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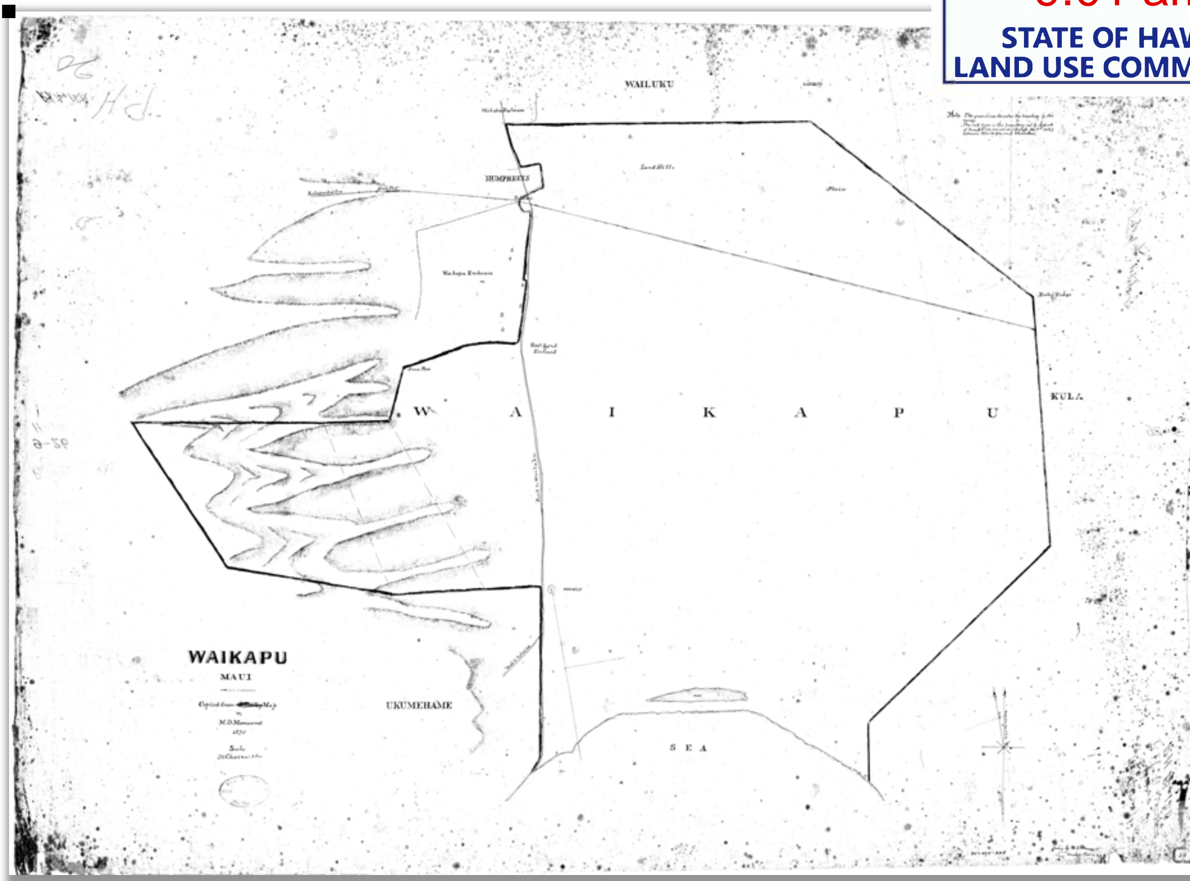

Ethnographic Survey for the Waikapū East Subvision No. 3
Waikapū Ahupuaʻa, Wailuku District, Maui Island
TMKs: [2] 3-5-002:011 (por.)

Prepared for

Waikapū Development Venture, LLC

Prepared by

March 2022

HONUA CONSULTING

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Note on Hawaiian Language Use

In keeping with other Hawaiian scholars, we do not italicize Hawaiian words. Hawaiian is both the native language of the paeʻāina of Hawaiʻi and an official language of the State of Hawaiʻi. Some authors will leave Hawaiian words italicized if part of a quote; we do not. In the narrative, we use diacritical markings to assist our readers, except in direct quotes, in which we keep the markings used in the original text. We provide translations contextually when appropriate. Unless otherwise noted, all translations are by Honua Consulting authors.

Front Cover Credit

State of Hawaiʻi

1885 Portion of Map of Waikapū, Maui. M.D. Monsarrat. Reg. Map 782.

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Executive Summary

Waikapū Development Ventures, LLC is proposing an affording housing project qualified under HRS 201-H. The proposed Project involves construction of a 100% workforce housing project with 80 units on 74 lots: 68 single family homes and 12 multi-family units (six duplexes).

Research in preparation of this report consisted of a thorough search of Hawaiian language documents, including but not limited to the Bishop Museum Mele Index and Bishop Museum archival documents, including the Hawaiian language archival caché. All Hawaiian language documents were reviewed by Hawaiian language experts to search for relevant information to include in the report. Documents considered relevant to this analysis are included herein, and translations are provided when appropriate to the discussion. Summaries of interviews with lineal and cultural descendants with ties to the project area are included in the study, and information on other past oral testimonies are also provided herein. Data was extrapolated from these sources that provide an unprecedented comprehensive look at the previous cultural resources on this ʻāina.

This survey thoroughly identified valued cultural, historical, and natural resources in the project area, including the extent to which traditional and customary Native Hawaiian rights are exercised in the project area. It also identifies the impacts that may potentially result from the proposed action and identified alternatives. Research and ethnographic research showed that any cultural resources that may have once been in the area were likely long ago destroyed by intensive planation use of the land. The only remaining available cultural resource is ʻuhaloa, which is widely found throughout the area. Any impact to these plants would not constitute an adverse effect, because the plants will remain widely available to practitioners in the area. There is also the ʻōpeʻapeʻa in the area, but state and federal laws prohibit any taking of this species, even for cultural uses. The project should nonetheless employ best management practices to minimize the potential taking of this species. Interviewees also noted that there is the potential for iwi kūpuna in the area, but this is not confirmed and consideration of of these resources will be addressed through the HRS 6E compliance process.

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Abbreviations and Acronyms

AIS: Archaeological Inventory Survey
BMP: Best Management Practice
ESP: Environmental Review Project, Office of Planning and Sustainable Development
HAR: Hawaii Administrative Rules
HRS: Hawaii Revised Statutes
ILK: Indigenous Local Knowledge
Ka Paʻakai: *Ka Paʻakai O Ka ʻĀina v. Land Use Commission*, 94 Haw. 31 (2000)
LRFI: Literature Review and Field Investigation
NRHP: National Register of Historic Places
OEQC: Office of Environmental Quality and Control
PPA: Power Purchase Agreement
Project: Waikapū East Subdivision No. 3
PUC: Public Utility Commission
ROI: Range of Influence
SHPD: State Historic Preservation Division
SIHP: State Inventory of Historic Places
SLH: Session Laws of Hawaii
TEK: Traditional Ecological Knowledge
TMK: Tax Map Key
USGS: U.S. Geological Survey

1.0 Project Description and Compliance

Waikapu Development Venture LLC is proposing the Waikapū East Subdivision No. 3 (Project) in the Wailuku district on the island of Maui (Figure 1) on 12.50 acres of undeveloped land located on TMK (2) 3-5-002:011. The proposed Project involves construction of a 100% workforce housing project with 80 units on 74 lots: 68 single family homes and 12 multi-family units (six duplexes) (Figure 2).

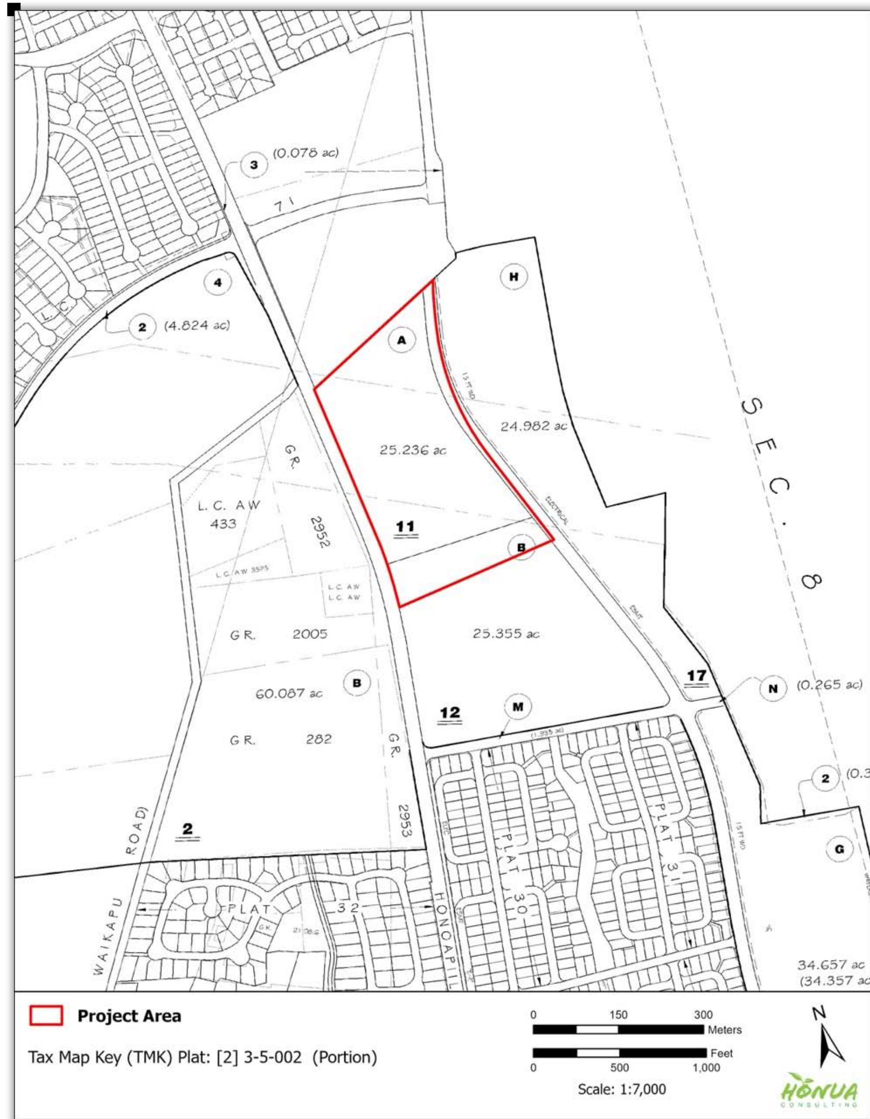


Figure 1. Tax Map Key map showing the Study Area

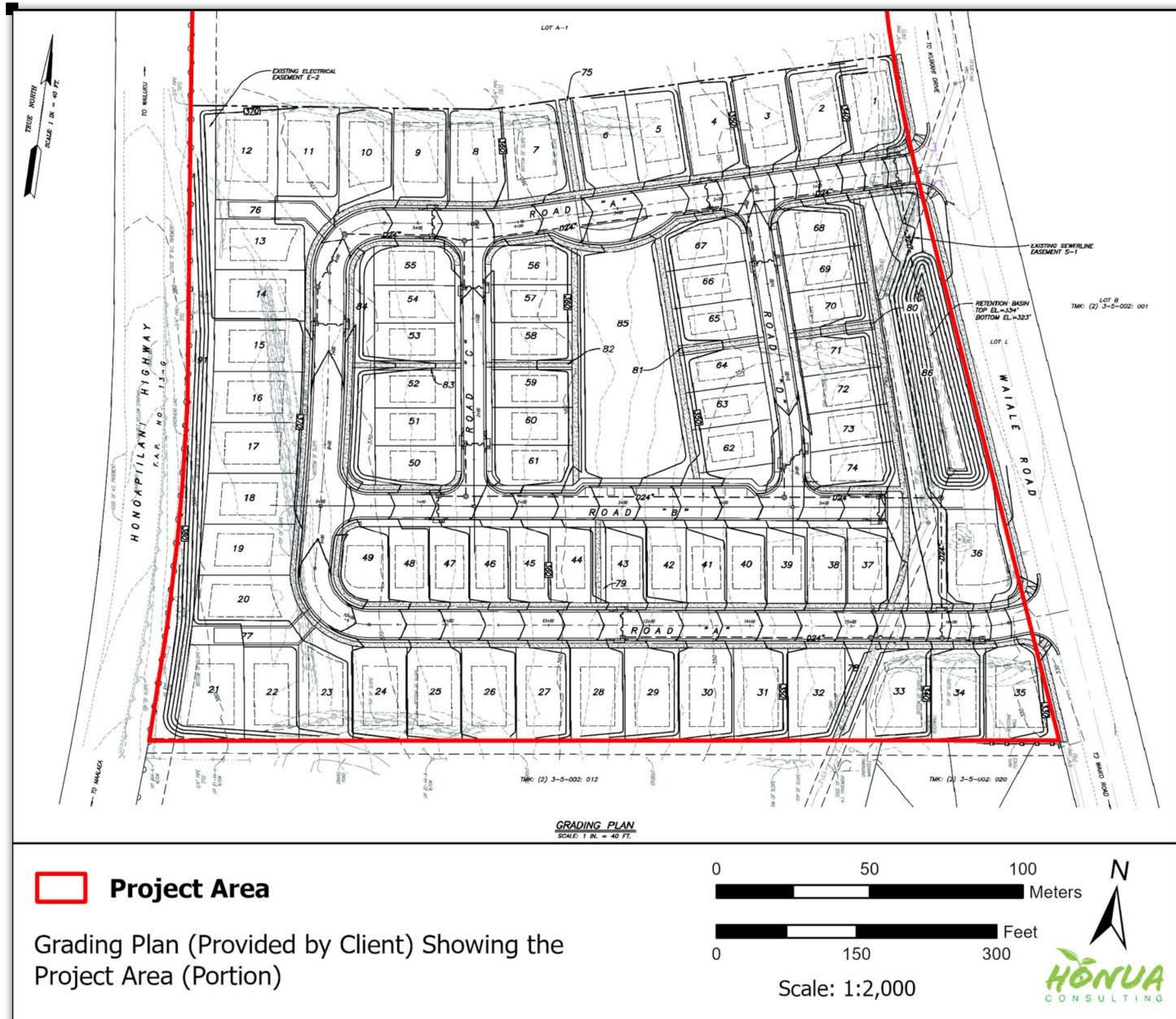


Figure 2. Grading Plan for the Waikapū East Subdivision No. 3

This project will require a 201H workforce housing approval. This approval triggers Hawaii Revised Statutes 6E-42. This ethnographic survey also supports the HRS 6E-42 review by using ethnography to help in the identification and inventory of historic sites and documenting consultation with area practitioners and organizations to identify resources that may be significant to Native Hawaiians or other ethnic groups.

1.1 Background

The State and its agencies have an affirmative obligation to preserve and protect Native Hawaiians' customarily and traditionally exercised rights to the extent feasible.[1] State law further recognizes that the cultural landscapes provide living and valuable cultural resources where Native Hawaiians have and continue to exercise traditional and customary practices, including hunting, fishing, gathering, and religious practices. In *Ka Paʻakai*, the Hawaiʻi Supreme Court provided government agencies an analytical framework to ensure the protection and preservation of traditional and customary Native Hawaiian rights while reasonably accommodating competing private development interests. This is accomplished through:

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

The appropriate information concerning the ahupuaʻa of Waikapū has been collected, focusing on areas near or adjacent to the project area. A thorough analysis of this project and potential impacts to cultural resources, historical resources, and archaeological sites is included in this survey.

This ethnographic survey provides an overview of cultural and historic resources in the project area using thorough literature review, community and cultural practitioner consultation, and high-level, project-specific surveys. This survey focuses on identifying areas in which disturbance should be avoided or minimized to reduce impacts to historic properties or culturally important features. The paramount goal is to prevent impacts through avoidance of sensitive areas and mitigating for impacts only if avoidance is not possible.

1.2 Geographic Extent

The geographic extent for impacts to cultural resources and historic properties includes the project area and localized surroundings. This CIA also reviews some of the resources primarily covered by the regulatory review. It primarily researches and reviews the range of biocultural resources identified through historical documents, traditional knowledge, information found

[1] Article XII, Section 7 of the Hawaiʻi State Constitution, *Ka Paʻakai O Ka ʻĀina v. Land Use Commission*, 94 Haw. 31 [2000] (Ka Paʻakai), Act 50 SLH 2000.

in the Hawaiian language historical cache, and oral histories and knowledge collected from cultural practitioners and experts. The best practice for ethnographic surveys is to define an geographic extent beyond the identified or typical boundaries of the geographic project area. The recommended area is typically the size of the traditional land area (ahupuaʻa) or region (moku), but this can be larger or smaller depending on what best helps to identify the resources appropriately.

The geographic extent of the survey is based on the position that the "Project Area" is part of a cultural landscape or cultural landscapes that therefore it is most appropriate to set and study the proposed alternatives within that cultural context. The Project Area or Study Area include the area where ground disturbance will occur and a portion of the neighboring parcel (Figures 3-4).

Figure 3. Aerial image of the project area showing adjacent uses and housing

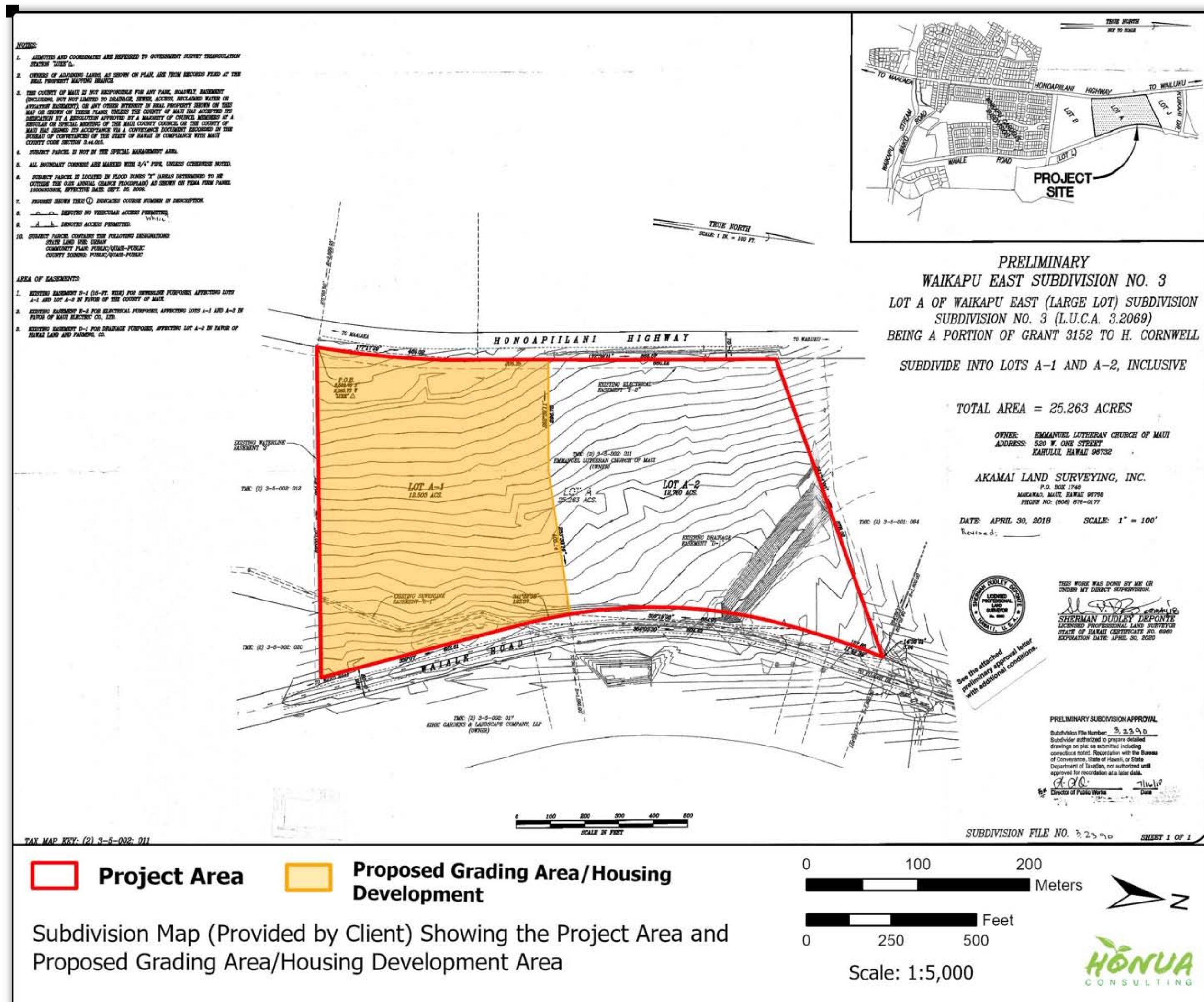


Figure 4. Subdivision Map Showing Proposed Grading Area and Housing Development

1.3 Goal of Ethnographic Survey

This survey, along with the archaeological work, looks to fulfill the requirement of taking into account the Project's potential impacts on historic and cultural resources and, at a minimum, describe: a) any valued cultural, historic, or natural resources in the area in questions, including the extent to which traditional and customary native Hawaiian rights are exercised in the area, b) the extent to which those resources – including traditional and customary native Hawaiians rights – will be affected or impaired by the Project; and c) the feasible action, if any, to be taken to reasonably protect native Hawaiian rights if they are found to exist.

