘ili</b>	Traditional land division, usually a subdivision of an <i>ahupua‘a</i> .
<b>‘ilima</b>	<i>Sida fallax</i> , the native shrub whose flowers were made into <i>lei</i> , and sap was used for medicinal purposes in traditional Hawai‘i.
<b>kalo</b>	The Polynesian-introduced <i>Colocasia esculenta</i> , or taro, the staple of the traditional Hawaiian diet.
<b>kapu</b>	Taboo, prohibited, forbidden.
<b>kīhāpai</b>	Small land division; cultivated garden, patch, orchard, or field; parish of a church.
<b>koali, kowali</b>	Vines of the morning glory <i>Ipomoea</i> spp., used traditionally to make swings and nets.
<b>kupuna</b>	Grandparent, ancestor; <i>kūpuna</i> is the plural form.
<b>lama</b>	The native tree, <i>Diospyros sandwicensis</i> , that had many uses in traditional Hawai‘i. Fruit was eaten, wood was fashioned into fish traps and sacred structures within <i>heiau</i> . <i>Lama</i> wood was also crushed and used for medicinal purposes.
<b>Māhele</b>	The 1848 division of land.
<b>makai</b>	Toward the sea.
<b>mauka</b>	Inland, upland, toward the mountain.
<b>mele</b>	Song, chant, or poem.
<b>mo‘olelo</b>	A story, myth, history, tradition, legend, or record.

<b>‘ōhi‘a</b>	Two kinds of forest trees. See also <i>o ‘ōhi‘a ‘ai</i> and <i>‘ōhi‘a lehua</i> .
<b>‘ōlelo no‘eau</b>	Proverb, wise saying, traditional saying.
<b>oli</b>	Chant.
<b>paniolo</b>	Cowboy.
<b>pōhaku</b>	Rock, stone.
<b>pulu</b>	Fern fibers obtained from the <i>hāpu‘u pulu</i> ( <i>Cibotium glaucum</i> ), tree fern.
<b>sandalwood</b>	<i>Iliahi</i> ( <i>Santalum</i> ), several varieties endemic to Hawai‘i. Known for their aromatic wood and medicinal qualities. Heavily exported in the 1800s.
<b>stone</b>	Rock fragment ranging from 25 cm to less than 60 cm.
<b>‘uala</b>	The sweet potato, or <i>Ipomoea batatas</i> , a Polynesian introduction.

## REFERENCES

- Athens, J.S., H.D. Tuggle, J.V. Ward, and D. Welch  
2002 "Avifaunal extinctions, vegetation change, and Polynesian impacts in prehistoric Hawai'i." In *Archaeology in Oceania* 37:57–78.
- Bacon, P.N. and N. Napoka (editors)  
1995 *Na Mele Welo: Songs of Our Heritage*. Translated by M. K. Pukui. Bishop Museum Press, Honolulu.
- Barrera Jr., W.  
1993 *Lalamilo, South Kohala, Hawaii Island: Archaeological Inventory Survey Of Sandalwood Estates (TMK:6-6-01:38)*. Chiniago Inc., Kamuela.  
1994 *Ouli and Lanikepu, South Kohala, Hawaii Island: Archaeological Inventory Survey of TMK: 6-2-01:9*. Comstock Cultural Resource Management, Inc., Honolulu.
- Bergin, B.  
2004 *Loyal to the Land: The Legendary Parker Ranch, 750–1950, Aloha 'Aina Paka*. University of Hawai'i Press, Honolulu.
- Bonk, W.J.  
1989 *An Archaeological Reconnaissance Survey In A Portion Of Wai'aka, South Kohala, Hawaii*. University of Hawai'i at Hilo, Hilo, Hawai'i.
- Brundage, L.  
1971 *Alfred W. Carter, Hawaii's Dean of Cattlemen, And Notes on Hawaiian Livestock*. Cathay Press Ltd., Hong Kong.
- Clark, J.  
1981 *Preliminary Report On The Intensive Archaeological Survey Of The Proposed Lalamilo Agricultural Park, Kohala, Island of Hawai'i*. Bishop Museum, Honolulu.
- Clark, J.T. and P.V. Kirch  
1983 *Archaeological Investigations Of The Mudlane-Waimea-Kawaihae Road Corridor, Island of Hawai'i: An Interdisciplinary Study of an Environmental Transect*. Bishop Museum, Honolulu.
