
**Ka Pa‘akai Analysis for
Honouliuli Wastewater Treatment Plant
Secondary Treatment Project
Honouliuli Ahupua‘a, ‘Ewa District, O‘ahu
TMKs: [1] 9-1-013:007, 9-1-069:003 and 004**

**Prepared for
R.M. Towill**

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Kailua, Hawai‘i
(Job Code: HONOULIULI 174)**

October 2019

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Management Summary

Reference	Ka Pa'akai Analysis for the Honouliuli Wastewater Treatment Plant Secondary Treatment
Date	October 2019
Project Number(s)	Cultural Surveys Hawai'i, Inc. (CSH) Job Code: HONOULIULI 174
Agencies	State of Hawai'i, Land Use Commission (LUC)
Land Jurisdiction	City and County of Honolulu
Project Proponent	City and County of Honolulu Department of Environmental Services
Project Location	The project area consists of the existing 51.33-acre Honouliuli Wastewater Treatment Plant (WWTP) (TMK: [1] 9-1-013:007) and the adjacent 48.4 acres of City and County of Honolulu (CCH) land (TMK: [1] 9-1-069:003) which combine for a total of 99.73 acres. Within the project area, the subject State Land Use (SLU) Boundary Amendment Application petition area consists of a 25.095-acre portion of Parcel 003 and the entire 2.702-acre area of Parcel 004, which are located in the SLU Agricultural District. The SLUDBA proposes to amend the SLU boundary to include these areas in the SLU Urban District. The project area is depicted on a 1998 Ewa U.S. Geological Survey (USGS) 7.5-minute topographic quadrangle.
Project Description	<p>The CCH Department of Environmental Services (ENV) plans to expand the Honouliuli WWTP into the CCH-owned land abutting the north and east boundaries of the existing WWTP facility. The proposed expansion will accommodate construction of secondary treatment and support facilities required to comply with the 2010 Consent Decree, now referred to as the First Amended Consent Decree (FACD), between the CCH, the State of Hawai'i Department of Health (DOH) and the Environmental Protection Agency (EPA).</p> <p>In addition to the secondary treatment facilities, the ENV intends to relocate eight non-process support facilities from Sand Island WWTP and other WWTP locations onto TMK: [1] 9-1-069:003. The non-process support facilities include the Central Laboratory, Central Warehouse, Central Shop, Regional Maintenance, Administration Building, Covered Parking/Equipment Storage, Collection System Maintenance (CSM) Debris Drying Facility, and Truck Wash. Three of these facilities currently located at the Sand Island WWTP—the Central Laboratory, Central Warehouse, and Central Shop Building—are to be relocated to the Honouliuli WWTP by 2022 in order to create sufficient space at the Sand Island WWTP to construct secondary treatment facilities stipulated in the EPA Consent Decree. The remaining non-process support facilities will be relocated at a future undetermined date and are not subject to Consent Decree requirements.</p>

Project Acreage	27.797 acres
Document Purpose	<p>This Ka Pa‘akai Analysis was prepared to comply with the State of Hawai‘i’s environmental review process under Hawai‘i Revised Statutes (HRS) §343, which requires consideration of the proposed project’s potential effect on cultural beliefs, practices, and resources. The Constitution of the State of Hawai‘i makes clear that the state and its agencies are bound by a fiduciary duty to “protect all rights, customarily and traditionally exercised for subsistence, cultural and religious purposes and possessed by ahupua‘a tenants who are descendants of native Hawaiians who inhabited the Hawaiian Islands prior to 1778” (Hawai‘i State Constitution, Article XII, Section 7).</p> <p>Protections for <i>ahupua‘a</i> (traditional land division usually extending from the uplands to the sea) or native tenants, had been set forth far before the ratification of the State Constitution. Recognizing the challenges of a Western system of private landownership, in which the appurtenant rights of native tenants had not yet been codified into law, the Hawaiian Privy Council, on 19 October 1849, adopted resolutions to protect the rights of the <i>maka‘āinana</i> (people that attend the land). The Kuleana Act of 1850, comprised of seven articles, confirmed and protected the rights of native tenants. Article 7 established access to roads, water sources, and other natural resources:</p> <p style="padding-left: 40px;">When the landlords have taken allodial titles to their lands, the people on each of their lands, shall not be deprived of the right to take firewood, house timber, aho cord, thatch, or ti leaf, from the land on which they live, for their own private use, should they need them, but they shall not have a right to take such articles to sell for profit. They shall also inform the landlord or his agent, and proceed with his consent. The people also shall have a right to drinking water, and running water, and the right of way. The springs of water, and running water, and roads shall be free to all, should they need them, on all lands granted in fee simple: Provided, that this shall not be applicable to wells and water courses which individuals have made for their own use. [5 August 1850, Territory of Hawaii 1925:2112]</p> <p>In 1992, the State of Hawai‘i Supreme Court upheld these rights under HRS §7-1, amending it to include “native Hawaiian rights . . . may extend beyond the <i>ahupua‘a</i> in which a native Hawaiian resides where such rights have been customarily and traditionally exercised in this manner” (Pele Defense Fund v. Paty, 73 Haw. 578, 620, 837 P.2d 1247, 1272 91992 cited in Dagher and Dega 2017:5).</p> <p>Act 50, enacted in 2000 with House Bill (HB) 2895, recognizes the importance of Native Hawaiian culture in defining the unique quality of</p>