2.0 Methodology

The approach to developing the ethnographic survey is as follows:

1) Gather Best Information Available
   a) Gather historic cultural information from stories and other oral histories about the affected area to provide cultural foundation for the report;
   b) Inventory as much information as can be identified about as many known cultural, historic, and natural resources, including previous archaeological inventory surveys, CIAs, etc. that may have been completed for the possible range of areas; and
   c) Update the information with interviews with cultural or lineal descendants or other knowledgeable cultural practitioners.
2) Identify Potential Impacts to Cultural Resources
3) Develop Reasonable Mitigation Measures to Reduce Potential Impacts
   a) Involve the community and cultural experts in developing culturally appropriate mitigation measures; and
   b) Develop specific Best Management Practices (BMPs), if any are required, for conducting the project in a culturally appropriate and/or sensitive manner as to mitigation and/or reduce any impacts to cultural practices and/or resources.

While numerous studies have been conducted on this area, very few have effectively utilized Hawaiian language resources and Hawaiian knowledge. This appears to have impacted modern understanding of this location, as many of the relevant documents are native testimonies given by Kanaka Hawaiʻi (Hawaiians) who lived on this land.

While hundreds of place names and primary source historical accounts (from both Hawaiian and English language narratives) are cited on the following pages, it is impossible to tell the whole story of these lands in any given manuscript. A range of history, spanning the generations, has been covered. Importantly, the resources herein are a means of connecting people with the history of their communities—that they are part of that history. Knowledge of place will, in turn, promote appreciation for place and encourage acts of stewardship for the valued resources that we pass on to the future.

Background research for the literature review was conducted using materials obtained from the State Historic Preservation Division (SHPD) library in Kapolei and the Honua Consulting LLC. report library. On-line materials consulted included the Ulukau Electronic Hawaiian Database (www.ulukau.com), Papakilo Database (www.papakilodatabase.com), the State Library on-line (http://www.librarieshawaii.org/ Serials/databases.html), and Waihona ʻĀina Māhele database (http://www.waihona.com). Hawaiian terms and place names were

translated using the on-line Hawaiian dictionaries (Nā Puke Wehewehe ʻŌlelo Hawaiʻi) (www.wehewehe.com), *Place Names of Hawaiʻi* (Pukui et al. 1974), and *Hawaiʻi Place Names* (Clark 2002). Historic maps were obtained from the State Archives, State of Hawaiʻi Land Survey Division website (http://ags.hawaii.gov/survey/map-search/), UH-Mānoa Maps, Aerial Photographs, and GIS (MAGIS) website (http://guides.library.manoa.hawaii.edu/magis). Maps were geo-referenced for this report using ArcGIS 10.3. GIS is not 100% precise and historic maps were created with inherent flaws; therefore, geo-referenced maps should be understood to have some built-in inaccuracy.

While conducting the research, primary references included, but were not limited to: land use records, including the Hawaiian L.C.A. records from the Māhele ʻĀina (Land Division) of 1848; the Boundary Commission Testimonies and Survey records of the Kingdom and Territory of Hawaiʻi; and historical texts authored or compiled by: David Malo (1987); Samuel M. Kamakau (1964, 1991, 1992); records of the American Board of Commissioners of Foreign Missions (A.B.C.F.M.) (1820–1860); Charles Wilkes (1845); Alexander & Preston (1892–1894); Abraham Fornander (1916–1919); and many other native and foreign writers. The study also includes several native accounts from Hawaiian language newspapers (primarily compiled and translated from Hawaiian to English by K. Maly), and historical records authored by nineteenth century visitors, and residents of the region.

Historical and archival resources were located in the collections of the Hawaiʻi State Archives, Survey Division, Land Management Division, Survey Division, and Bureau of Conveyances; the Bishop Museum Library and Archives; the Hawaiian Historical Society and the Hawaiian Mission Childrenʻs Society Library; University of Hawaiʻi-Hilo Moʻokini Library; the National Archives and Records Administration (NARA), Maryland; the Library of Congress, Washington D.C.; the National Oceanic and Atmospheric Administration National Library, Maryland; the Smithsonian Institution Natural History and National Anthropological Archives libraries, Washington, D.C.; the Houghton Library at Harvard; the United States Geological Survey (USGS) Library, Denver; the Paniolo Preservation Society and Parker Ranch collections; private family collections; and in the collection of Kumu Pono Associates LLC. This information is generally cited in categories by chronological order of the period depicted in the narratives.

M. P. Nogelmeier (2010) discusses the adverse impacts of methodology that fails to properly research and consider Hawaiian language resources. He strongly cautions against a mono-rhetorical approach that marginalizes important native voices and evidence from consideration, specifically in the field of archaeology. For this reason, Honua Consulting consciously employs a poly-rhetorical approach, whereby all data, regardless of language, is researched and considered. To fail to access these millions of pages of information within the Hawaiian language cache could arguably be a violation of Act 50, as such an approach would

fundamentally fail to gather the best information available, especially considering the voluminous amounts of historical accounts available for native tenants in the Hawaiian language.

Hawaiian culture views natural and cultural resources as largely being one and the same: without the resources provided by nature, cultural resources could and would not be procured. From a Hawaiian perspective, all natural and cultural resources are interrelated, and all natural and cultural resources are culturally significant. Kepā Maly (2001), ethnographer and Hawaiian language scholar, points out, "In any culturally sensitive discussion on land use in Hawaiʻi, one must understand that Hawaiian culture evolved in close partnership with its natural environment. Thus, Hawaiian culture does not have a clear dividing line of where culture ends and nature begins" (Maly 2001:1). As a leading researcher and scholars on Hawaiian culture, Maly, along with his wife, Onaona, have conducted numerous ground-breaking studies on cultural histories throughout Hawaiʻi. A substantial part of the archival research utilized in this study was previously compiled and published by Kepā and Onaona Maly, who have granted their permission to use this important work and are identified properly as associated authors and researchers to this study.

This study also specifically looks to identify intangible resources. Tangible and intangible heritage are inextricably linked (Bouchenaki 2003). Intangible cultural resources, also identified as intangible cultural heritage (ICH), are critical to the perpetuation of cultures globally. International and human rights law professor Federico Lenzerini notes that, "At present, we are aware on a daily basis of the definitive loss—throughout the world—of language, knowledge, knowhow, customs, and ideas, leading to the progressive impoverishment of human society" (Lenzerini 2011:12). He goes on to warn that:

> the rich cultural variety of humanity is progressively and dangerously tending towards uniformity. In cultural terms, uniformity means not only loss of cultural heritage—conceived as the totality of perceptible manifestations of the different human groups and communities that are exteriorized and put at the others' disposal—but also standardization of the different peoples of the world and of their social and cultural identity into a few stereotyped ways of life, of thinking, and of perceiving the world. Diversity of cultures reflects diversity of peoples; this is particularly linked to ICH, because such a heritage represents the living expression of the idiosyncratic traits of the different communities. Preservation of cultural diversity, as emphasized by Article 1 of the UNESCO Universal Declaration on Cultural Diversity, 'is embodied in the uniqueness and plurality of the identities of the groups and societies making up humankind'. Being a 'source of exchange, innovation and creativity', cultural diversity is vital to humanity and is inextricably linked to the safeguarding of ICH. Mutual recognition and respect for cultural diversity—and, *a fortiori*, appropriate safeguarding

> of the ICH of the diverse peoples making up the world—is essential for promoting harmony in intercultural relations, through fostering better appreciation and understanding of the differences between human communities. (Lenzarini 2011:103)

Therefore, tradition and practice, as elements of Hawaiian ICH, are essential to the protection of Hawaiian rights and the perpetuation of the Hawaiian culture.

2.1 Identifying Traditional or Customary Practices

It is within this context that traditional or customary practices are studied. The concept of traditional or customary practices can often be a challenging one for people to grasp. Traditional or customary practices can be defined as follows:

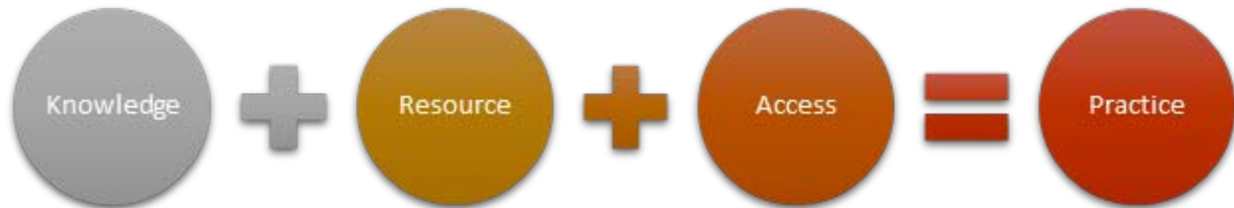


Figure 5. Diagram of elements that contribute to traditional or customary practices (Honua Consulting)

The first element is knowledge. This has been referred to as traditional ecological knowledge (TEK), Indigenous local knowledge (ILK), or ethnoscience. In the context of this study, it is the information, data, knowledge, or expertise Native Hawaiians or local communities possessed or possess about an area's environment. In a traditional context, this would have included information Hawaiians possessed in order to have the skills to utilize the area's resources for a range of purposes, including, but not limited to, travel, food, worship or habitation. This element is largely intangible.

The second element are the resources themselves. These are primarily tangible resources, either archaeological resources (i.e., habitation structures, walls, etc.) or natural resources (i.e., plants, animals, etc.). These can also be places, such as a sacred or culturally important sites or wahi pana. Sometimes these wahi pana are general locations; this does not diminish their importance or value. Nonetheless, it is important to recognize that potential eligibility as a "historic site" on the National Register of Historic Places (NRHP) would require identifiable boundaries of a site.

The third element is access. The first two elements alone are not enough to allow for traditional or customary practices to take place. The practitioners must have access to the resource in order to be able to practice their traditional customs. Access does not just mean the ability to physically access a location, but it also means access to resources. For example, if a particular plant is used for medicinal purposes, there needs to be a sufficient amount of that plant available to practitioners for us. Therefore, an action that would adversely impact the population of a particular plant with cultural properties would impact practitioners' ability to access that plant. By extension, it would adversely impact the traditional or customary practice.

Traditional or customary practices are, therefore, the combination of knowledge(s), resource(s) and access. Each of these individual elements should be researched and identified in assessing any potential practices or impacts to said practices.

2.2 Traditional Knowledge, or Ethnoscience, and the Identification of Cultural Resources

The concept of ethnoscience was first established in the 1960s and has been defined "the field of inquiry concerned with the identification of the conceptual schemata that indigenous peoples use to organize their experience of the environment" (Roth 2019). Ethnoscience includes a wide range of subfields, includes, but is not limited to, ethnoecology, ethnobotany, ethnozoology, ethnoclimatology, ethnomedicine and ethnopedology. All of these fields are important to properly identify traditional knowledge within a certain area.

Traditional Native Hawaiian practitioners were scientists and expert natural resource managers by necessity. Without modern technological conveniences to rely on, Hawaiians developed and maintained prosperous and symbiotic relationships with their natural environment for thousands of years. Their environments were their families, their homes, and their laboratories. They knew the names of every wind and every rain. The elements taught and inspired. The ability of Indigenous people to combine spirituality and science led to the formation of unique land-based methologides that spurred unsurpassed innovation. Therefore, identifying significant places requires a baseline understanding of what made places significant for Hawaiians.

Hawaiians were both settlers and explorers. In *Plants in Hawaiian Culture,* B. Krauss explains: "Exploration of the forests revealed trees, the timber of which was valuable for building houses and making canoes. The forests also yielded plants that could be used for making and dying tapa, for medicine, and for a variety of other artifacts" (Krauss 1993). Analysis of native plants and resource management practices reveals the depth to which Hawaiians excelled in their environmental science practices:

> [Hawaiians] demonstrated great ability in systematic differentiation, identification, and naming of the plants they cultivated and gathered for use. Their knowledge of the gross morphology of plants, their habits of growth, and the requirements for greatest yields is not excelled by expert agriculturists of more complicated cultures. They worked out the procedures of cultivation for every locality, for all altitudes, for different weather conditions and exposures, and for soils of all types. In their close observations of the plants they grew, they noted and selected mutants (spores) and natural hybrids, and so created varieties of the plants they already had. Thus over the years after their arrival in the Islands, the Hawaiians added hundreds of named varietis of taro, sweet potatoes, sugarcane, and other cultivated plants to those they had brought with them from the central Pacific (Krauss 1993).

Thus, Native Hawaiians reinforced the biodiversity that continues to exist in Hawaiʻi today through their customary traditional natural resource management practices.

The present analyses of archival documents, oral traditions (oli or chants, mele or songs, and/or hula dances and haʻi moʻolelo or storytelling performances), and Hawaiian language sources including books, manuscripts, and newspaper articles, are focused on identifying recorded cultural resources present on the landscape, including: Hawaiian and non-Hawaiian place names; landscape features (ridges, gulches, cinder cones); archaeological features (kuleana parcel walls, house platforms, shrines, heiau [places of worship], etc.); culturally significant areas (viewsheds, unmodified areas where gathering practices and/or rituals were performed); and significant biological, physiological, or natural resources. This research also looks to document the wide range of Hawaiian science that existed within the geographic extent.

2.3 Moʻolelo ʻĀina: Native Traditions of the Land

Among the most significant sources of native moʻolelo are the Hawaiian language newspapers which were printed between 1838 and 1948, and the early writings of foreign visitors and residents. Most of the accounts that were submitted to the papers were penned by native residents of areas being described and noted native historians. Over the last 30 years, Kepā Maly has reviewed and compiled an extensive index of articles published in the Hawaiian language newspapers, with particular emphasis on those narratives pertaining to lands, customs, and traditions. Many traditions naming places around Hawaiʻi are found in these early writings. Many of these accounts describe native practices, the nature of land use at specific locations, and native moʻolelo (history, narrative, story). Thus, we are given a means of understanding how people related to their environment and sustained themselves on the land.

2.4 Historic Maps

There are also numerous, informative historic maps for the region. Surveyors of the eighteenth and nineteenth centuries were skilled in traversing land areas and capturing important features and resources throughout Hawaii's rich islands. Historic maps were carefully studied, and the features detailed therein were aggregated and categorized to help identify specific places, names, features, and resources throughout the study area. From these, among other documents, new maps were created that more thoroughly capture the range of resources in the area.

2.5 Archaeological and Biological Studies

HRS 6E review has already been completed for the project. A biological study was completed in 2017, the findings of which have been incorporated into this assessment (Section 4.0).

2.6 Ethnographic Methodology

Information from lineal and cultural descendants is instrumental in procuring information about the project area's transformation over time and its changing uses. The present analyses of archival documents, oral traditions (including oli or chants, mele or songs), and/or hula dance), and Hawaiian language sources including books, manuscripts, and newspaper articles, are focused on identifying recorded cultural and archaeological resources present on the landscape, including: Hawaiian and non-Hawaiian place names; landscape features (ridges, gulches, cinder cones); archaeological features (kuleana parcel walls, house platforms, shrines, heiau or places of worship, etc.); culturally significant areas (viewsheds, unmodified areas where gathering practices and/or rituals were performed); and significant biocultural resources. The information gathered through research helped to focus interview questions on specific features and elements within the project area.

3.0 Historic Background

Maui has a unique geography; it is considered to be two islands, joined together by an isthmus. Land divisions on Maui are unlike those on other islands (Sterling 1998). Ancient names for Maui include Ihikapalaumaewa and Kulua (Sterling 1998: 2). Since Waikapū, and thereby the project area, is located on the isthmus, it is important to understand the unique geopolitical construct of Maui's landscape.

> The division into district of the islands of the Maui group has not simplicity observed in the other islands. The configuration of the island of Maui, which is really a double island made up of two distinct mountain masses joined by a low flat isthmus, is probably the explanation for the group number of districts on that island, namely Kaanapali and Lahaina in West Maui, and the districts of Hamakua Poko, Hamakua Loa, Koolau, Hana, Kipahulu, Kaupo, Kahikinui, Honuaula and Kula in East Maui. The *ahupuaa* of Kahakuloa in Kaanapali and the *ahupuaas*[2] [sic] of Olowalu and Ukemehame in Lahaina were at times termed *kalanas* [sic]. The *ahupuaas* [sic] of Waihee and Waiehu were independent of any *moku* and are listed in the *Book of the Mahele* as being in "Puali Komohana," i.e., West Isthmus. The large *ahupuaas* [sic] of Wailuku of Waikapu, which appropriated almost the whole of the isthmus, belonged to no district and in the *Mahele* were said to be in Na Poko, Na Poko in this case meaning a smaller division of the island. C. J. Lyons says "with reference to the ahupuaas of Waihee, Waiehu, Wailuku and Waikapu, on the map it was necessary to form a new district and call it Wailuku, Nawaieha, 'the four waters,' being too cumbersome and ill understood'' (Sterling 1998: 3).

Wailuku is widely agreed to mean the "waters of destruction." While many associate the term with the Battle of Kapaniwai, scholars believe the term to have an older origin. One moʻolelo (story) recounts a battle in Wailuku between kanaka (humans) and pueo (owls). While such tales seem far-fetched, this moʻolelo is not unique to Maui as a similar moʻolelo of a great battle between kanaka and pueo is found on Oʻahu. In the Wailuku tale, published in the Hawaiian newspaper *Ke Au Okoa* in 1871, the story speaks of how many humans and chiefs were killed, including Kapoi and his wife (Uaua 1871: 3). Clark provides an interpretation of this story:

[2] In the Hawaiian language, the plural form of words is not created by adding an "s" to the end of the word, hence "[sic]" has been added where "s" was added to Hawaiian words. Words are instead made plural through the use of the kahakō and/or the plural definite article, for example, the plural form of the word he haumana (a student, singular) is nā haumāna (the students, plural).