- Clark, M.R. and R.B. Rechtman  
2006a *An Archaeological Inventory Survey of TMKs: 3-6-5-04:25 and 63, Waimea, South Kohala District, Island of Hawai'i*. Rechtman Consulting LLC, Kea'au, Hawai'i.  
2006b *Archaeological Monitoring of Development Activities Associated with the Waimea Parkside Residential Subdivision (TMKs:3-6-5-004:029,030,050), Waimea Homesteads, South Kohala District, Island of Hawai'i*. Rechtman Consulting, LLC, Kea'au, Hawai'i.
- Clark, S.D., E.D. Davidson, and P. Cleghorn.  
1990 *Archaeological Testing And Data Recovery For The Waimea School Improvements, Lot A (TMK:6-7-2:por.17), Waikoloa, South Kohala, Hawai'i Island*. Bishop Museum, Honolulu.
- Doyle, E. L.  
1953 *Makua Laiana: The Story of Lorenzo Lyons*. The Advertiser Publishing Co., Honolulu.
- Ellis, W.  
1963 *Journal Of William Ellis: Narrative of a Tour of Hawaii, or Owhyhee; with Remarks on the History, Traditions, Manners, Customs and Language of the Inhabitants of the Sandwich Islands*. Advertiser Publishing Company, Ltd. Honolulu. Originally published 1827, London.
- Emerson, N.B.  
1997 *Pele and Hiiaka: A Myth from Hawaii*. Reprinted. 'Ai Pohaku Press. Honolulu. Originally published 1915, Honolulu Star-Bulletin Ltd., Honolulu.

- Erkelens, C.  
1998 *The Kuleana Lots At Pukalani, Waimea Town Center Project Area, Waimea, Hawai'i Island*. International Archaeological Research Institute, Inc., Honolulu.
- Franklin, L.J., K. Maly, and P.H. Rosendahl  
1994 *Archaeological Inventory Survey, Hawaii Preparatory Academy, Waimea Campus Expansion, Land of Wai'aka 2<sup>nd</sup>, South Kohala District, Island of Hawaii (TMK:3-6-5-1: Por.33)*. Paul H. Rosendahl, Inc., Hilo, Hawai'i.
- Giambelluca, T.W., M.A. Nullet, and T.A. Schroeder  
1986 *Rainfall Atlas of Hawai'i*. State of Hawai'i Department of Land and Natural Resources, Division of Water and Land Development, Honolulu.
- Gregg, E. and J. Kennedy  
2006 *An Archaeological Assesment Of A Property Located At TMK:6-5-02:43 In Pu'uki Ahupua'a, South Kohala District, Island of Hawai'i*. Archaeological Consultants of the Pacific, Inc., Hale'iwa, Hawai'i.
- Hammatt, H.H. and D.F. Borthwick  
1986 *Archaeological Reconnaissance of 50 Acres for Proposed Lālānilo House Lots, Lālānilo, South Kohala, Hawai'i*. Cultural Surveys Hawai'i, Kailua, Hawai'i.
- Hammatt, H.H., D. Borthwick, and D. Shideler  
1988 *Intensive Archaeological Survey of 12.4 Acres for Proposed Lālānilo House Lots, Unit 2, Lālānilo, South Kohala, Hawai'i*. Cultural Surveys Hawai'i, Kailua, Hawai'i.
- Hammatt, H. and D. Shideler  
1989 *Archaeological Investigations at Ka La Loa Subdivision, Lālānilo, South Kohala, Hawai'i*. Cultural Surveys Hawai'i, Kailua, Hawai'i.
- Handy, E.S., E.G. Handy, and M.K. Pukui  
1991 *Native Planters in Old Hawaii: Their Life, Lore, and Environment*. Revised Edition. Bernice P. Bishop Museum Bulletin 23, Bishop Museum Press, Honolulu.
- Haun, A.E., D. Henry, and K. McGuire  
2002 *Archaeological Inventory Survey, DHHL Residential Development At Lālānilo, South Kohala District, Island Of Hawai'i (TMK: 6-6-01:10,54 & 77, and TMK: 6-6-04:12-17)*. Haun & Associates, Kea'au, Hawai'i.
- Kamakau, S.M.  