	<p>life in Hawai'i. The act amended the definition of "significant effect" to include,</p> <p>... the sum of effects on the quality of the environment, including actions that irrevocably commit a natural resource, curtail the range of beneficial uses of the environment, are contrary to the State's environmental policies or long-term environmental goals as established by law, or adversely affect the economic [or] welfare, social welfare[.], or cultural practices of the community and State. [H.B. 2895, Act 50, 2000]</p> <p>Act 50 also requires that Environmental Impact Statements and Environmental Assessments "include the disclosure of the effects of a proposed action on the cultural practices of the community and the State."</p> <p>Through document research and cultural consultation efforts, this analysis provides information compiled to date pertinent to the assessment of the proposed project's potential impacts to cultural beliefs, practices, and resources (pursuant to the Office of Environmental Quality Control's <i>Guidelines for Assessing Cultural Impacts</i>) which may include traditional cultural properties (TCPs). These TCPs may be significant historic properties under State of Hawai'i significance Criterion e, pursuant to Hawai'i Administrative Rules (HAR) §13-275-6 and §13-284-6. Significance Criterion e refers to historic properties that</p> <p>have an important value to the native Hawaiian people or to another ethnic group of the state due to associations with cultural practices once carried out, or still carried out, at the property or due to associations with traditional beliefs, events or oral accounts—these associations being important to the group's history and cultural identity. [HAR §13-275-6 and §13-284-6]</p> <p>In 2000, the State of Hawai'i Supreme Court provided an analytical framework "to effectuate the State's obligation to protect native Hawaiian customary and traditional practices while reasonably accommodating competing private [property] interests" (<i>Ka Pa'akai O Ka 'Aina v. Land Use Commission</i>). When reviewing land use applications, state and county agencies must independently assess: 1) the identity and scope of valued cultural, historical, or natural resources in the petition area, including the extent to which traditional and customary Native Hawaiian rights are exercised in the petition area; 2) the extent to which those resources—including traditional and customary Native Hawaiian rights—will be affected or impaired by the proposed action; and 3) the feasible action, if any, to be taken by the</p>
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	<p>LUC to reasonably protect native Hawaiian rights if they are found to exist.</p> <p>The document is intended to support a State Land Use District (SLUD) Boundary Amendment petition for this project.</p>
Results of Background Research	<p>Background research for this analysis yielded the following results, presented in approximate chronological order:</p> <ol style="list-style-type: none"> 1. The 'Ewa plains, south of the Wai'anae mountain range consist largely of limestone and alluvial deposits pockmarked with karsts formed by the dissolution of limestone by underground fresh water. 2. Honouliuli is the largest <i>ahupua'a</i> in the <i>moku</i> (district) of 'Ewa. One translation of the name for this district is given as "unequal" (Saturday Press, 11 August 1883). Others translate the word as "strayed" and associate it with the legends of the gods Kāne and Kanaloa. 3. Generally, Honouliuli was described as very hot and dry. Evidence for drought-like conditions are further supported by the relative lack of traditional rain names associated with Honouliuli Ahupua'a. The Nāulu rain is the only known associated rain name for Honouliuli. Due to the lack of rainwater, freshwater resources were accessed via a karstic system. 4. In traditional Hawaiian times, the areas of exposed coral (Pleistocene limestone) outcrop were undoubtedly more extensive. According to McAllister (1933), holes and pits in the coral were generally accessed for water, while larger pits, often containing soil, were used for cultivation. 5. Several places on the 'Ewa coastal plain are associated with <i>ao kuewa</i>, the realm of the homeless souls. The plains of Kaupe'a is where ghosts wandered among the <i>wiliwili</i> (<i>Erythrina sandwicensis</i>) trees to catch night moths (<i>pulelehua</i>) and spiders (<i>nanana</i>) for food (<i>Ke Au Hou</i>, 12 July 1911 in Sterling and Summers 1978). The plains of Kānehili were also associated with wandering souls as illustrated in a lament on the death of Kahahana (Fornander 1919:6:297). 6. A cross-<i>ahupua'a</i> (east-west) trail that bordered Pearl Harbor, passed through Honouliuli north of Pu'uokapolei, and continued along the coast to Wai'anae following the route of the modern Farrington Highway. A <i>mauka-makai</i> (mountains-sea; north-south) trail branched off the cross-<i>ahupua'a</i> trail into two offshoots which led to the settlements of Kūalaka'i and One'ula which are located along the southern coast. Early historic maps show the <i>mauka-makai</i> trail which led to One'ula crossed through the petition area, however, today no remnants of the