> In 1871 the Hawaiian newspaper *Ke Au ʻOkoʻa* told a legend involving a man named Kapoi who lived with his wife at Kaimuheʻe, just above the two waters Kanahā and Mauoni. One day Kapoi's wife went out to gather *ʻūhini* (grasshoppers) and found an owl's nest with seven eggs. Thinking they were duck's eggs, she took them and gave them to Kapoi. He realized what they were, but refused to give them back to the owl who appeared and requested for their return. Kapoi then smashed the eggs against the stone wall surrounding the house. Infuriated over the senseless loss, ʻAʻapueo, the mother owl, and her mate, Pueokaia, gathered owls from all the islands. All of the men and chiefs of the area, including Kapoi and his wife, were destroyed. The place *mauka* of the ponds where the cruel breaking of ʻAʻapueo's eggs was avenged was called Wailuku, "water (of) destruction" (Clark 1980: 8-9).

In this moʻolelo, the place name Kaimuhee is found: "I ka wa e noho alii ana o Kanenenuiakawaikalu no Maui, ma Wailuku kona wahi noho mau, e noho ana kekahi kanaka kaulana o ia wahi, o Kapoi me kana wahine, ma Kaimuhee, mauka ae o na wai elua, o Kanaha me Mauoni, he mau loko kaulana ia no Wailuku…" (Uaua 1871: 1). This specifies that Kapoi and his wife lived in Kaimuhee, mauka (uplands) from the famed ponds of Wailuku, Kanahā and Mauʻoni.

There are also moʻolelo about the name Waiehu. In a previous recording included in the Sites of Maui, Pia Cockett explained the meaning of the name Waiehu: "And Waiehu, there's a water in the upland there when the water came down the cliff, the sprays fly just as it does over the sea. It was called Waiehu" (cited in Sterling 1998: 71).

The following research and analyses appropriately study the history and cultural resources of Waiehu and Wailuku, focusing on the project area and the surrounding environment.

3.1. ʻĀina Resources

The project area is located in the ahupuaʻa of Wailuku, within the moku (district) of the same name. Wailuku moku consists of four ahupuaʻa: Waihee, Waiehu, Wailuku, and Waikapu.

The ahupuaʻa of Waikapū is located within the larger moku of Wailuku, south of the ahupuaʻa of Wailuku and north of Māʻalaea Bay (Figure 5).

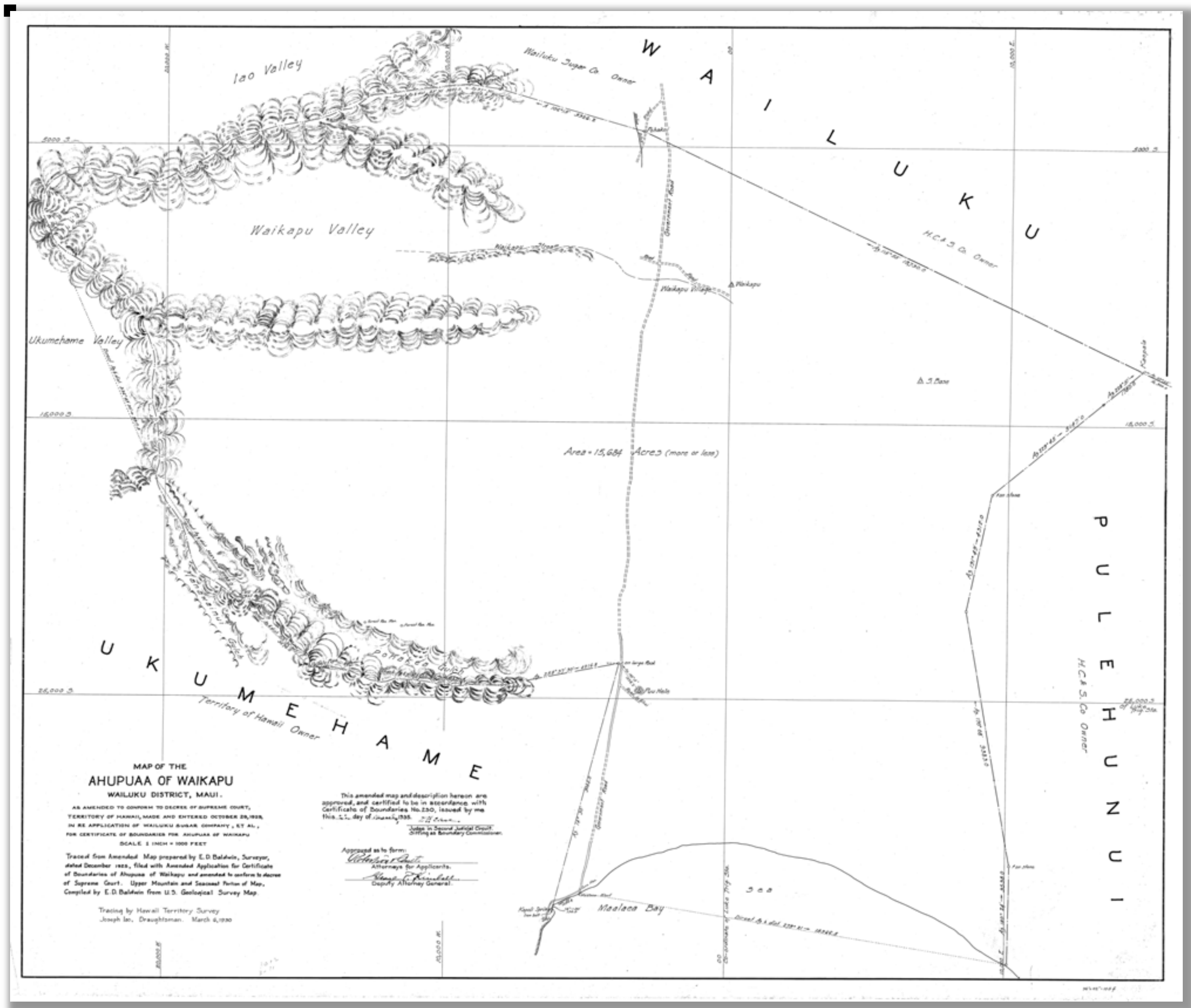


Figure 6. Map of the Ahupuaa of Waikapu (1930)

To employ the Hawaiian landscape perspective and emphasize the symbiosis of natural and cultural resources, Honua Consulting uses the term ‘biocultural’ to refer to natural and cultural resources, with additional sub-classifications by attributes.

A brief further discussion of environmental zones and traditional Hawaiian land management practices is necessary to understand the tangible and intangible aspects of the Hawaiian landscape. Additionally, it is important to point out once again that in the Hawaiian landscape, all natural and cultural resources are interrelated and culturally significant. Natural unaltered landscape features such as rocky outcrops, cinder cones, intermittent streams, or an open plain can carry as much significance as a planted grove of wauke (*Broussonetia papyrifera*) or a boulder-lined ‘auwai (canal).

Maly presents a narrative of traditional Hawaiian land management strategies and the different environmental zones recorded in *Ka Hoku o Hawaii* (September 21, 1916):

> Hawaiian customs and practices demonstrate the belief that all portions of the land and environment are related, like members of an extended family, each environmental zone was named, and their individual attributes were known. Acknowledging the relationship of one environmental zone (wao) to another, is rooted in traditional land management practices and values. Just as place names tell us that areas are of cultural importance, the occurrence of a Hawaiian nomenclature for environmental zones also tells us that there was an intimate relationship between Hawaiians and their environment.
>
> The native tradition of Ka-Miki provides readers with a detailed account of Hawaiian land divisions and environmental zones. While competing in a riddling contest at the court of the chief, Palikū-a-Kīkoʻokoʻo, the hero, Ka-Miki sparred with Pīnaʻau, the foremost riddler of the district of Hilo Palikū (northern Hilo). The riddles covered topics describing regions from the mountain tips to the depths of the ocean, and descriptions of kalo (taro growth), the ala loa (trail systems), and nā mea lawaiʻa (fishing practices). As the contest unfolded, it was seen that each of the competitors were well matched. In one of the riddles, Ka-Miki described the various regions of the island of Hawaii, extending from the mountain to the sea. Ka-Miki then told his opponent, that if he could rise to the challenge of answering the riddle, his knowledge could be compared to one who has ascended to the summit of the "mauna o Paliahu" (mountain of Poliʻahu, or Mauna Kea) (in *Ka Hoku o Hawaii*, September 21, 1916).
>
> Through one of the riddles [the] reader learn[s] about the traditional wao or regions of land, districts, and land divisions of the administrators who kept peace upon the land. The environmental zones include:
>
> 1 – Ke kuahiwi; 2 – Ke kualono; 3 – Ke kaumauna; 4 – Ke ku(a)hea; 5 – Ke kaolo; 6 – Ka wao; 7 – Ka wau maʻu kele; 8 – Ka wao kele; 9 – Ka wao akua; 10 – Ka wao lāʻau; 11 – Ka wao kānaka; 12 – Ka ʻamaʻu; 13 – Ka ʻāpaʻa; 14 – Ka paheʻe; 15 – Ke kula; 16 – Ka ʻilima; 17 – Ka puʻeone; 18 – Ka poʻina nalu; 19 – Ke kai kohola; 20 – Ke kai ʻele; 21 – Ke kai uli; 22 – Ke kai pualena; 23 – Kai Pōpolohua-a-Kāne-i-Tahiti.
>
> 1 – The mountain; 2 – The region near the mountain top; 3 – The mountain top; 4 – The misty ridge; 5 – The trail ways; 6 – The inland regions; 7 and 8 – The rain belt regions; 9 – The distant area inhabited by gods; 10 – The forested

> region; 11 – The region of people below; 12 – The place of ʻamaʻu (fern upland agricultural zone); 13 – The arid plains; 14 – The place of wet land planting; 15 – The plain or open country; 16 – The place of ʻilima growth (a seaward, and generally arid section of the kula; 17 – The dunes; 18 – The place covered by waves (shoreline); 19 – The shallow sea (shoreline reef flats); 20 – The dark sea; 21 – The deep blue-green sea; 22 – The yellow (sun-reflecting sea on the horizon); and 23 – The deep purplish black sea of Kāne at Tahiti (Maly 2001: 3).

The area of Wailuku as a whole contained a full range of wao and as a result, the area was known to be kapu (sacred or restricted). One historian explains:

> Na Wai Ehā, the Four Waters, including Wai-ka-pu Walley, waterfalls and stream, the Forbidden or Sacred Valley. Wai-lu-ku is the Destructive Waters of I-a-o Valley whose stream is best known as Wai-aka-ma-kea or Waters of Light and Shadow. Wai-ehu is the Valley of Misty Waters; and Wai-heʻe is the Valley of Racing Waters. All this area on the eastern slop of west Maui, whose name is Mauna-ka-Hala-Wai, or Mountain Blessed with Waters, was farmed diligently in olden times. With the produce from those lovely gardens, and the fat fish from the ponds of Kana-hā and Mauʻoni at Kahului and their counterparts at Ke-alia of Ka-lepo-lepo on Maʻalaea Bay, the people of Maui were rich and happy. Here, many temples were built for prayer, ceremonials, and finally, some were rededicated as war temples.
>
> Today little of the flourishing gardens remains. There are some active taro patches, but the land now produces sugar cane products at the Wailuku Sugar Company which began under King Kamehameha III, who has the burden of changing the ancient feudal system into a modern money-making venture (1825 to 1854) during his reign of the Kingdom of all Hawaiʻi.
>
> The fishponds date back for many centuries and were rededicated under Kiha-a-Piilani and Umi-a-Liloa who was his brother-in-law, in the middle 1500s. During the reign of King Ke-kau-li-ke, who died in 1736, the twin ponds of kanaha and Mauʻoni were again repaired along their walls. Today Kanaha is a bird sanctuary; and Kealia is a modern commercial shrimp pond.
>
> The area of Na Wai Ehā were kapu (sacred) to Maui Kingdom, with the beach at Kahului Bay being named Maka-wela, or literally, the Burning Eyes, indicative of the kapu of the burning sun peculies to the Aliʻi of Maui (Ashdown 1976: 3).

W.D. Alexander wrote in 1891 that the establishment of the district of Wailuku was a post-foreign contact construct: "On Maui the lands of Waikapu and Wailuku appropriated almost the whole of the isthmus so as to cut off half of the lands in the distrct of Kula from access to the sea. These two ahupuaʻa(s), together with Waiehu and Waiheʻe, which were independent, belonging to no Moku, were called Na Poko, and have been formed into a district in modern times" (Sterling 1998: 63; see also Van Dyke 2008: 178). F.S. Dodge would refer to the area as an ʻili kupono (Figure 3). Moffet and Fitzgerald note about Dodge's 1885 map of the island: "In addition to the standard colors of yellow for Crown and green for government lands, Dodge employed several other colors to cope with the land complexities of Maui. For example, an unusual land in Hawaiʻi is the *ʻili kupono* of Wailuku, shown in pink and covering the north half of the isthmus that connects the two halves of the island. An *ʻili kupono* was an *ʻili* that was independent of any ahupuaʻa. Wailuku was purchased by Claus Spreckels in 1882 and formed a major component of his sugar empire in Hawaiʻi" (Moffat and Fitzgerald 1987: 47). It is unclear when the area became known as its own district, but it occurred sometime between the creation of Dodge's map in 1885 and the passage of the County Act by the Territorial Government in 1905 when the Act named Wailuku to the County seat of Maui.[3]

[3] The National Register of Historic Places Inventory – Nomination Form for the Wailuku Civic Center Historic District: https://npgallery.nps.gov/GetAsset/053a8c8a-3956-4c7d-831a-0c3e0a737037

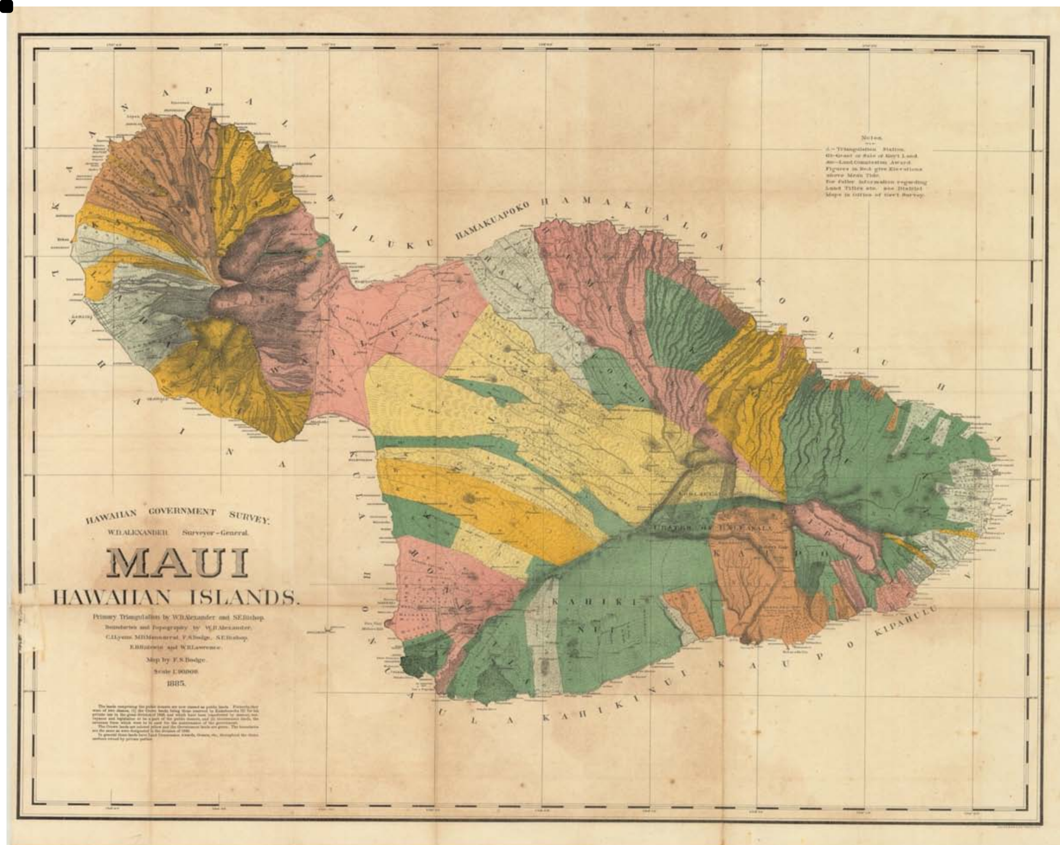


Figure 7. Map of Maui by W.D. Alexander and F.S. Dodge (1885)

3.2 Cultural History of Central Maui

Fornander notes that Hawaiians settled within the Wailuku moku as early as the 9-10th century: "Among other southern families of note who arrived at the Hawaiian group during this migratory period, though now it is impossible to place them in their proper order, the legend mentions *Kalana-nuunui-kua-mamao*, and *Humu*, and *Kamaunua-niho* who came from Kahiki (the southern groups), and landed at Kahahawai in Waihee, Maui" (Fornander 1878: 43).

It seems best to begin a genealogy of Maui's chiefs with Moʻoinanea. Moʻoinanea appears in numerous moʻolelo throughout Hawaiian history. She is considered "the matriarch of all moʻo [(lizard)] gods and goddesses" (Pukui and Elbert 1971: 394). Accounts detail her arrival from Kahiki "with the Kū and Hina family of gods" and that she was "the ancestor of the ʻUlu / Hemo linage of Maui" (Klieger 1998: 8). It is explained:

> One of [Moʻoinanea's] descendants was Kelea (Keleanuinohoʻanaʻapiʻapi), a Maui chief and famous surfer of married Kalamakua, a prominent chief on Oʻahu. Maui was not yet a unified kingdom at the time, but soon the moʻo would be evoked for the unification of the island, and then the entire archipelago.

> Kelea was the daughter of Kahekili I, the alii nui of the kingdom of West Maui, and his wife Haukanuimakamaka. The moʻo lineage was most likely introduced through Kelea's mother. Kelea's paternal grandfather and great uncle were Kakaʻe and Kalaʻalaneo, alii nui of the Wailuku line who ruled West Maui and Lanai from Lele/Lahaina in the sixteenth century (Klieger 1998: 8).

After Kahekili I passed, Kelea's brother, Kawaokaohele, gained control over his kingdom. Kawaokaohele was a popular aliʻi (chief) and the reign is known for its prosperity. Most importantly, it was during the reign of Kawaokaohele that East Maui (i.e., Hana) recognized the Wailuku aliʻi as being mōʻī (King) of Maui (Klieger 1998: 8-9).

Kawaokaohele's son, Piʻilani, is widely acknowledged to this day to be the greatest aliʻi in Maui's history. He ruled all of Maui from Lahaina, which would eventually become the political center of the island and later the unified Hawaiian Kingdom. Piʻilani is known for creating a trail that circumnavigated the entire island (Klieger 1998: 9). Piʻilani married his first cousin, Laieloheloheikawai, daughter of Kelea. Piʻilani and Laieloheloheikawai had at least four children: daughter Kihawahine Mokuhinia Kalamaula Kalaaiheana, daughter Piʻikea, son Lono-a-Piʻilani[4] and son Kiha-a-Piʻilani. These children, being the result of a piʻo union (marriage between two close relatives, sometimes a brother and sister), had a very strong lineage.

Upon her death, it is believed that Kihawahine transformed into a moʻo and became a guardian of sacred places on Maui, most notably fishponds, some of which bear her names. Mary Kawena Pukui said that her home was Mauʻoni fishpond, located in Kahului (Klieger 1998: 9). Yet, it is also said that Kihawahine possessed the ability to travel between islands and fishponds (Klieger 1998: 9). Many fishponds to this day are associated with a moʻowahine (female lizard deity) that protects the pond. It is likely that this continued existence of moʻo deities originated with Kihawahine.