1991 *Tales and Traditions of the People of Old: Na Mo'olelo a ka Po'e Kahiko*. Translated by Mary Kawena Pukui. Ed. by Dorothy B. Barrere. Bishop Museum Press, Honolulu.  
1996 *Ke Kumu Aupuni*. 'Ahahui 'Olelo Hawai'i. Originally published 1866–1868. Honolulu.
- Kame'elehiwa, L.  
1992 *Native Land and Foreign Desires: Pehea Lā E Pono Ai?* Bernice P. Bishop Museum, Honolulu.
- Kanakanui, S.M. and M.E. Lutz  
1913 *Puukapu Homesteads Second Series Waimea Kohala Hawaii*. Hawaii Territory Survey Plat 402. Scale : 1 in. = 1,000 ft. March 1913.
- Kanoa-Martin, K.  
2012 Huapala: Hawaiian Music and Hula Archives. [www.huapala.org](http://www.huapala.org), accessed 2014.
- Kikiloi, S.T., D.F. Borthwick, and H.H. Hammatt  
2002 *An Archaeological Assessment of Proposed Waimea Trails And Greenway Project within the Lālānilo and Waikōloa Ahupua'a, South Kohala District, Island of Hawai'i (TMK 6-2, 6-5, 6-6)*. Cultural Surveys Hawai'i, Kailua, Hawai'i.
- Lyons, C.J.  
n.d. *North Hawaii*. Hawaiian Government Survey. Register No. 907. Scale: 500 ft. = 1 inch.

- Marks, A.L.  
 1945 *Portion of South Kohala District*. Hawaii Territory Survey Plat 411. Scale: 1 in. = 600 ft.  
 1947 *Waimea Plain Investigation Land Classification Portions of Puukapu Homesteads First and Second Series and Hawaiian Home Land of Puukapu*. Hawaii Territory Survey Plat 413. Scale: 1 in. = 1,000 ft.
- McElroy, W.K., D. Duhaylonsod, and U. Macabio  
 2014 *Cultural Impact Assessment for the Waimea Nui Community Development Initiative, TMK: (3) 6-4-038:011 (por.), Waimea Ahupua 'a, South Kohala District, Island of Hawai'i*. Keala Pono Archaeological Consulting, Kāne'ohe, Hawai'i.
- Menzies, A.  
 1920 *Hawaii Nei 128 Years Ago*. W.F. Wilson (ed.). Honolulu.
- Moffat, R.M. and G.L. Fitzpatrick  
 1995 *Palapala 'aina: Surveying the Mahele*. Editions Limited, Honolulu.
- National Park Service  
 1990 (rev. 1997) *How to Apply the National Register Criteria for Evaluation. National Register Bulletin 15*. U.S. Department of the Interior, National Park Service, Cultural Resources.
- Nees, R.C. and S.S. Williams  
 1998 *Archaeological and Biological Monitoring of Unexploded Ordinances (UXO) Investigations at Maneuver Area (Formerly Camp Tarawa), Waikoloa, Island of Hawai'i*. Ogden Environmental, Honolulu.
- Pammer, M.F. and H.H. Hammatt  
 2010 *Literature Review and Field Inspection for the Waimea Trail and Greenway Project, Lālāmilo, 'Ōuli, Mamoualoo, Lanikepu, Keoniki, Waiaka, Kauniho, Waikōloa, Waiāuia, Haleaha Ahupua 'a, South Kohala District, Hawai'i Island, Various TMK's*. Cultural Surveys Hawai'i, Kailua, Hawai'i.
- Pantaleo, J.  
 2005 *Archaeological Assessment For The Kanu O Ka 'aina Learning Ohana, Pu'ukapu, Waimea Ahupua 'a, South Kohala District, Hawaii Island (TMK 6-4-04:por.09)*. Jeffrey Pantaleo Consulting, LLC., Honolulu.
- Pukui, M.K.  
 1983 *'Ōlelo No 'eau: Hawaiian Proverbs and Poetical Sayings*. Bishop Museum Press, Honolulu.
- Pukui, M.K., S.H. Elbert, and E.T. Mookini  
 1974 *Place Names of Hawaii*. University Press of Hawaii, Honolulu.
- Pukui, M.K. and A.L. Korn (editors and translators)  
 1973 *The Echo of Our Song: Chants & Poems of the Hawaiians*. University of Hawai'i Press, Honolulu.