Historians estimate that Piʻilani ruled in the 16th century. It is important to note that Hawaiian chiefs demonstrated considerable savvy in politics. Chiefs commonly intermarried for political reasons. Piʻikea-a-Piʻilani, daughter of Piʻilani, married Umi-a-Liloa, the King of Hawaiʻi Island. When Piʻilani died, the Maui Kingdom went to his oldest son Lono-a-Piʻilani. For many years, Lono-a-Piʻilani and his younger brother Kiha-a-Piʻilani (brothers to Piʻikea) co-existed peacefully. Eventually, Lono-a-Piʻilani and Kiha-a-Piʻilani had a falling out and the latter feared his brother, the King, would try to kill him, so Kiha-a-Piʻilani fled and lived on Lānaʻi. He eventually returned and stayed in the southern parts of Maui, as to not be found by his brother.

[4] Children often bore the name of an ancestor, so names such as Lono-a-Piʻilani mean "Lono of Piʻilani." Whenever historical figures' names have this element, the name has been broken up with dashes in this report to help the reader follow geneaologies and familial relationships.

His identity was eventually discovered and he traveled to Hawaiʻi Island to stay with his sister, Piʻikea-a-Piʻilani and her husband, ʻUmi-a-Liloa (Kamakau 1992: 23-27). Kiha-a-Piʻilani joined with ʻUmi-a-Liloa, and together they planned to invade Maui. Lono-a-Piʻilani resided in Wailuku during this time.

Kiha-a-Piʻilani and ʻUmi-a-Liloa successfully invaded and conquered East Maui. Before they could reach Lono-a-Piʻilani in Wailuku, Lono-a-Piʻilani died. A prophet told Kiha-a-Piʻilani that the body of Lono-a-Piʻilani was "in Wailuku in a land called Paʻuniu" (Kamakau 1992: 31). Despite a wide search throughout Wailuku, the bones of Lono-a-Piʻilani were never found by Kiha-a-Piʻilani.

Kiha-a-Piʻilani ruled Maui in the 17th century. During ʻUmi-a-Liloa's reign of Hawaiʻi Island, the two kingdoms remained close and peaceful thanks to the intermarrying of the chiefly families. It would be this history of strategically intermarrying that would help to engender the eventual unification of the islands. Kiha-a-Piʻilani's descendant, Kekaulike, would become the King of Maui in the 18th century.

As Kekaulike ruled on Maui, Keawe ruled on Hawaiʻi Island. Keawe was a famed ruler of Hawaiʻi Island (Kamakau 1992: 64). Keawe's half sister was Ka-lani-kau-lele-ia-iwi, whose husband was Ka-uaua-nui-a-Mahi and to them was born Alapaʻi-nui-a-Kauaua (Alapaʻi) (Kamakau 1992: 64). Kamakau (1992) notes that Keawe enjoyed travel and would travel to the other islands, including Maui. When Keawe died, he left Kohala and Kona to his son Keʻeaumoku and Kaʻu to his son Kalaninuiʻiamamao (Kamakau 1992: 64-65).

Alapaʻi also lived on Maui during this time, moving there after Hilo chiefs killed his father, Ka-uaua-nui-a-Mahi. Alapaʻi's half-sister Kekuʻiapoiwanui-a-Kalaninuikauleleiaiwi (Kekuʻiapoiwanui) was the wife of Kekaulike (Kamakau 1992: 65). After Keawe's death, Alapaʻi returned to Hawaiʻi Island. He first waged war against Keʻeaumoku and gained control of Kohala and Kona. Kekaulike did not approve of this and took his own warriors to fight with Alapaʻi on Hawaiʻi Island. Kekaulike was unsuccessful in this battle and he slaughtered numerous commoners during his campaign in Kohala (Kamakau 1992: 65-66). Alapaʻi then unsuccessfully launched a campaign against Kekaulike on Maui.

Kekaulike had four biological children with his wife Kekuʻiapoiwanui: Kalola (wahine (female)), Kamehamehanui (kāne (male)), Kahekili II (kāne), and Kahuʻaimokuakama (wahine). Kalola bore children with three different men: Kalanikauōkikilokalaniakua (wahine) with her brother Kamehamehanui, Kīwalaʻo (kāne) through her union with Kalaniʻopuʻu, and Kekuʻaipoiwa Liliha (wahine) from her union with Keōua. Kalanikauōkikilokalaniakua had many kapu on her due to her being the result of a nīʻau piʻo union between siblings, which Hawaiians believed

gave a child a sacred status. Kalaniʻopuʻu and Keōua are two sons of Keawe, both of which Alapaʻi brought up as leaders in his government.

Keōua had many wives. In addition to Kalola, he also married Kekuʻaipoiwa, daughter of Kekela and Haʻae (not to be confused with Kekuʻaipoiwa Liliha, daughter of Kalola, or Kekuʻaipoiwanui, wife of Kekaulike). Keōua and Kekuʻaipoiwa would become the parents of Kamehameha I (kāne), who was born as Alapaʻi launched his attack against Kekaulike on Maui.

As Kekaulike ruled Maui, Alapaʻi ruled over Hawaiʻi Island. Alapaʻi was a peaceful and prosperous chief and additional war between the two kingdoms was avoided for a period of time. On Maui, Wailuku had been the central location of power since the time of Piʻilani. Kekaulike moved it to Kaupō, likely in preparation of attacks on Hawaiʻi Island. Kekaulike fell ill and never returned to Hawaiʻi Island. Kekaulike turned over Maui to his son, Kamehamehanui (not to be confused with Kamehameha I).

In anticipation of an attack from Alapai's forces, the weakened Kekaulike directed his family and governing officials to return to Wailuku, to Halekiʻi, "the royal residence of the Maui ruling line near Wailuku" (Kirch 2012: 240). There Kekaulike died and after his death, "fearing the arrival of Alapaʻi bent on war, the chiefs cut the flesh from the bones of Ke-kau-like in order to lighten the load in carrying the body to ʻIao" (Kamakau 1992: 69).

Alapaʻi arrived on Maui as anticipated. Yet, when Alapaʻi heard of Kekaulike's death and of Kamehamehanui's rule, he relinquished his planned attack on the island and rather opted for peace between the kingdoms.

Kahekili II, the second son of Kekaulike, would become one of Maui's most famed aliʻi. He was known to be a ferocious warrior and a staunch follower of the Hawaiian religious beliefs and protocols. He kept individuals for sacrifice at a place called Puaʻanui, near the site of the Wailuku mill (Thrum 1917: 60). It was during Kahekili II's reign that the great battle at Kakanilua occurred.

Joseph Mokuohai Poepoe wrote of this great battle in Hawaiian language newspapers in 1905:

> As the Alapa[5] and Piipii proceeded to the plain of Kamaomao [from Kihei-pukoʻa] they met with no hindrance until they reached the southeastern side of a place called Kalua, close to the village of Wailuku.
>
> When the Alapa arrived there, the warriors of Kahekili concentrated upon them from many points, like sandcrabs running over the sand.
>
> A bitter fight was fought by the Alapa and Piipii armies of Kalaniopuu against the well trained warriors of Maui and those of Oahu under Kahahana…
>
> Kalaniopuu received the news on the evening of the day of the terrible battle. This battle in which the Alapa and Piipii were destroyed was called Ahulau ka Piipii i Kakanilua (completely slaughtered were the Piipii at Kakanilua) (Sterling 1998: 88, citing Poepoe 1905).

Kekuʻaipoiwa Liliha (daughter of Keōua and Kalola) and her half-brother Kīwalaʻō married and this nīʻau piʻo union resulted in the birth of Keōpuōlani (wahine). Due to the half-sibling relationship between her parents and her royal lineage, Keōpuōlani was a chiefess of substantial status and rank. While Kamehameha I would eventually take many wives, none held as high a sacred status as Keōpuōlani and she would become known as Kamehameha's sacred wife. It is through their children, Liholiho (kāne), Kauikeaouli (kāne), and Nahiʻenaʻena (wahine), that the Kamehameha Dynasty was established.

The Wailuku district was generally abundant with resources, both from the mountains and the sea, yet its name implies a history of conflict also impacted the area. Wailuku, as previously mentioned, literally translates to "water of destruction" and while some attribute the name to the historic battle instigated by Kamehameha I that took place in this area, the name reaches further back prior to Kamehameha's reign.

Wailuku would become an important political hub. Kahekili kept a home in Wailuku, known as Lanikeha, which was a name often used for the residences of high chiefs (Pukui and Elbert 1971: 178; Malo 1951: 104). Literally meaning "lofty heaven," it referenced the legendary part of heaven. It is possible Kahekili kept a second home in Wailuku. One account from *Ka Naʻi Aupuni* mentions another home called Kalani-hale: "The people of Hawaii lamented greatly. Kalaniʻopuu grieved over the destruction of his ʻAlapa and Piipii warriors. At that time Kahekili was living in his house, Lanikeha, in Wailuku. Kiwalaʻo donned his royal regalia; Kameeiamoku held his spittoon and Kamanawa carried his kahili. The delegate from Hawaii

[5] "Alapa" in this case references the famed warrior company of Kalaniʻopuʻu. The spelling of the term with diacriticals is ʻālapa.

went up to Wailuku, for at that time Kahekil was living in his house named Kalani-hale" (Sterling 1998: 89).[6]

3.2.1 Ka Moolelo o Kihapiilani (The Tradition of Kihapiʻilani)

In 1884, native historian Moses Manu, a contributor to accounts published by Abraham Fornander (1918 & 1996), published *"Ka Moolelo o Kihapiilani"* in *Ku Okoa* (January 12 to August 23, 1884). A part of the account includes reference to Kihapiʻilani's rise to rule over Maui and construction of the great fishpond complex of Kanahā in Kahului. The following excerpt, translated by Maly, is a synopsis of Manu's narratives:

> …Upon securing his rule over Maui, Kihapiʻilani determined that he was going to build a *heiau,* a house for the gods… Kihapiʻilani then called upon the chiefs and commoners alike, having them gather the *ʻalā makahinu* (dense basalt stones) to build an *alanu* (trail).
>
> The trail began at the stream of Kawaipapa and Pihehe and entered the *hala* forest of Kahalaowaka. From that place, it went to the forest of ʻAkialaʻa at Honomāʻele… The trail was also set out at Kaupō, from the stream (gulch) of Manawainui to Kumunui. That was the extent of the work of the king and the people. He then began the paving in the forest of ʻOʻopuloa [i.e., ʻOʻopuola], at Koʻolau, extending from Kawahinepeʻe to Kaloa, then on to Pāpaʻaʻea, and on to Kaʻohekanu at Hāmākua Loa…
>
> Now when the King (Kihapiʻilani) completed his work in this area, he moved and lived at Kahului, where he began the collection of stones for the *kuapā* (fishpond walls) of Mauoni and Kanahā. He is the one who caused the water in those two ponds to be separated and given two names. The *kuapā* is still there to this day, but a large portion of it has been lost, covered under the sands flying in the winds. When this work was completed, Kihapiʻilani then departed for Waiehu and ʻĀʻāpueo… (Manu in *Nupepa Ku Okoa,* August 23, 1884: 4; Maly and Maly 2003: 81)

3.2.2 He Moolelo Kaao Hawaii no Laukaieie… (A Hawaiian Tradition of Laukaieie…) Fishery Resources on Hawaiʻi, Maui, and Oʻahu

Manu published "He Moolelo Kaao Hawaii no Laukaieie…" in *Nupepa Ka Oiaio* between January 5, 1894 and September 13, 1895. The following is excerpted from the longer

[6] The original text of this account implies the home was in the mauka (mountain or inland) part of Wailuku: "Ua pii aku la nohoi ka elele o Hawaii no uka o Wailuku, a, aia ia wa, e noho ana no o Kahekili iloko o kona hale i heaia ma ka inoa o 'Kalani-hale'" (Poepoe 1905).

narratives which describe the travels of Laukaieie, her younger brother Makanikeʻoe, and their companions. This tradition includes descriptions of fisheries and aquatic resources, history, and mele interspersed with account from other traditions and references to nineteenth century events.

> From [Makawao] he then traveled to the cool pond of Kālena and then he went to the top of the hill, Piʻiholo, from where he could look out upon the beauty of the land. While he was atop Piʻiholo the *ʻūkiukiu* mist rains and the *ʻulalena* surrounded him, and the *līhau* dropped from the leaves of the *koa* of Kokomo and the famous *kukui* grove of Lilikoʻi. There, while upon the hill he saw two young women whose features were like that of Hinauluʻōhiʻa [a goddess of the forests and water at Waipiʻo, Hawaiʻi] sitting along the side of the stream of ʻAlelele. In his mysterious manner, Makanikeoe appeared before these two young women. Startled, they dove into the stream of ʻAlelele and entered a cave, and in a short time these mysterious women arose below Waiʻalalā. There, the women took their mysterious body forms and Makanikeoe called out to them. He learned that their names were Lauhuki and Kiliʻoe, and that they were the *moʻo* guardians of the cool waters of Kālena and all of the ponds at Makawao. For them the lines of the *mele* were composed:
>
> | | |
> |---|---|
> | *Ka helena a wahine i ka pali* | The women travel along the cliffs |
> | *I ka luna o Piʻiholo i ʻAlelele* | At the heights of Piʻiholo and ʻAlelele |
> | *O Lauhuki ma lāua o Kilioe.* | They are Lauhuki and Kiliʻoe |
>
> After exchanging their greetings, Makanikeoe passed through the cave by which the women traveled to Waiʻalalā. He then continued underground till he reached the sea fronting Māliko. He arose at the eastern point of Māliko, which is the boundary between Hāmākualoa and Hāmākuapoko. From here, the path of our traveler passed before Kūʻau and Pāʻia and he then arrived at Kapukaʻulua, the boundary between Hāmākuapoko and Wailuku. <u>There, Makanikeoe saw a deep pit in the sea which he entered and followed to the ponds of Kanahā and Mauoni, those famous ponds that are near Kahului. The ponds were made by the commoners in the time of the chief Kihapiʻilani</u>… (Manu in *Nupepa Ka Oiaio*, December 28, 1894; Maly and Maly 2003: 88)

3.3 Post-Contact Era in the Wailuku District

When foreigners arrived, Hawaiians resided throughout Wailuku. The first foreigners established in Wailuku in 1832 under Jonathan S. Green (U.S. Department of the Interior 1986). It is said that “[v]ery little development occurred, however, until after the Wailuku Sugar Company commenced its operations in 1862” (U.S. Department of the Interior 1986).

In 1870, Samuel Thomas Alexander and Henry Perrine Baldwin (Alexander & Baldwin) planted their first sugarcane crop on their planation; this would eventually become the foundation of Maui Agricultural Company (HC&S 2017).

Wailuku was significantly impacted by both foreign contact and the Māhele, which made the establishment of sugar operations and plantations possible. Although listed among the Crown Lands,[7] significant acreage from these Crown Lands would be transferred to Claus Spreckels through Government Grant 3343 (Van Dyke 2008: 178); this Grant included all of Kahului. Through this land transfer, Wailuku and Kahului became a central hub of Hawaiʻi's sugar industry. Claus Spreckels acquired a total of 40,000 acres in East Maui: 16,000 acres in Waikapu and 24,000 acres in Wailuku. Spreckels developed a particularly close relationship with King David Kalākaua, who executed a number of questionable transactions that would significantly benefit Spreckels (Wilcox 1996: 61). These resources allowed Spreckles to form Hawaiian Commercial Company in 1878, the predecessor to Hawaiian Commercial & Sugar Company (HC&S), which was officially incorporated and renamed in 1882 (HC&S 2017).

Historic accounts detail Spreckels' activities:

> Claus Spreckels & Co.'s Sugar Mill and Plantation, Wailuku and Waikapu Common, seven miles from Wailuku; Kahului Road; post office address, Kahului. Owns 30,000 acres; 3,000 acres under cultivation; 25,000 acres available for sugar planting; the balance is pasture, etc. sole right of 32 streams for irrigating purposes; said right obtained direct from the Crown; estimated yield for season of 1880, 3,000 tons of sugar. The cane will average six tons to the acre. Number of men employed, 350; horses and mules employed, 70 head.
>
> The ploughing on the whole is done by steam ploughs, and the cane is transported by the aid of portable railways to the mill. The capacity of the mill will be about twenty tons per diem; the mill will have five crushers in two sets, one of three, and one of two. The mill buildings are now in course of construction, and it is expected that grinding may be commenced about November next. Mr. Spreckels has his own landing and storehouse at Kahului, and the sugar is brought down to the landing by Captain Hobron's Wailuku and Hamakua Railway. Messrs. J. Horner & Co. plant 600 acres, all under cultivation, on shares with this company. Mr. Spreckels calculates to import,

[7] Wailuku, not yet being its own autonomous moku, is listed under Napoko, with Wailuku being the name of the land area (Van Dyke 2008: 178).

inside of four years, 40,000 tons of sugar per annum from his Hawaiian estates (Bowser 1880: 432).

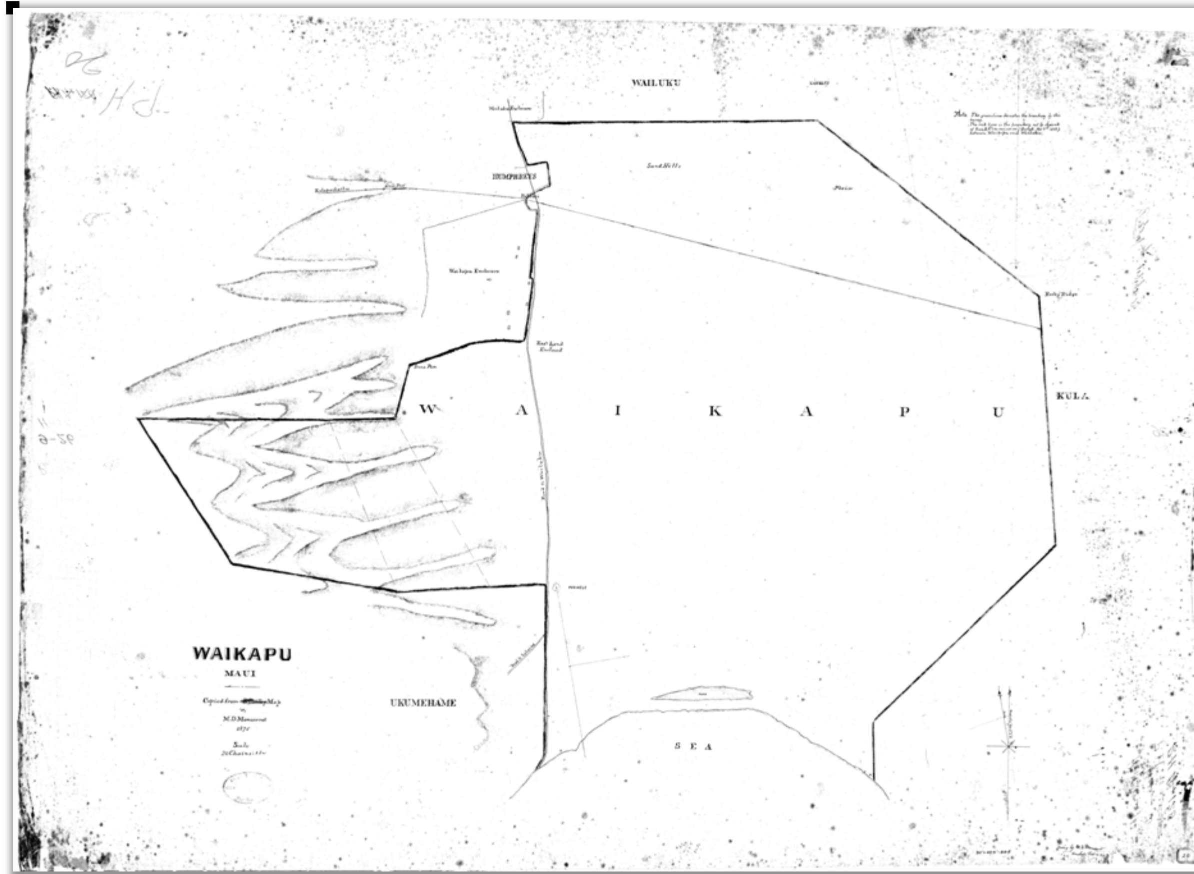


Figure 8. Map of Waikapū, Registered Map No. 782, Monsarrat, Surveyor (1875)

By 1862, Wailuku Sugar Company was officially organized in 1875, the company officially incorporated (Wilcox 1996: 122). In 1863, Thomas Hogan built the first Western structure in Kahului: a warehouse near the beach (Clark 1980: 7); other Western structures followed in Kahului. The conversion from traditional Hawaiian agriculture, which was particularly abundant on Maui, to Western irrigation practices had long-term adverse effects on the cultural practices and ecosystem services enjoyed on the island. These effects would be felt around the region, including in places like Waikapū. Unlike traditional Hawaiian practices which required loʻi (pond fields) and other stream diversion activities to have a hoʻi (return flow to the stream of origin), sugar irrigation activities did not return water from perennial streams to the source. Rather, these modern irrigation practices diverted water without returning it, adversely impacting landowners downstream, particularly native tenants. Sugar also consumed an unprecedented amount of water from these water sources. Waikapū

enjoyed a large number of kuleana landholders (Figure 9) who would have relied on their water rights to farm.

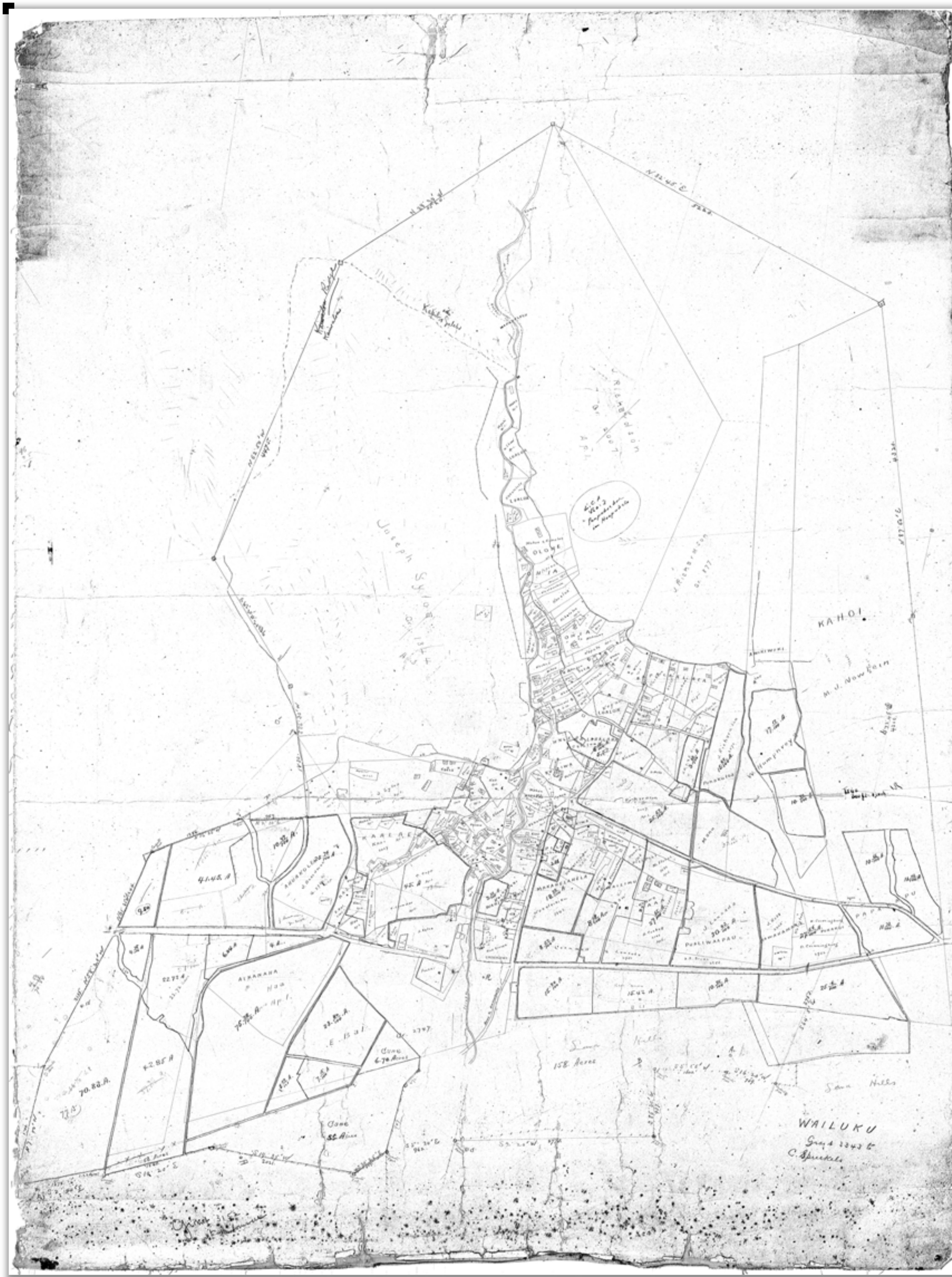
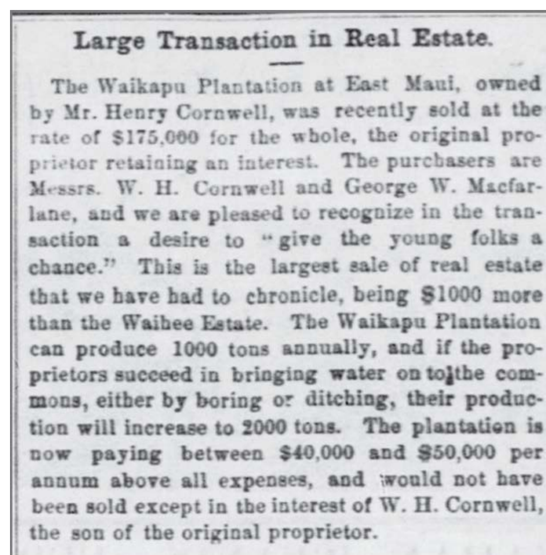


Figure 9. Registered Map 940, showing a high density of kuleana lands in Waikapū (1882)

Hawaiʻi's rich watershed systems are dependent upon healthy streamflow. Among the many benefits are healthy crops and healthy fisheries (Gingerich et al. 2007; Field et al. 2008). The radical changes in lifestyle and economy that accompanied foreign contact resulted in many Hawaiians becoming displaced from their family and ancestral lands. In 1876, the United States and the Hawaiian Kingdom signed the Hawaiian Reciprocity Treaty, which allowed sugar from Hawaiʻi to be imported into the United States duty-free. This made the sugar industry in Hawaiʻi far more economically viable than it had been prior to the execution of the Treaty. Sugar grew significantly on Maui as a result. A small landing was built in 1879 to service the growing sugar industry and Kahului Railroad Company incorporated in 1881 and established its headquarters near Kahului Bay. This was the first railroad company in Hawaiʻi and the first route ran from Kahului to Wailuku. The company was founded by Captain Thomas Hobron, a sea captain who came to Hawaiʻi and decided to stay and become a merchant in the islands. Hobron Point is named for him (Clark 1980: 7).

Sources note that Maui had telegraph-telephone service as early as 1877. The line ran between Napili and Wailuku. Within a few years, a more sophisticated line was set up for central Maui that included Kahului. Maui Telephone Company began in 1889, taking over the system (Ramil 1984: 6). In 1898, Alexander & Baldwin gained control of HC&S (HC&S 2017).

As Maui's sugar industry grew, so did the infrastructure needed to cultivate and export the sugar. Immigrant workers were brought to Maui from Asia and the Pacific. Plantation camps popped up throughout Wailuku and Kahului. Waikapū Planatation would be formed in the mid-19th century and would quickly develop capacity for cultivating large yields. Yields that would only be increased with the availability of more water. Waikapū Plantation would eventually be purchased by Wailuku Sugar Company by the end of the 19th century.



Large Transaction in Real Estate.

The Waikapu Plantation at East Maui, owned by Mr. Henry Cornwell, was recently sold at the rate of $175,000 for the whole, the original proprietor retaining an interest. The purchasers are Messrs. W. H. Cornwell and George W. Macfarlane, and we are pleased to recognize in the transaction a desire to "give the young folks a chance." This is the largest sale of real estate that we have had to chronicle, being $1000 more than the Waihee Estate. The Waikapu Plantation can produce 1000 tons annually, and if the proprietors succeed in bringing water on to the commons, either by boring or ditching, their production will increase to 2000 tons. The plantation is now paying between $40,000 and $50,000 per annum above all expenses, and would not have been sold except in the interest of W. H. Cornwell, the son of the original proprietor.

Figure 10. Announcement of the sale of Waikapū Plantation (1877)

The railroad infrastructure that carried crops to mills then to Kahului Harbor also grew. By the late 1800s, a second crop was introduced for cultivation and export on Maui: pineapple. Pineapple plantations steadily grew across Maui for several decades. The small landing at Kahului Bay transformed into a modern commercial harbor in 1900 when a plague outbreak led to the controlled, intentional burning of the town as a means of killing all the rats that were spreading the infestation. By 1910, the traditional Kahului Bay became home to a fully modernized harbor, as the Kahului Railroad Company extensively altered the area to suit its commercial needs (Clark 1980: 7).

Figure 11. Waikapū Valley, Maui, Hawaii State Archives Call No. PPWD-10-14-011 (1888)

The Maui News was established in 1900 and within the year, encouraged local Hawaiians "to give your children the best English education possible" (Ramil 1984: 7). At the time, the island's residents were primarily divided among three political parties: Republicans, which were led by plantation owners and managers, the Home Rule Party, led primarily by Hawaiians, and the Democratic Party (Ramil 1984). *The Maui News*, largely controlled by Republicans, weighed heavily into politics, making statements like: "Let [Hawaiians] have time to grasp the two great thoughts, first that all hopes of a restoration of the monarchy is gone forever, and secondly, that in order to have any weight in the management of the affairs of the Islands, [they] must forget that they are Hawaiians and remember only that they are Americans, and

then their adjustment in the body politic will come easily and naturally" (Ramil 1984: 8). Despite their rhetoric and efforts, the Republican Party failed to elect many delegates to the First Territorial Legislature; the Home Rule Party won six out of nine available seats.

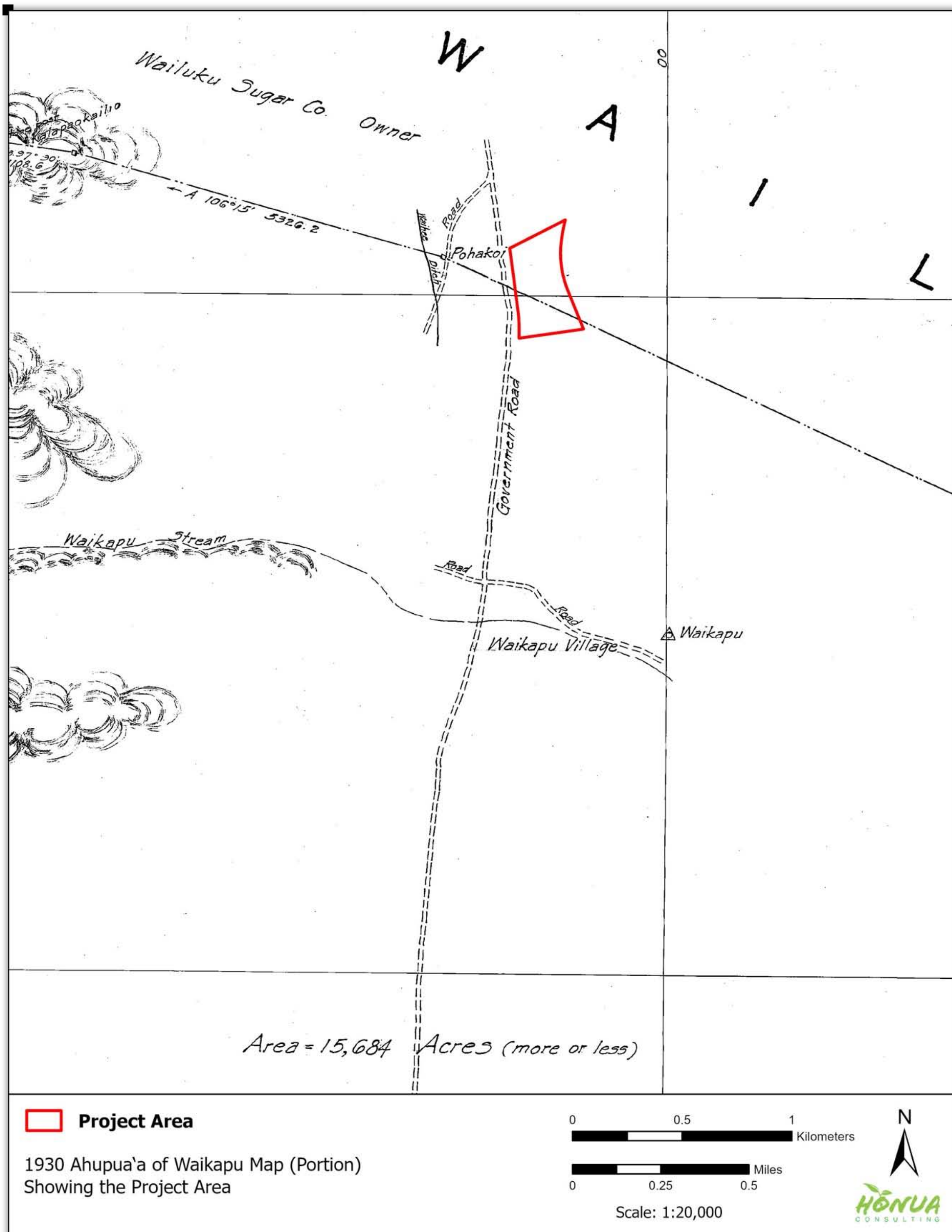


Figure 12. Portion of 1930 map of the Waikapū Ahupuaʻa

The Home Rule Party was unable to hold onto power. The Hawaiian led group continuously pushed to maintain elements of the sovereign kingdom, which led to regular conflict with foreign plantation owners. It was said that "The Home Rulers also opened themselves to criticism by their insistence of using the Hawaiian language in their legislative proceedings, in violation of the Organic Act which required the use of the English language" (Ramil 1984: 11). The publication also commented on foreign control of Maui lands: "It is monotonous untruth that the native Hawaiians have been cheated of their lands by the missionaries or the sugar planters or any body else. …On Maui, the bulk of the sugar plantations were formerly arid lands that nobody wanted, and have been made valuable only by outlay of vast sums for irrigating ditches and pumps" (Ramil 1984: 8).

During the First Territorial Legislature, a county bill was passed, only to be vetoed by the Governor. The 1901 effort would have changed the name of Maui Island to Liliuokalani and would have named Lahaina as the center of the county government (Ramil 1984: 10). Wailuku would nonetheless become the County seat of power when the County Act passed in 1903.

During World War II, the U.S. Military took over a substantial part of Maui for training and defense. Kahului was shelled by a Japanese submarine on January 1, 1942 (Clark 1980: 7; Pignataro 2013). Maui would shortly therefore become home to the 4th Marine Division, known as the "Maui Marines." The U.S. Marines built a camp and living facility for 18,000 troops in Wailuku (NOAA n.d.). The Navy would also take over land to build two naval air stations: NAS Puʻunēnē, now known as Maui Airport, and NAS Kahului, which would become known as Naska, and they were built in 1942 and 1943, respectively (NOAA n.d.). Clark identifies Naska as "the site of Kahului Airport and a small industrial-commerical complex. Some of the old-World War II structures can still be found in the area, including the now empty Naska Swimming Pool" (Clark 1980: 9).

Post-World War II demands of the "baby boomer" generation helped to turn Maui towards the tourism industry. As in many places, when soliders began to arrive home from the war, there was an increased need for single-family homes and suitable communities. The plantation camps of the past were undesirable for Maui's growing middle class, as was work on the plantation.

HC&S merged with Maui Agricultural Company in 1948, creating the largest sugar producer in the United States (HC&S 2017). In 1949, the Kahului Development Company received approval for a new development in the town (Ramil 1984: 128); the development would break ground by the end of the year. In 1950, HC&S introduced Tournahaulers to Hawaiʻi, using them to replace the aging railroad system as a means of transporting sugar (HC&S 2017). The first traffic lights installed on Maui were placed in Kahului in 1951 (Ramil 1984: 144). This provides a sense of how large and industrialized the town of Kahului had become. HC&S

also diversified significantly by this time and developed a plan to transform Kahului from a plantation town into a modern city. They sought to develop their cast holdings of sugar plantation lands adjacent to Kahului Harbor into a city, which they called “Dream City.” The project was successful, and this effort served as the foundation of much of Kahului today.

4.0 Cultural Resources

This section discusses the natural resources within the project area, specifically those natural resources that may have cultural significance or use.

4.1 Flora

In the Botanical Survey conducted within the project area, 48 total plant species were discovered, with vegetation in the area “dominated by two non-native species” (Hobdy 2017). Only one recorded species of the 48 identifed flora is native to Hawaiʻi, ʻuhaloa (*Waltheria indica*) (Hobdy 2017). This species is present on all of the Hawaiian Islands and is not of conservation or environmental concern.

ʻUhaloa is primarily a medicinal plant. The leaves, stems and roots were pounded, strained and used as a gargle for sore throats, which is a practice that continues today (Abbott 1992). ʻUhaloa was also combined with other plants to create a tonic for young and older children, and seldom adults (Krauss 1993). Canoe builders would also occasionally add the sap of ʻuhaloa to a concoction of kukui root, ʻakoko, and banana inflorescence to create a paint that would stain the hull (Krauss 1993). This native weed remains abundant throughout the Hawaiian Islands and is still treasured as a natural and safe tonic for bodily ailments today.

Hobdy (2017) also notes:

> The original vegetation in this area consisted of a dense low statured native forest and shrubland with such components as 'ohi'a (Metrosideros polymorpha), 'a'ali'i (Dodonaea viscosa), olopua (Nestegis sandwicensis), lama (Diospyros sandwicensis), halapepe (Chrysodracon auwahiensis), and a variety of ferns, vines and herbaceous plants.
>
> Hawaiians lived in the area for several centuries, farming in the valley bottoms and lowlands and utilizing forest plants for food, construction materials, tools, fiber and medicines. They altered the landscape somewhat through cultivation and burning. This area is situated on farming lands that were irrigated with waters from the ancient Kama Ditch.
>
> During the mid-1800s this area was cleared for sugar cane agriculture and the area was plowed, planted, burned and harvested in continuous cycles for over 100 years. Native ecosystems were replaced by sugar cane and increasing numbers of agricultural weeds.

When sugar production ended in the 1990s this area was converted to cattle grazing. All of these practices, along with recent fires that have swept through the grass lands, have resulted in an environment that is now nearly totally lacking in native plants and animal species.

4.2 Fauna

Hobdy (2017) identified two mammal species in the Project Area: the axis deer (Axis axis) and the ʻōpeʻapeʻa (Hawaiian hoary bat).

Other potential non-native mammals likely to be found in the project area are: mongoose (*Herpestes auropunctatus*), roof rat (*Rattus rattus*), mice (*Mus domesticus*) and domestic cats (*Felis catus*).

While native birds were identified on property, Hobdy (2017) notes that the migratory Pacific golden-plover (*Pluvialia fulva*), referred to at the kōlea in Hawaiian, may appear in the area during the winter. The kōlea may be considered ʻaumakua, ancestral guardian, in some families. In certain Hawaiian language context, being referred to as a kōlea can be considered derogatory.