- Rechtman, R.B.  
 2000 *Supplemental Archaeological Inventory of TMK: 3-6-2-01:91, Lanikepu Ahupua 'a, South Kohala District, Island of Hawai'i*. Rechtman Consulting. Kea'au, Hawai'i.
- Rosendahl, P.  
 1985 *Archaeological Reconnaissance Survey Kawaihae Reservoir No. 1 Site, Lalamilo, South Kohala, Hawaii*. Paul Rosendahl, Consulting Archaeologist.
- Sato, H.H., W. Ikeda, R. Paeth, R. Smythe, and M. Takehiro Jr.  
 1973 *Soil Survey Of The Island Of Hawaii*. United States Department of Agriculture, Soil Conservation Service and University of Hawaii, Agricultural Experiment Station. U.S. Government Printing Office. Washington, D.C.

- Schoeneberger, P.J., D.A. Wysocki, E.C. Benham, and W.D. Broderson (editors)  
2002 *Field Book for Describing and Sampling Soils, Version 2.0*. Natural Resources Conservation Service, National Soil Survey Center, Lincoln, Nebraska.
- Spencer, A.C.  
1989 *Archaeological Investigations of The Lalamilo Agricultural Addition Irrigation Pipeline Corridor And The Livestock Water Distribution System And Management Area, Waimea-Paauilo Watershed, Hawaii*. Soil Conservation Service, West National Technical Center, Portland.
- Thien, S.  
1979 A Flow Diagram for Teaching Texture-By-Feel Analysis. *Journal of Agronomic Education* 8:54–55.
- Thompson, L.W. and P.H. Rosendahl  
1992a *Archaeological Inventory Survey, Potential Sites for North Hawaii Community Hospital, Lands of Waikoloa, Pu'ukapu, and Lalamilo, South Kohala District, Island of Hawaii (TMK:6-7-02:13,17;6-7-03:11;6-8-01:1,2)*. Paul H. Rosendahl, Inc., Hilo, Hawai'i.  
1992b *Archaeological Inventory Survey, Waimea Elderly Housing Project, Land of Puukapu, South Kohala District, Island of Hawaii (TMK:6-7-02:Por.17)*. Paul H. Rosendahl, Inc., Hilo, Hawai'i.
- U.S. Army Corps of Engineers  
2013 Fact Sheet: Formerly Used Defense Site (FUDS) Waikoloa Maneuver Area, South Kohala, Hawaii. <http://www.poh.usace.army.mil/Portals/10/docs/factsheets/Fact%20Sheet%20-Waikoloa%20April%202013.pdf>. Accessed 2014.
- Wall, W.E.  
1914 *Classification Survey of Portions of the Lands of Waikoloa Nui, Waikoloa Iki, Lalamilo, and Puukapu Waimea South Kohala Hawaii*. Hawaii Territory Survey Register Map 2576. Scale: 1 in. =200 ft.  
1928 *Waimea Govt Lands South Kohala—Hawaii*. Hawaii Territory Survey Plat 404. Scale: 1 in. = 400 ft.
- Wilcox, C.  
1996 *Sugar Water Hawaii's Plantation Ditches*. University of Hawaii Press, Honolulu.
- Wilkinson, S., M. Rivera, A. Mitchell, and H.H. Hammatt  
2012 *Final Archaeological Assessment For the Longs Drugs Store #2406 Site Improvement Project, Lalamilo Ahupua'a (Waimea Town), South Kohala District, Hawai'i Island*. Cultural Surveys Hawai'i, Inc. Kailua, Hawai'i.
- Wolforth, T.R.  
1999 *Data Recovery (Phase II) for the North Hawai'i Community Hospital: Investigations at an 'Auwai in the Lālāmilo Field System, Land of Waikoloa, South Kohala District, Island of Hawai'i (TMK:6-7-02:13)*. Paul H. Rosendahl, Inc., Hilo, Hawai'i.
- Yucha, T.M., D.W. Shideler, and H.H. Hammatt  
2009 *Final Archaeological Inventory Survey For the Waimea Trails and Greenway Project, Lālāmilo Ahupua'a, South Kohala District, Hawai'i Island, TMK:(3)6-5-003:004 por., :005 por., :007 por., :044 por., 6-6-003:006 por., :013 por.* Cultural Surveys Hawai'i, Kailua, Hawai'i.