4.3 Other Environmental Features

4.3.1 Waikapū Stream

Waikapū Stream is one of the four water sources that make up Nā Wai ʻEha. Practitioners continue to work the protect and restore these waters. As describes by this group:

> "Kaulana ʻo Nā Wai ʻEhā" "Famous are the Four Great Waters of Waikapū, Wailuku, Waiehu, and Waiheʻe." This well-known saying attests to the traditional, historical, and cultural significance of the four ahupuaʻa within the moku of Wailuku and their fresh water resources. Nā Wai ʻEhā, was once the largest contiguously cultivated loʻi kalo growing region in all of Hawaiʻi. It also served as the primary ritual, political, and population center of Maui. The vast water resources of Mauna Kahālāwai (West Maui Mountains) supplied these four streams with the life giving waters of Kāne. This allowed the Hawaiian population of this area to develop expansive irrigation and agricultural systems unique to Hawaiʻi. The rich history of Nā Wai ʻEhā, is directly linked to the abundance of wai. Hawaiians thrived for many generations in this region by cultivating loʻi kalo (wetland kalo), fishing in natural and manmade inland fishponds, gathering native stream life such as ʻoʻopu, hīhīwai, and ʻōpae, and collecting drinking water from springs (Hui o Nā Wai ʻEha).

4.3.2 Rain Names

Akana and Gonzalez in *Hānau Ka Ua: Hawaiian Rain Names* explain the significance of the wind and rain in Native Hawaiian culture:

> In the mind…of our Hawaiian kūpuna [(ancestors)], every being and every thing in the universe was born. Our kūpuna respected nature because we, as kānaka, are related to all that surrounds us – to plants and creatures, to rocks and sea, to sky and earth, and to natural phenomena, including rain and wind. This worldview is evident in a birth chant for Queen Emma, "Hānau ke aliʻi, hānau ka ua me ka makani" (The chiefess was born, the rain and wind, too, were born). Our kūpuna had an intimate relationship with the elements. They were keen observers of their environment, with all of its life-giving and life-taking forces. They had a nuanced understanding of the rains of their home. They knew that one place could have several different rains, and that each rain was distinguishable from another. They knew when a particular rain would fall, its color, duration, intensity, the path it would take, the sound it made on the trees, the scent it carried, and the effect it had on people (Akana and Gonzalez 2015: xv).

To the Native Hawaiians, no two rains are ever the same. Rain can be distinguished based on its intensity, the way it falls, and its duration, among other things. The following are a collection of rains that occur within Wailuku moku. Moʻolelo, ʻōlelo noʻeau (traditional sayings), mele, oli (chants), etc., associated with the particular rain name are also provided to give insight into the importance and cultural significance that the different types of rains have to the Native Hawaiian people.

4.3.2.1 Kiliʻoʻopu Rain

Kiliʻoʻopu rain is associated with Wailuku, Maui and is also the name of a wind.

<u>Rain of Waiheʻe, Maui</u>

Kuʻu kāne mai ka ua Kiliʻoʻopu o Waiheʻe	*My dear husband from the Kiliʻoʻopu rain of Waiheʻe*
ʻAuʻau ka ʻuhane i ka wai o Nīʻaukawa	*The spirit bathes in the water of Nīʻaukawa*

From a kanikau (lament) for Kamakaokalani (Akana and Gonzalez 2015: 83).

<u>Rain of Waikapū, Maui</u>

Ua Kiliʻoʻopu – Waikapū, Maui.
From a list of rain names and their descriptions (Akana and Gonzalez 2015: 84).

Rain of Wailuku, Maui

Ua Kiliʻoʻpu – Wailuku, Maui.

From a list of rain names and their descriptions (Akana and Gonzalez 2015: 84).

4.3.2.2 ʻUlalena Rain

ʻUlalena or Ulalenalena rain is probably related to Lena and is associated with Lilikoʻi and Piʻiholo, Maui. It is also found on other parts of Maui and on Kahoʻolawe, Oʻahu, and Kauaʻi. Also the name of a hill in Hāmākualoa, Maui. "ʻUla lena" means "yellowish-red" (Akana and Gonzalez 2015: 262).

Rain of Wailuku, Maui

Pau ʻole koʻu mahalo i ka laulā o Kamaʻomaʻo	*My admiration is endless for the expanse of Kamaʻomaʻo*
Ka hālana maikaʻi a Keālia	*The fine rising of the waters of Keālia*
Ka hemolele o ka ua ʻUlalena	*The perfection of the ʻUlalena rain*
Lena ka pua o ka māmane pala luhiehu i ka lā	*Yellow are the blossoms of the māmane, soft and lovely in the sun*

From a mele mākaʻikaʻi (travel chant) for ʻEmalani Kaleleonālani by Kaleipaʻihala (Akana and Gonzalez 2015: 267).

4.3.3 Wind Name

The name Iʻa-iki was identified for the Wailuku area. The name Iʻa-iki means "little fish." It is also said that the name of the wind of Wailuku is "Makani-lawe-malie, the wind that takes it easy" (Sterling 1998: 62).

43.4. Wai (Fresh Water)

Fresh water (wai) is of tremendous significance to Native Hawaiians. It is closely associated with a variety of Hawaiian gods. According to traditional accounts, Kāne and Kanaloa were the "water finders:" "Ka-ne and Kanaloa were the water-finders, opening springs and pools over all the islands, each pool known now as Ka-Wai-a-ke-Akua (The water provided by a god)" (Westervelt 1915: 38). Kāne is widely known to be closely associated with all forms of water, as outlined in the mele "He Mele No Kane."

There was no element more important or precious than water. There was no god more powerful than Kāne. Pua Kanahele recounts the oli "ʻO Kāne, ʻo wai ia aliʻi o Hawaiʻi?" and

notes of the oli: “The chant begins with Kāne and focuses on this deity as the connective force of all the poʻe akua, or god family. All the entities mentioned in each paukū, or verse, are a manifestation of Kāne” (2011: 24). The association between water and Kāne is logical considering certain interpretations of Hawaiian mythology identify Kāne as the most powerful of all the Hawaiian gods.

Further investigation into the relationship between Kāne and Pele would be appropriate and helpful. Some interpretations identify Kāne as Pele’s father (Westervelt 1915). A full analysis of the different perspectives on Pele and Kāne would be helpful to refining an approach in developing community education programs for geothermal energy and culture. A brief analysis is provided below.

He Mele No Kane asks:

E ui aku ana au ia oe,
Aia i hea ka Wai a Kane?
Aia i lalo, i ka honua, i ka Wai hu,
I ka wai kau a Kane me Kanaloa-
He waipuna, he wai e inu,
He wai e mana, he wai e ola,
E ola no, ea!

One question I ask of you:
Where flows the water of Kane?
Deep in the ground, in the gushing spring,
In the ducts of Kane and Kanaloa,
A well spring of water, to quaff,
A water of magic power- The water of life!
Life! O give us this life!

This mele and other mo’olelo are clear: Kāne is water. It is deeply valued among the Hawaiian people. The only exceptions may be mist, known to be associated with Lilinoa, and snow, associated with Poliahu. There is an extensive body of traditional knowledge about the expeditions of Kāne and Kanaloa during which Kāne drove his ʻōʻō (digging stick) into the earth in search of water.

There is heightened sensitivity regarding water in East Maui, where the project is located. Contemporaneous protections around water as a “public trust resource” extend back to the Kingdom, where the concept of owning water contradicted Hawaiian cultural values and traditions. Under the monarchy, control of water was reserved for use by the people who lived on and worked the land. The use of surface water was strictly controlled through the kapu system to ensure that all land tenants enjoyed an abundant availability of water. Farming, particularly kalo or taro, occurred regularly, especially in places with notably fertile lands like those found in the watersheds of East Maui. As early as 1839, the public use of water was codified by Kauikeaouli, Kamehameha III. His “Respecting Water for Irrigation” law stated: “In all places which are watered by irrigation, those farms which have no formally received a division of water, shall, when this new regulation respecting lands is circulated, be supplied in accordance with this law, the design of which is to correct in full all those abuses which men have introduced. All those farms which were formally denied a division of water, shall

receive their equal proportion. Those bounties which God has provided for the several places should be equally distributed, in order that there may be an equal distribution of happiness among all those who labor in those places" (Cited in *Reppun v. Board of Water Supply*, 656 P.2d 57 1982). This public right eventually found its way into existing law, where the Hawaii Water Code continues to recognize and protect traditional farming and mahi ʻai (farmers).

It is critical for this assessment to consider impacts to cultural practices, even when the practices may take place outside the project area if project activities within the APE have the potential to impact traditional practices and customs. In this particular case, it is appropriate to carefully consider the impact water usage may have on farmers and other practices within the watershed(s) from which the water for this project will be drawn. If the water usage potentially results in an allocation of water that diverts resources from cultural and/or traditionally uses, that potential impact should be considered.

4.3.3 Intangible Cultural Resources

It is important to note that Honua Consulting's unique methodology divides cultural resources into two categories: biocultural resources and built environment resources. We define biocultural resources as elements that exist naturally in Hawaiʻi without human contact. These resources and their significance can be shown, proven, and observed through oral histories and literature. We define built environment resources as elements that exist through human interaction with biocultural resources whose existence and history can be defined, examined, and proven through anthropological and archaeological observation. Utilizing this methodology is critical in the preparation of a CIA as many resources, such as those related to akua (Hawaiian gods), do not necessarily result in material evidence, but nonetheless are significant to members of the Native Hawaiian community.

Hawaiian culture views natural and cultural resources as being one and the same: without the resources provided by nature, cultural resources could and would not be procured. From a Hawaiian perspective, all natural and cultural resources are interrelated, and all natural and cultural resources are culturally significant. Kepā Maly, ethnographer and Hawaiian language scholar, points out, "In any culturally sensitive discussion on land use in Hawaii, one must understand that Hawaiian culture evolved in close partnership with its natural environment. Thus, Hawaiian culture does not have a clear dividing line of where culture ends and nature begins" (Maly 2001: 1).

4.3.3.1 ʻŌlelo Noʻeau

ʻŌlelo noʻeau are another source of cultural information about the area. ʻŌlelo noʻeau literally means "wise saying" and they encompass a wide variety of literary techniques and multiple layers of meaning common in the Hawaiian language. Considered to be the highest form of

cultural expression in old Hawaiʻi, ʻōlelo noʻeau bring us closer to understanding the everyday thoughts, customs, and lives of those that created them.

The ʻōlelo noʻeau presented here relate to Waikapū and the larger area of Wailuku. These ʻōlelo noʻeau are found in Pukui's *ʻŌlelo Noʻeau: Hawaiian Proverbs & Poetical Sayings* (1983). The number preceding each saying is provided.

1711 Ke inu aku la paha aʻu ʻĀlapa i ka wai o Wailuku.
My ʻĀlapa warriors must now be drinking the water of Wailuku.
Said when an expected success has turned into a failure. This was a remark made by Kalaniōpuʻu to his wife Kalola and son Kiwalaʻō, in the belief that his selected warriors, the ʻĀlapa, were winning in their battle against Kahekili. Instead they were utterly destroyed.

2300 Na wai ʻehā.
The four wai.
A poetic term for these places on Maui: Wailuku, Waiehu, Waiheʻe, Waikapū, each of which has a flowing water (wai).

2647 Pili ka hanu o Wailuku.
Wailuku holds its breath.
Said of one who is speechless or petrified with either fear or extreme cold. There is a play on luku (destruction). Refers to Wailuku, Maui.

2912 Wailuku i ka malu he kauwa.
Wailuku in the shelter of the valleys.
Wailuku, Maui, reposes in the shelter of the clouds and the valley.

4.3.3.2 Mele

Honua Consulting completed searches of mele written about the ahupuaʻa of Waikapūi.[8] Maui historian Inez Ashdown wrote in 1976 about the importance of mele:

> The natives of Hawaiʻi Neʻi saw the Creator in everything and the Haku Mele or Music Masters delighted in presenting the chants and songs, mele and oli, to inspire the people. Such mele tell of God's assistant spirits which, to the imaginative natives, represented the winds, rains, and so on. Each spirit of creation was depicted as male or female and was given a personality and a name indicative of purpose. Hence the name of the volcanic action creating

[8] It should be noted that there are numerous mele about the larger Wailuku area that have not been included in this assessment as they did not yield information closely associated with the project area.

> and cleansing the earth. She is beautiful, alluring, desirable. She also is unpredictable because she is temperamental and usually full of fiery emotions. She is an old woman asking help when she lies to test mortals, and woe betide anyone who is rude or inconsiderate of this form of an older person to whom respect and Aloha must be given (Ashdown 1976: 3).

This mele was written in the early 20th century about the central Maui region and recounts the wind of the area.

Waikapū – by James Kahele

Waikapō makani kokolo lio Makani houhou ʻili ʻIniʻiniki mālie	Waikapū has a swift blowing wind Wind that pierces the skin Gently pinching it
Wailuku makani lawe mālie Makani houhouʻili ʻIniʻiniki mālie	Wailuku has a gently blowing wind Wind that pierces the skin Gently pinching it
Waiʻehu makani hoʻeha ʻili Makani houhou ʻili ʻIniʻiniki mālie	Waiʻehu has a wind that pricks the skin Wind that pierces the skin Gently pinching
Waiheʻe makani kiliʻoʻopu Makani houhou ʻili ʻIniʻiniki mālie	Waiheʻe has a cool wind Wind that pierces the skin Gently pinching
Haʻina mai ana ka puana Makani houhou ʻili ʻIniʻiniki mālie	This ends my song Wind that pierces the skin Gently pinching

The following mele are traditional chants and songs. They also speak of the rich natural resources, like the winds and waters, that serve as inspiration for haku mele (composers) in the area.

I Waikapu Ke Aloha – Traditional (translated by Mary Kawena Pukui)

I Waikapu ke aloha Ka makani Kokololio Pili i ka poli nahenahe He ʻinikiniki malie	In Waikapu The gusty wind named Kokololio Held in warm arms Gently pinching

I Wailuki iho ʻoe
I ka piko aʻo Iao
Lihilihi o ka pua rose
He ʻinikiniki malie

I Waiʻehu iho ʻoe
Ka makani hoʻeha ʻili
Me ka ʻuhiwai aʻo uka
He ʻinikiniki malie

I Waiheʻe kaua
Ka makani Kiliʻoʻopu
Me ka wai aʻo Eleile
He ʻinikiniki malie

I Lahaina iho ʻoe
Ka makani Kauaʻula
Me ka malu ʻulu aʻo Lele
He ʻinikiniki malie

Haʻina mai ka puana
No na wai ʻeha
E hoʻi no e pili
He ʻinikiniki mâlie

You were in Wailuku
To the summit of Iao
Petals of the roses
Gently pinching

You were in Waiehu
The wind that pierces the skin
With the fog of the upland
Gently pinching

Both of us were in Waihee
With the wind named Kiliʻoʻopu
With the water of Eleile
Gently pinching

You were in Lahaina
With the Kauaʻula wind
Amid the shelter of the breadfruit
trees of Lele
Gently pinching

Here ends my song
Of the four waters
Return, let us be together
Gently pinching

Kololio Waikapū – Traditional (Translated by Kanani Kamai)

Kololio ka makani o Waikapū ia
Malu ana i ke ʻaoʻao Wailuku la
Na pili o kakae nā pua i mohala i ka pēlā
Kepaniwai aʻo ʻlao

Komo ana i ka ʻolu, Waiehu ia
Ka makani ka ahaaha lai ia o niua
Māʻeʻele ʻike anu, ahe kiu ka makani
Hoʻohaehae ana i ka Nāulu

Komo ana i ka olu, o ke Kiliʻoʻopu
Ka makani kaulana ia o ka ʻāina
Me ka wai huʻihuʻi, wai aʻo Eleile
Hoʻoipoipo ia e nā manu
Hoʻoipoipo ia e nā manu

The wind of Waikapū gusts
Wailuku is protected
Swiftly blowing gusts make the blooms
cuddle
Kepaniwai of 'Iao

The strong, cold wind penetrates Waiehu
The whirling wind pierces the stillness
The numbing cold of the strong,
northwesterly wind
The fury of the Nāulu wind with sudden
showers

The strong wind Kiliʻoʻopu is penetrating
The famous wind of the land
Co-mingled with cold water, the water of

Eleile
This makes the birds woo
The birds are making love

5.0 Traditional or Customary Practices Historically in the Study Area

In traditional (pre-western contact) culture, named localities served a variety of functions, informing people about: (1) places where the gods walked the earth and changed the lives of people for good or worse; (2) heiau or other features of ceremonial importance; (3) triangulation points such as koʻa (fishing markers) for fishing grounds and fishing sites (4) residences and burial sites; (5) areas of planting; (6) water sources; (7) trails and trail side resting places (oʻioʻina), such as a rock shelter or tree shaded spot; (8) the sources of particular natural resources/resource collections areas, or any number of other features; or (9) notable events which occurred at a given area. Through place names knowledge of the past and places of significance was handed down across countless generations. There is an extensive collection of native place names recorded in the moʻolelo (traditions and historical accounts) published in Hawaiian newspapers.

This is not intended to be a comprehensive list of all the practices that historically or contemporaneously occur in Waikapū. This is meant to show the range of traditional or customary practices that took place in the larger geographic extent.

5.1 Moʻolelo

Moʻolelo is the practice of storytelling and developing oral histories for the purpose of transmitting knowledge information and values intergenerationally. Moʻolelo are particularly critical in protecting and preserving traditional culture in that they are the primary form through which information was transmitted over many generations in the Hawaiian Islands and particularly in the Native Hawaiian community.

Storytelling, oral histories, and oration are widely practiced throughout Polynesia and important in compiling the ethnohistory of the area. The Native Hawaiian newspapers were particularly valued for their regular publication of different moʻolelo about native Hawaiian history. Were it not for the newspapers having the foresight to allow for the printing and publication of moʻolelo, far less information about the cultural history of the Hawaiian people would be available today.

There are numerous moʻolelo about Waikapū and the geographic extent. These moʻolelo are provided in Sections 3.2 (Cultural History of Central Maui).

5.2 Habitation

Hawaiians lived extensively throughout the islands. Handy, Handy, and Pukui (1991) identify how different kānaka and their ʻohana lived in accordance with what the authors termed "occupational contrasts" (286), meaning that based on occupation (i.e., planter or fisherman, for example), habitation systems differed. They describe, "The typical homestead or *kauhale*… consisted of the sleeping or common house, the men's house, women's eating house, and

storehouse, and generally stood in relative isolation in dispersed communities. It was only when topography or the physical character of an area required close proximity of homes that villages exist. There was no term for village. Kauhale meant homestead, and when there were a number of kauhale close together the same term was used. The old Hawaiians, in other words, had no conception of village or town as a corporate social entity. The terrain and the subsistence economy natural created the dispersed community of scattered homesteads" (284).

Historic Registered Map 940 (Figure 9) shows numerous land awards throughout the Waikapū area. Number land awards are also shown throughout the entire ahupuaʻa, demonstrating that traditional habitation occurred throughout the larger geographic extent.

5.3 Travel and Trail Usage

The ability to travel was essential to Hawaiians and enabled their sustainability. Travel, and the freedom to move throughout different areas, had different names, including huakaʻi, kaʻapuni, or kaʻahele. Traveling by sea had distinct names as well, like ʻaumoana. Traveling through the mountains was sometimes referred to as hele mauna. Travel, and moving throughout various places and regions was an essential practice and way of life in traditional Hawaiʻi.

The freedom to travel safely was so important that Kamehameha I would come to pass a well-known law protecting travelers, Ke Kānāwai Māmalahoe (The Law of the Splintered Paddle). It is explained by the William S. Richardson School of Law as follows:

> As a young warrior chief, Kamehameha the Great came upon commoners fishing along the shoreline. He attacked the fishermen, but during the struggle caught his foot in a lava crevice. One of the fleeing fishermen turned and broke a canoe paddle over the young chief's head. The fisherman's act reminded Kamehameha that human life was precious and deserved respect, and that it is wrong for the powerful to mistreat those who may be weaker.
>
> Years later when Kamehameha became ruler of Hawaiʻi, he declared one of his first laws, *Ke Kānāwai Māmalahoe* (the Law of the Splintered Paddle), which guaranteed the safety of the highways to all. This royal edict was law over the entire Hawaiian kingdom during the reign of Kamehameha the Great. Considered one of the most important *kānāwai* (royal edict), the law gave the Hawaiian people an era of freedom from violent assault (William S. Richardson School of Law 2021).

The kānāwai (law) reads:

E nā kānaka	O my people
E mālama ʻoukou i ke akua	Honor thy god

A e mālama hoʻi	Respect alike, the rights of
Ke kānaka nui a me kānaka iki	All men great and humble
E hele ka ʻelemakule	See to it that our aged,
Ka luahine, a me ke kama	Our women, and children
A moe i ke ala	Lie down to sleep by the roadside
Aʻohe mea nana e hoʻopilikia	Without fear of harm
Hewa no, make	Disobey, and die

The law would have such long-lasting resonance that it would be expressly incorporated into the Hawaiʻi State Constitution.[9]

As traveling through traditional trails was the primary means by which people traveled on land throughout most of Hawaiian history, the traditional trail system is particularly important throughout the Hawaiian Islands. Throughout the islands, there were numerous trails that allowed for people to access different locations. This trail system was critical not only for maintaining a healthy population and managing this population, but it was also important for the traditional economic system of bartering. The trail system allowed for different localized communities to engage and interact. This also allowed for the trade of goods throughout island communities. Maui was particularly fames for its extensive trail system that allowed for extensive travel and trade across the island.

5.4 Farming

Since poi was the staple food for Native Hawaiians, it was of the utmost priority for the first settlers to establish loʻi. Kalo's prominence in the Hawaiian diet derived from its nutritional value, but even more so from its mythological significance. According to Hawaiian traditions, the first human (male) was born from the taro plant:

> The first born son of Wakea and Papa was of premature birth and was given the name Haloa-naka. The little thing died, however, and its body was buried in the ground at one end of the house. After a while, a taro plant shot up from the child's body, the leaf of which was named lau-kapa-lili, quivering leaf; but the steam was given the name Haloa.
>
> After that another child was born to them, whom they called Haloa, from the stalk of the taro. He is the progenitor of all the peoples of the earth. (Malo 1951:244)

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

As discussed in **Section 3.2 (Cultural History of Central Maui) and 3.3 (Post-Contact Era in the Wailuku District)**, the area has an extensive history of farming that extends well back into the pre-European contact era. Ethnographic data also shows that Hawaiian families still continue to farm near the Project Area.

5.5 Traditional Clothing (Clothes Making, Dyeing, and Lei Making)

Kapa (commonly known as bark cloth) was the traditional material made through a traditional method of gathering, treating, and beating plant fibers, often, but not limited to, wauke (*Broussonetia papyrifera*) to make fabric that was used to make lole (clothing). Pacific and Hawaiian kapa was known for its wide range of colors and the application of watermarks.

One article describes the process for making kapa:

> The finest kapa came from the paper of the mulberry tree. These trees were cultivated on plantations and grew to heights of more than twelve feet. As the tree grew, the branches were nipped off along the main trunk, insuring a long piece of bark which was easily peeled from the tree.
>
> The manufacture of kapa was an important occupation for women. After the bark had been peeled from the tree, the inner bark was separated and soaked in sea water to make it soft and pulpy. The softened bark was placed on an anvil and beaten with a cylindrical wooden beater. The first beating separated the fibers and produced strips about eight or nine feet long and ten to fourteen inches wide. These strips could be dried and stored until needed. When needed, the strips were soaked in water, placed in layers between banana leaves, and left for about ten days to mature by "retting" which is the decomposition and removal of softened tissues, leaving the finer fibers. These partially decomposed layered strips were beaten a second time with specially carved four-sided beaters. The patterns carved on the beaters were functional as they produced the necessary characteristics in the kapa for its end use. These carved designs left the equivalent of a watermark on the kapa.
>
> Kapa which was to be extremely soft and pliable, such as that used for the malo or loincloth, was subjected to an additional softening process. This process, which produced a finely ribbed fabric, was done by dampening the cloth, stretching it over a grooved board, and running a wooden grooving tool along the indentations in the board. When the cloth dried, permanent ribs remained. The hand was very similar to our crinkle gauze of today (Furer 1981:109-110).

Hawaiians were skilled at utilizing plants and materials to dye their clothing and other materials. Different methods would be employed to hōʻawa, extract dye colors from their source material(s). These dyes would be placed in a cup, known as a kā kāpala. Even foreign

or exotic plants were utilized for this practice. Hawaiians used different words for the various types of dyeing activities and methods.

- We‘a – a red dye or to print or dye red
- Hili – bark dye, as hili kukui, hili kōlea, hili noni; also kapa dyed with bark or the name for dyeing with the use of bark
- Kūhili – to dye (or stain) by soaking in water containing mashed bark, such as used for nets; also mulberry bark before it is beat into kapa
- Kūpenu – to dye by dipping material
- Ki‘olena – to dye kapa
- Hōlei –native tree (*Ochorosia compta*) related to the hao (*Rauvolfia*), which yields a yellow dye for kapa
- Kīhe‘ahe‘a pala‘ā – dye made from the pala‘ā (Sphenomeria chinensis syn. chusana) fern; pala‘ā also references a kapa made from the māmaki (*Pipturus spp.*) bark which is then dyed a brownish-red with pala‘ā fern

Hawaiians also had a lexicon for the various colors that could be achieved through this traditional practice.

- ‘Ōlenalena – yellow
- Hili – Dark-brown dye made from bark
- Puakai – red
- Nao – dark red
- Pōkohukohu – color made from the noni (*Morinda citrifolia*) root
- ‘Ākala – color made from raspberry or thimbleberry juice
- ‘Ōma‘oma‘o – light green color made from ma‘o leaves

Similarly, lei making was a regular occurrence in traditional Hawaii. Anderson-Fung and Maly (2009) write about the traditional practice:

> In old Hawai‘i, lei could have important ceremonial functions, such as in religious offerings and for chiefly regalia, but lei were also enjoyed as personal adornment by Hawaiians of all levels of society. The ali‘i (chiefs) and the maka‘ainäna (the common people who tended the land) all wore lei. Even the akua (gods, deities, spirits), it was believed, sometimes wore lei when they walked the land in human form. The following observation by the French botanist Gaudichaud, who visited the islands in 1819, paints a picture of Hawai‘i as a place where the lei was an integral part of everyday life:
>
>> “It is indeed rare to encounter one of the natives of this archipelago who does not have an ornamental plant on his head or neck or some other part of his

> body…[The] women … change [the plants they wear] according to the seasons, [and for them] all the fragrant plants, all flowers, and even the colored fruits, serve as attire, one after another. …The young girls of the people, those of the island of Hawaiʻi especially, seem to be fond of the [kou, Cordia subcordata], a tree very abundant in all the cultivated areas… The young girls of the mountains, who live near the forests, give their preference to the flowers of the [Erythrina (wiliwili) and a species of Canavalia, called ʻawikiwiki], the lively color of which makes magnificent garlands. Such natural attire is much more rich, much more striking, than all the dazzling creations of the elegant European ladies."

> This account and others like it suggest that lei worn for personal adornment were fashioned from the favorite plant materials that were readily available and abundant in the lei maker's environment (4).

Lei making continues as an important practice today, as the making and giving of lei as an expression of aloha to loved ones still regularly occurs throughout the Hawaiian Islands. Practitioners of these crafts actively practice in the Waikapū ahupuaʻa, although there is no indicator that the Study Area is currently used for any of these practices.

5.6 Lāʻau Lapaʻau

Lāʻau lapaʻau is the practice of traditional Hawaiian medicine. For centuries, native Hawaiians relied upon the environment around them to provide them medicine. It is still actively taught and practiced today. Medicinal experts or healers have intimate knowledge about plants and other resources to cure ailments illnesses and sicknesses. Traditional medicine is practiced by native peoples and local communities around the world. Similarly, Native Hawaiians, over many generations, have learned how to properly care for, utilize, and prepare plants to maintain the community's health.

It was important to not only have plants and have access to plants but to ensure that these plants were healthy and in good condition. In the list of biological resources, plants with medicinal capacity and components are identified. These resources are cultural resources. They are critical to the ongoing practice of traditional medicine and healing within the Native Hawaiian community. There are still many traditional medicine practitioners in the Hawaiian community and throughout the Hawaiian Islands today. It is a practice that is still taught to the younger generation, and it is a practice that is still honored and utilized in many Hawaiian households throughout the state.

It was important that medicinal plants existed throughout the Hawaiian Islands so that when people traveled throughout different places on in the islands, they would always have access to the medicine they needed. In some cases, some plants were extremely rare, and, in those

cases, it was particularly important to make sure that these populations were well protected and well cared for. They are listed in Table 1.

Table 1. Hawaiian Gods Associated with Health, Healing and Medicine

Hawaiian gods associated with health, healing, and medicine (Pukui, 1971)
Hiʻiakaikapolio Pele
Lonopūhā
Maʻiola
Hiʻiakaikapuaʻenaʻena
Hauwahine
Hina
Hinaʻea
Hinalaulimukala
Kamakanuiʻahuʻilono
Kanaloa
Kū
Kūkeoloʻewa
Mauliola
ʻŌpeluhuikauhaʻailo

Maui has an active community of healing practitioners. These practitioners actively practice in the Wailuku district, although there is no indicator that the specific Study Area is currently used for any of these practices.

5.7 Kilo

Kilo are observational traditions and people who examine, observe, or forecast are identified as kilo and serve as traditional climate and weather experts. Kilo "references a Hawaiian observation approach which includes watching or observing [the] environment and resources by listening to the subtleties of place to help guide decisions for management and pono practices" (ʻĀuamo Portal 2021). The practice of kilo is seeing a resurgence on Hawaiʻi Island and in the Hawaiian Islands.

Kilo hōkū are traditional astronomers, or those who study the stars. A hale kilo or hale kilo hōkū were observatories or star observatories respectfully. Kilo makani were those who traditionally observed the winds. Kilo moana were traditionally oceanographers. Kilo ʻuhane were those who observed and communicated with spirits.

Traditionally the practice of kilo or observation was critical to the management of traditional Hawaiian landscapes. This practice is very closely tied to traditional or customary access as observers would require access to specific vistas viewsheds or areas in order to observe environmental phenomenon.

As illustrated in the proceeding section, Native Hawaiians created a wide range of terms for the environment and understanding the ecosystems around them. These terms were often quite specific, and many were tied closely to a specific geographic area. This level of specify illustrated the close kinship Hawaiians shared to their surrounding environment. The ability to observe and understand all elements of their ecosystem was essential to both the successful care of natural resources and the survival of the Hawaiian people.

The ability to effectively and accurately read weather phenomena was essential to the ability of Hawaiian people who farm, fish, navigate, and conduct any number of practices in a sustainable and successful manner. The knowledge Hawaiians acquired about their environment around them, including weather phenomena were the result of multi-generational observations that comprised an extensive body of information passed down through oral traditions. The following Hawaiians names and their descriptions of weather phenomena include words for clouds, rains, and winds that are utilized by kilo to help guide activities and practices:

ao akua – godly cloud, figurative representative of a rainbow.
ao loa – long cloud or high, distant cloud. Status cloud along the horizon.
ao ʻōnohi – cloud with rainbow, ʻōnohi, colors contained within it.
ao puaʻa – cumulus clouds of various sizes piled together, like a mother pig with piglets clustered around her. The Kona coast is famous for ao puaʻa, a sign of good weather and no impending storms.
ao pehupehu – continually growing cumulus typical of summer. Drifting with the tradewinds, these clouds pick up moisture and darken at their base, finally releasing their rain on the windward mountain cliffs.
hoʻomalumalu – sheltering cloud.
hoʻoweliweli – threatening cloud.
ānuenue – rainbow, a favorable omen.
ua loa – extended rainstorm.
ua poko – short rain spell.

5.8 Ceremonial Practices

The ceremonial practices of traditional Hawaiians are extensive. Throughout the course of Hawaii's history, traditional Hawaiians have integrated religious, spiritual, and ceremonial practices in their daily lifestyle. Traditional or customary practices are then not distinct ceremonial practices but rather a part of their way of life. Therefore, it is challenging to define in discrete terms ceremonial practices associated with traditional Hawaiian customs. For the purpose of this section, the ceremonial practices discussed here focus primarily on customs carried out by general populations of Hawaiians, as opposed to activities or rituals carried out by trained and recognized specialists, kahuna. Those practices are discussed in a separate section.

Ceremonial practices are incorporated throughout numerous, if not all, of the activities identified in this section. For example, there is a great level of ceremonial practice and ritual associated with the care of the dead, burial remains, and funerary objects. Native Hawaiians as with most Iindigenous people integrated ceremony into most of their practices especially those that occurred out in the natural landscape or related to their way of life. There was no specific site or materials required for ceremony *per se*.

Nonetheless, shrines were sometimes associated with ceremonial practices. Shrines for the purpose of this survey are distinct from heiau, which were places of worship. Again, the distinction is the nature in which these features or sites were created. Heiau required the advice and guidance of a kahuna, who would help aliʻi determine the best location in which to erect a heiau. Conversely, shrines were erected by makaʻāinana (working class) as part of their daily or occupational functions.

Makahiki is one example of a practice that has taken place prior to contact and continues post-contact and involves ceremonial elements. One of these elements is the akua loa, described by Malo as “the image of the Makahiki god, Lono-makua … This work was called ku-i-ke-pa-a” (Malo, 1951: 143). Further described by Malo:

> 22. This Makahiki idol was a stick of wood having a circumference of about ten inches and a length of about two fathoms. In form, it was straight and staff-like, with joints carved at intervals and resembling a horse’s leg; and it had a figure carved at its upper end.
>
> 23. A cross piece was tied to the neck of this figure, and to this cross piece, kea, were bound pieces of the edible pala[10] fern. From each end of this cross piece were hung feather lei that fluttered about, also feather imitations of the kaupu bird[11], from which all the flesh and solid parts had been removed.
>
> 24. The image was also decorated with a white tapa cloth made from wauke[12] kakahi[13], such as was grown at Kuloli[14]. … One end of this tapa was basted to the cross piece, from which it hung down in one piece to a length greater than that of the pole. The width of this tapa was the same as the length of the cross piece, about sixteen feet.

[10] Native fern (*Marattia douglasii)* used for medicinal purposes as well as in ceremony.
[11] Laysan albatross (*Diomedea immutabilis*), written with diacritical markings as kaʻupu.
[12] Paper mulberry (*Broussonetia papyrifera*)
[13] Meaning outstanding or of high quality, as in reference to the white kapa (tapa) made from these fibers.
[14] Likely a reference to the place in Pelekunu Valley at Kamalō, Molokaʻi, located between the peaks of Kaunuohua and Pēpēʻōpae.

> 25. The work of fabricating this image, I say, was called kuikepaa. The following night the chiefs and people bore the image in grand procession, and anointed it with cocoanut (sic) oil. Such was the making of the Makahiki god. It was called Lono-makua (father Lono), also the akua loa. This name was given it because it made the circuit of the land (Malo, 1951: 144-145).

The akua loa was taken to each ahupuaʻa. This custom was important to the care, stewardship, and worship of the gods. These practices were intimately tied to the proper care and sustainable stewardship of all cultural and natural resources. Ethnographic data indicates that such practices take place within the Project Area or Study Area.

As with many concepts of traditional Hawaiian living and practices, the contemporaneous concept of the kahuna has been largely influenced by Western thought. The roles and responsibilities of the kahuna are well explained by Professor Terry Kanalu Young in his text, *Rethinking the Native Hawaiian Past*, in which he writes:

> As recipients of hana lawelawe[15], the Aliʻi Nui were themselves serves of a sort. They were responsible for maintaining a positive spiritual relationship with the Akua through pono conduct. Pono was defined for individuals of that era within the context of a particular task specialty. Kahuna who functioned as experts in specific skill areas like medicinal healing, canoe building, or spiritual advising were consulted by leaders. The experts were looked to as responses for what was considered pono in their respective realms of knowledge (Young 1998).

Kahuna were critical to traditional Hawaiian lifeways as their extensive expertise helped to provide sound and strategic advice to aliʻi and other leaders on proper spiritual, cultural, and ecological management. There are numerous types of kahuna in Hawaiian traditions. including, but not limited to:

kahuna ʻanāʻanā - sorcerer who practices black magic and counter sorcery

kahuna aʻo - teaching preacher, minister, sorcerer.

kahuna hāhā - an expert who diagnoses, as sickness or pain, by feeling the body.

kahuna haʻiʻōlelo - preacher, especially an itinerant preacher.

kahuna hoʻohāpai keiki - medical expert who induced pregnancy.

[15] Hana lawelawe are defined by Young as "service tasks" by which kaukau aliʻi (lower ranked chiefs) served the Aliʻi Nui (high chiefs). These hana lawelawe were critical to the ability of the Aliʻi Nui to effective govern (Young 1989).

kahuna hoʻopiʻopiʻo - malevolent sorcerer, as one who inflicts illness by gesture.

kahuna hoʻoulu ʻai - agricultural expert.

kahuna hoʻoulu lāhui - priest who increased population by praying for pregnancy.

kahuna hui - a priest who functioned in ceremonies for the deification of a king.

kahuna kālai - carving expert, sculptor.

kahuna kālai waʻa - canoe builder.

kahuna kiʻi - caretaker of images, who wrapped, oiled, and stored them, and carried them into battle ahead of the chief.

kahuna kilokilo - priest or expert who observed the skies for omens.

kahuna lapaʻau - medical doctor, medical practitioner, healer. Lit., curing expert.

kahuna makani - a priest who induced spirits to possess a patient so that he might then drive the spirits out.

kahuna nui - high priest and councilor to a high chief; office of councilor.

kahuna poʻo - high priest.

kahuna pule - preacher, pastor, minister, parson, priest. clergyman. Lit., prayer expert.

kahuna pule kaʻahele - preacher

kahuna pule wahine - priestess

5.9 Haku Mele, Haku Oli, and Hula

This practice is related to the composition of song and chants. this is a practice that has existed for many centuries in the Hawaiian culture. When the Hawaiian culture primarily relied on an oral tradition to pass on knowledge and information, the ability to create songs and chants was essential to pass information from one generation to the next. As Donaghy (2013) notes, Hawaiians had hundreds of terms associated with this practice.

Songs and chants are largely influenced by the environment around them. As a pedagogical device it was important if not imperative that these songs or chants effectively captured data from the environment around the composer and passed on this information for others to utilize when managing natural resources. In a very real sense, the land and natural resources act as a muse for composers. The category of songs that provide information on or speak to

natural resources are called mele ʻāina (songs of the land). As shown in the previous section, there are numerous traditional chants and songs about the project area and its surrounding landscape.

Much like mele and oli, hula serves as a way of both honoring place and telling the story of place. Many hula, especially those based on mele ʻāina, require intimate understanding of the place where the mele was composed, including the natural elements of that ʻāina. Hula hālau will regularly take huakaʻi, or journeys, to visit and honor the place a particular mele speaks of. The ability to visit the place and learn about it is important to the practice of hula.

Hula, as well as mele or oli, are also offered as gifts to kupuna or gods. This practice also requires access to traditional sites. Associated with hula would have been the practices of lei making and the use of plants to dye clothing, both practices were identified through the ethnographic data collection. The ethnographic data illustrated a desire for a space for cultural resources in the area, specifically a hālau. Such a space would help cultural practices of the area to thrive.

6.0 Ethnographic Data

As discussed previously in **Section 2.6 (Ethnographic Methodology)**, information was collected from a wide range of individuals and sources. The findings of those efforts are discussed in this section. Ethnographic data is utilized to supplement the other research methods utilized. It is one in a range of research tools employed to gather information about the project area.

Honua Consulting was tasked with gathering information from individuals with lineal and cultural ties to the area and its vicinity regarding regional biocultural resources, potential impacts to these biocultural resources, and mitigation measures to minimize and/or avoid these impacts.

The bulk of the information available from practitioners and kūpuna were drawn from native testimonies and Hawaiian language sources and integrated into the cultural and historic overview section of this survey. Those sources, along with responses to this project, were considered when researching the traditional or customary practices discussed in a previous section. Interviews were conducted with five (5) individuals and additional moʻolelo from a sixth individual was included in this section. This data helped to identify additional resources and practices in the area; this information also helped to confirm research conducted for this report.

6.1 Interview with Ikaika Blackburn

Interviewer: Mathew Sproat
Interviewee: Ikaika Blackburn
Date: 3/18/2022
Location: via telephone

Biography

Mr. Blackburn is a firefighter. He was born and raised in Wailuku, Maui.

General Discussion

Mr. Blackburn is associated with the project area through his lifelong residency in Wailuku, Maui and Nā Wai ʻĒha.

Cultural Resources

Mr. Blackburn said that there are not existing cultural resources necessarily near the project area. The closest cultural resources are likely the Waikapū river and valley. He noted, however, that this project is located nearer Wailuku. Regarding iwi, Mr. Blackburn said he believes one could technically find iwi anywhere – so there is always a chance. However, he noted that there is a great need to develop more affordable housing.

Traditions and Customs

Mr. Blackburn said that he was not aware of any traditions or customs currently taking place in the project area.

Impacts

Mr. Blackburn noted that there is always a chance that iwi are uncovered during development. However, he stressed that there is also a great need for more affordable housing.

Mitigation Measures and Recommendations

Should iwi be uncovered in any situation, Mr. Blackburn recommended that they be treated respectfully. In other projects on Maui where they have found iwi, they block off the area and ensure it is known there is a burial. Preserving the burial in place would be the best option should iwi be uncovered.

Mr. Blackburn also noted that it would be great if a hālau could be provided, much in the same way that a community park is often part of a development. This could be a space for any type of cultural practices in the community.

6.2 Interview with Daryl Fujiwara

Interviewer: Mathew Sproat
Interviewee: Daryl Fujiwara
Date: 3/18/2022
Location: via telephone

Biography

Mr. Fujiwara does PR, marketing, and graphic design at an advertising firm. He has clients on Maui, other islands, and internationally. Mr. Fujiwara also works for a County Council Member. He was born and raised on the island of Maui, specifically Lāhainā. He currently lives in Wailuku.

Overview

As a lifelong resident of Maui and active community member, Mr. Fujiwara brings a helpful perspective and expertise on the cultural resources, traditions, and customs that exist in the project area. He does not believe that the project will negatively impact cultural resources, traditions, or customs.

General Discussion

Mr. Fujiwara is associated with the project area through his lifelong residency on Maui. He currently lives a few blocks away from the project site. In addition, Mr. Fujiwara's family owns a farm off one of the access roads along the Waikapū river – also close to the project site. Here, they farm kalo, and Mr. Fujiwara explained that the farm ran out of water until very recently. In addition to kalo, the family also raises chickens, pigs, and goats.

Mr. Fujiwara noted that the area has a special beauty. Waikapū was utilized to communicate with other parts of the islands through stories of different lava tubes in the area. The tubes also housed the bones of kupuna and aliʻi.

Cultural Resources

Mr. Fujiwara noted that there is a chance that there are iwi in or around the project site. He noted the sand dune complex in the area, which has recently had songs written for it, and houses the bones of warriors. He explained that there have been several recent mele composed about the area. Mr. Fujiwara did not list any other cultural resources known in the area. He explained that the area has been developed consistently over the years and is now mostly urban sprawl.

Traditions and Customs

As noted, Mr. Fujiwara explained that there is some farming in the area. He did note that there is an active group which takes care of the area, in general.

Impacts

Mr. Fujiwara explained that while the area is already quite developed, there is still a chance that the project could uncover iwi. Beyond this, Mr. Fujiwara explained that there could be a positive impact for the farms and project, since it is important that people live close to food production. He explained that this will become increasingly more important as we try to become more sustainable.

Mitigation Measures and Recommendations

Mr. Fujiwara noted that it is always important to observe protocol and ask for permission. If iwi are found, it is important that they are treated with respect. He believes that affordable housing is important for our communities, though, and is supportive of the project.

7.0 Findings and *Ka Paʻakai* Analysis

It has long been the law of the land that the State of Hawaiʻi has an "obligation to protect the reasonable exercise of customary and traditionally exercised rights of Hawaiians to the extent feasible" *Public Access Shoreline Hawaiʻi v. Hawaiʻi County Planning Commission ("PASH")* 79 Hawaiʻi 425, 450 n. 43, 903 P.2d 1246, 1271 n. 43 (1995). In 2000, in the *Ka Paʻakai* decision, the Court established a framework "to help ensure the enforcement of traditional and customary Native Hawaiian rights while reasonably accommodating competition private development interests." 94 Hawaiʻi 31, 35, 7 P.3d 1068, 1972 (2000). This analysis is used here to fulfill the goal of this CIA (Section 1.3).

It is also imperative to emphasize that the State may not delegate their obligations under the *Ka Paʻakai* decision to another party, including but not limited to the federal government. While the *Ka Paʻakai* decision was specific to a private developer, the facts of that case would be applicable to the situation at hand because the Court's reasoning for this decision and applicable precedent apply – the issue being that another entity would not have the same public accountability as the State. That is the case herein, the public accountability of the federal government is not equal to that of the State of Hawaiʻi. More specifically, the federal government is not bound to the obligations of the State as set forth under the Hawaiʻi State Constitution, which is the document from which the rights protected under *Ka Paʻakai* emanate.

Based on the guidelines set forth in *Ka Paʻakai*, the Hawaiʻi Supreme Court provided government agencies an analytical framework to ensure the protection and preservation of traditional and customary Native Hawaiian rights while reasonably accommodating competing private development, or other, interests. The Court has stated: "that in order to fulfill its duty to preserve and protect customary and traditional Native Hawaiian rights to the extent feasible, as required by Article XII, Section 7 of the Hawaiʻi Constitution, an administrative agency must, at minimum, make specific findings of fact and conclusions of law as to the following:

1) The identification of valued cultural, historical, or natural resources in the project area, including the extent to which traditional and customary Native Hawaiian rights are exercised in the project area.
2) The extent to which those resources—including traditional and customary Native Hawaiian rights—will be affected or impaired by the proposed action; and
3) The feasible action, if any, to be taken to reasonably protect Native Hawaiian rights if they are found to exist. *Ka Paʻakai*, 94, Hawaii at 47, 7 P.3d at 1084. Cited in *Matter of Contested Case Hearing Re Conservation District Use Application (CDUA) HA-3568 for the Thirty Meter Telescope at the Mauna Kea Science Reserve, Kaʻohe Mauka, Hāmākua, Hawaiʻi*, 143 Hawaiʻi 379, 431 P.3d 752 (2018) ("*Mauna Kea II*").

In order to complete a thorough CIA that complies with statutory and case law, it is necessary to fully consider information available from, and provided by, Native Hawaiian cultural practitioners and cultural descendants from the project area. From thorough research, data was extrapolated that provides a comprehensive look at the cultural resources in this ‘āina. Through this research, the factors from *State v Hanapi* are met. These factors are: “to establish that his or her conduct is constitutionally protected as a native Hawaiian right, he or she must show, at minimum, the following three factors. First, he or she must qualify as a “native Hawaiian” within the guidelines set out in PASH . . . [as] “those persons who are ‘descendants of native Hawaiians who inhabited the islands prior to 1778,’ … regardless of their blood quantum.” Second, once a defendant qualifies as a native Hawaiian, he or she must then establish that his or her claimed right is constitutionally protected as a customary or traditional native Hawaiian practice…. Finally, a defendant claiming his or her conduct is constitutionally protected must also prove that the exercise of the right occurred on undeveloped or “less than fully developed property.”” 89 Hawai‘i 177, 185-86, 970 P.2d. 485, 493-94 (1998).

The *Ka Pa‘akai* analysis is largely a legal analysis, as the applicable tests are legal standards. Therefore, a strong analysis is one conducted by someone with sufficient legal training. Additionally, at the core of a thoughtful *Ka Pa‘akai* analysis is a comprehensive understanding of traditional and customary practices. In breaking down the Court’s tests, it is important to the different elements that contribute to each test.

The first test - “The identification of valued cultural, historical, or natural resources in the project area, including the extent to which traditional and customary Native Hawaiian rights are exercised in the project area” – actually consists of two separate elements. First, the simple identification and existence of valued cultural, historical, or natural resources. These resources are tangible in nature. They can include sacred places, culturally valuable plants, or a religious or historic site. This survey how sought to exhaustively identified the great multitude of resources that may exist in the project area or adjacent areas.

As to this test, this survey shows there is a low potential to cultural resources to current exist within the project area. Cultural archaeological or biological resources that were potentially once in the area were likely long ago destroyed by intensive plantation use that began in the 19th century. Interviews indicate they are unaware of traditional cultural resources in the area that are used for traditional or customary practices but noted that it possible that there may be iwi (human burial remains) in the area. Only the ‘uhaloa remains in the area that would have once had numerous native plants through it.

The second element of this first test is access. Access requires two things to occur. One is the existence of a resource. Whether a plant, an animal, a place, or site, the resource must exist

in order a practitioner to access it. The second thing is physical access. This includes, but it is not limited to, the ability to physically access a plant, animal, site, or location associated with a particular practice. This can also include the traditional and customary route or path taken to access the resource. This can also include cultural protocols that existed in accessing a resource. These are often temporal, in that access protocols can be at a certain time of day or year. Makahiki would be a good example of a traditional custom that has specific cultural protocols associated with access. In the case of Makahiki, the custom takes place at a certain time of year.

Therefore, the first test under *Ka Paʻakai* should include not only a listing of resources, but the identification of ways in which those resources are accessed and utilized in association with a traditional and customary practice. There is no indicator that the Project Area is used for any access purposes.

Therefore, the second test – "The extent to which those resources—including traditional and customary Native Hawaiian rights—will be affected or impaired by the proposed action" – also looks at two separate elements. The first, does the proposed action and its alternatives have an adverse impact on the existence of resources? This would include the alteration, destruction, modification, or harm of sites, including biological resources, sacred places, burial sites, etc. It also includes a loss of species. Any adverse impact or harm to resources is alone an affect or impairment caused by the proposed action.

Under this element, adverse impacts to historic sites or culturally utilized plants would all be identified adverse impacts. Under this same element, any indirect or cumulative effects would create an adverse impact under *Ka Paʻakai* if those actions harmed resources.

In addition to this, any action that impacts traditional and customary access to resources, even if there is not direct adverse impact to the resource itself, would result in an affect or impairment resulting from the proposed action. Therefore, the limitations on access that could result from development or use of the project area could create an adverse impact under *Ka Paʻakai.*

The only plant in the area identified to have any cultural use is the ʻuhaloa, which is commonly and widely found throughout the islands. Therefore, while the project will like impact the individual ʻuhaloa in the area, this would not constitute an adverse effect under *Ka Paʻakai* because of the wide availability of this plant to practitioners in the larger area.

The ʻōpeʻapeʻa is also found in the area, but these animals do not have known contemorpaneous cultural use. Due to state and federal laws, collection of this species is prohibited, which includes cultural takings and uses. Therefore, since the species cannot be otherwise used, any potential impact to individual bats would not constitute an impact to

traditional or customary practices, since there are none associated with this species. Nonetheless, potential impacts to the species could be an adverse effect to practitioners who consider the species sacred or significant.

The third part of the *Ka Pa‘akai* framework aims to identify "[t]he feasible action, if any, to be taken to reasonably protect Native Hawaiian rights if they are found to exist." Determining whether or not action has been suitably "feasible" is a matter for the State. These feasible actions could include continued access to the project as needed to conduct cultural practices.

As potential adverse effects can be avoided through the implementation of best management practices, specifically to the ‘ōpe‘ape‘a, the third part of the *Ka Pa‘akai* framework becomes moot, as there are no adverse effects to cultural resources or practices anticiapted for this project.

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8.0 Conclusion

This ethnographic survey investigated potential traditional or customary practices that occur within the proposed project area. This survey found that while the project area may have used for traditional habitation, farming, and gathering, much of those activities stopped as land ownership changed in the area and the project area was utilized for modern agricultural activities.

Waikapū is an important region for traditional and customary practices, and there are many Hawaiian families that continue to live in the area. Practitioners identified plants with culturally important that grow in the project area, but these plants are common and can be easily found in the larger region. There is no adverse impact to the practitioners‘ ability to access these plants anticipated to result from the project.

None the less, it would be important for the project to implement best management practices recommended from the biological assessment and archaeological and/or cultural monitoring during the construction of the project. It is also advised to continue to work closely with the community to ensure there are no unintended adverse effects and that practitioners have a means of quickly contacting the project applicant with questions or concerns should any arise.

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Appendix I: Glossary of Hawaiian Terms

The following list of terms were used throughout this report. All definitions were compiled using Pukui and Elbert's *Hawaiian Dictionary* (1986).

Ahupuaʻa	Land division usually extending from the uplands to the sea, so called because the boundary was marked by a heap (ahu) of stones surmounted by an image of a pig (puaʻa), or because a pig or orther tribute was laid on the altar as tax to the chief.
ʻĀina	Land, earth.
Akua	1. God, goddess, spirit, ghost. 2. Divine, supernatural, godly.
Ala	Path, road, trail.
Aliʻi	1. Chief, chiefess, ruler, monarch. 2. Royal, regal. 3. To act as chief, reign.
ʻAumakua	Family or personal gods, deified ancestors who might assume the shape of sharks, owls, hawks, dogs, plants, etc. A symbiotic relationship existed; mortals did not harm or eat them, and the ʻaumakua warned or reprimanded mortals in dreams, visions, and calls.
ʻAumākua	Plural of ʻaumakua.
ʻAuwai	Irrigation ditch, canal.
Haku mele	Poet, composer; to compose song or chant.
Hālau	1. Long house, as for canoes or hula instruction; meeting house. 2. Large, numerous; much.
Hale	House, building, institution, lodge, station, hall.
Hale pili	House thatched with pili grass.
Heiau	Pre-Christian place of worship, shrine. Some heiau were elaborately constructed stone platforms, other simple earth terraces.
Hula	A Polynesian dance form accompanied by chant or song.
ʻIli	Land section, next in importance to ahupuaʻa and usually a subdivision of an ahupuaʻa.
ʻIli kūpono	A nearly independent ʻili land division within an ahupuaʻa, paying tribute to the ruling chief and not to the chief of the ahupuaʻa. Transfer of the ahupuaʻa from one chief to another did not include the ʻili kūpono located within its boundaries.
Iwi	Bone, carcass. The bones of the dead, considered the most cherished possession, were hidden, and hence there are many figurative expressions with iwi meaning life, old age.
Kalo	Taro (*Colocasia esculenta*), a kind of aroid cultivated since ancient times for food, spreading wildly from the tropics of the Old World. In Hawaiʻi, taro has been the staple from earliest times to the present, and

	here its culture developed greatly, including more than 300 forms. All parts of the plant are eaten, its starchy root principally as poi, and its leaves as lūʻau.
Kanaka	Human being, man, person, individual, party, mankind, population.
Kānaka	Plural of kanaka.
Kāne	Male, husband, male sweetheart, man; brother-in-law of a woman.
Kanikau	1. Dirge, lamentation, chant of mourning, lament. 2. To chant, wail, mourn.
Kapu	1. Taboo, prohibition. 2. Special privilege or exemption from ordinary taboo. 3. Sacredness, prohibited, forbidden, sacred, holy, consecrated. 4. No trespassing, keep out.
Kuleana	Right, privilege, concern, responsibility, title, business, property, estate, portion, jurisdiction, authority, liability, interest, claim, ownership, tenure, affair, province.
Kumu	Teacher, tutor, manual, primer, model, pattern.
Kumu hula	Hula teacher.
Kupuna	Grandparent, ancestor, relative or close friend of the grandparent's generation, grandaunt, granduncle.
Kūpuna	Plural of kupuna.
Limu	A general name for all kinds of plants living under water, both fresh and salt, also algae growing in any damp place in the air, as on the ground, on rocks, and on other plants; also mosses, liverworts, lichens.
Loʻi	Irrigated terrace, especially for taro, but also for rice and paddy.
Loko iʻa	Traditional Hawaiian fishpond.
Lua	A type of dangerous hand-to-hand fighting in which the fighters broke bones, dislocated bones at the joints, and inflicted severe pain by pressing on nerve centers. There was much leaping, and (rarely) quick turns of spears. Many of the techniques were secret. Lua holds were named. Lua experts were bodyguards to chiefs.
Mahi ʻai	Farmer, planter; to farm, cultivate; agricultural.
Makai	On the seaside, toward the sea, in the direction of the sea.
Māla	Garden, plantation, patch, cultivated field, as māla ʻai, māla kalo, māla kō, māla kūlina.
Mālama	To take care of, tend, attend, care for, preserve, protect, beware, save, maintain.
Manaʻo	Thought, idea, belief, opinion, theory, thesis, intention, meaning, suggestion, mind, desire, want; to think, estimate, anticipate, expect, suppose, mediate, deem, consider.
Mauka	Inland, upland, towards the mountain.
Mele	1. Song, anthem, or chant of any kind. 2. Poem, poetry. 3. To sing, chant.
Mele mākaʻikaʻi	Travel chant.

Mōʻī	King, sovereign, monarch, majesty, ruler, queen.
Moku	1. District, island, islet, section, forest, grove, clump, fragment. 2. To be cut, severed, amputated, broken in two.
Moʻo	Lizard, reptile of any kind, dragon, serpent.
Moʻolelo	Story, tale, myth, history, tradition, literature, legend, journal, log, yard, fable, essay, chronicle, record, article.
Moʻowahine	Female lizard deity.
Nīʻau-piʻo	Offspring of the marriage of a high-born brother and sister, or half-brother and half-sister.
ʻOhana	Family, relative, kin group; related.
ʻŌlelo noʻeau	Proverb, wise saying, traditional saying.
Oli	Chant that was not danced to, especially with prolonged phrases chanted in one breath, often with a trill at the end of each phrase; to chant thus.
ʻŌʻō	Digging stick, digging implement, spade.
ʻŌpeʻapeʻa	Hawaiian bat (*Lasiurus cinereus semotus*)
Pae ʻāina	Group of islands, archipelago.
Piʻo	Marriage of full brother and sister of nīʻaupiʻo rank, presumably the highest possible rank. Their offspring had the rank of naha, which is less than piʻo but probably more than nīʻaupiʻo. Later piʻo included marriage with half-sibling.
Pueo	Hawaiian short-eared owl (*Asio flammeus sandwichensis*), regarded often as a benevolent ʻaumakua.
Wai	Water, liquid or liquor of any kind other than sea water.
Wahi pana	A sacred and celebrated/legendary place.
Wahine	Woman, lady, wife; sister-in-law, female cousin-in-law of a man.
Wao	1. Realm. 2. A general term for inland region usually forested but not precipitous and often uninhabited.