	<p>trail remain within the project area and petition area, as well as, <i>mauka</i> and <i>makai</i> of the area.</p> <ol style="list-style-type: none"> 7. 'Ewa Moku was also a political center and home to many chiefs in its day. Oral accounts of <i>ali'i</i> (royalty) recorded by Hawaiian historian Samuel Kamakau date back to at least the twelfth century. <i>Ali'i</i> associated with Honouliuli and greater 'Ewa Moku included Kākuhihewa, Keaunui, Lakona, Mā'ilikūhahi, and Kahahana. 8. In 1855, the Land Commission awarded all of the unclaimed lands in Honouliuli, 43,250 acres, to Miriam Ke'ahikuni Kekau'ōnohi (Royal Patent #6971 in 1877; Parcel #1069 in the Land Court office, Land Commission Award [LCA] 11218), a granddaughter of Kamehameha I, and the heir of Kalanimōkū, who had been given the land by Kamehameha after the conquest of O'ahu (Indices of Awards 1929; Kame'eleihiwa 1992). Kekau'ōnohi was one of Liholiho's (Kamehameha II's) wives, and after his death, she became the wife of Chief Levi Ha'alelea. Upon her death on 2 June 1851, all her property passed to her husband and his heirs. In 1864, Ha'alelea died, and his second wife, Anadelia Amoe, transferred ownership of the land to her sister's husband John Coney (Yoklavich et al. 1995:16). 9. With the increasing foreign interests on O'ahu Island during the last half of the nineteenth century, an array of agricultural enterprises were attempted. In 1877, James Campbell purchased most of Honouliuli Ahupua'a for a total of \$95,000. 10. By 1889, the Ewa Plantation Company was established and lands throughout Honouliuli were designated for sugarcane cultivation. Sugar production exploded with the successful drilling of an artesian well by James Campbell on the 'Ewa Plain. By 1930, Ewa Plantation had drilled 70 artesian wells to irrigate cane lands (Ho'okuleana 2014). 11. The early twentieth century saw the lands of Honouliuli heavily utilized by both civilians and the U.S. military for transportation. The Barbers Point Military Reservation was established in 1921.
Results of Community Consultation	<p>CSH previously conducted cultural impact assessments within the project area in 2007 and 2011 (Souza et al. 2007 and Cruz et al. 2011). During the consultation process for these studies, in-person interviews were conducted with numerous members of the community to document their <i>mana'o</i> (thoughts, opinions) regarding cultural resources within the project area. In May 2019, CSH reached out to participants in these previous cultural studies to notify them about the Ka Pa'akai Analysis for the proposed Honouliuli Wastewater Treatment Plant (WWTP) Secondary Treatment project and follow up with them regarding their <i>mana'o</i> on cultural resources and practices within the</p>

	<p>petition area. CSH also reached out to community members who were referred to CSH by the Office of Hawaiian Affairs (OHA) and the State Historic Preservation Division (SHPD). Consultation was received from community members as follows:</p> <ol style="list-style-type: none"> 1. Shad Kāne, member of the Kapolei Hawaiian Civic Club, Chair of the O'ahu Council of Hawaiian Civic Clubs Committee on the Preservation of Historic Sites and Cultural Properties, Ali'i Ai Moku of the Kapuāiwa Chapter of the Royal Order of Kamehameha Ekahi, and 'Ewa Moku Representative on the State Aha Moku Advisory Committee. 2. Nettie Tiffany, <i>Kahu</i> of Lanikūhonua and former O'ahu Island Burial Council member, 'Ewa District
Ka Pa'akai Analysis	<p>In <u>Ka Pa'akai v. Land Use Commission</u>, 94 Hawai'i 31, 74, 7 P.3d 1068, 1084 (2000), the Court held the following analysis also be conducted:</p> <ol style="list-style-type: none"> 1. The identity and scope of valued cultural, historical, or natural resources in the petition area, including the extent to which traditional and customary native Hawaiian rights are exercised in the petition area; 2. The extent to which those resources—including traditional and customary native Hawaiian rights—will be affected or impaired by the proposed action; and 3. The feasible action, if any, to be taken by the LUC to reasonably protect native Hawaiian rights if they are found to exist. <p>This analysis includes:</p> <ol style="list-style-type: none"> 1. Practices which were undertaken in the past; 2. Practices which were undertaken in the past which continue to the present day; and 3. Practices which may be undertaken in the future which may or may not have been undertaken in the past. <p>Based on information gathered from the cultural and historical background, and the community consultation, culturally significant resources have been identified within the <i>ahupua'a</i>. Although not within the petition area, documentation and testimony indicates that traditional and customary Native Hawaiian rights are possessed and currently being exercised within the <i>ahupua'a</i> by <i>ahupua'a</i> tenants who are descendants of native Hawaiians who inhabited the Hawaiian Islands prior to 1778 (Hawai'i State Constitution, Article XII, Section 7). While no cultural resources or practices, were identified as currently existing within the petition area, the <i>ahupua'a</i> of Honouliuli maintains a rich cultural history</p>

	<p>in the exercising of traditional and customary Native Hawaiian rights within the project <i>ahupua'a</i>.</p> <p>The proposed action will not affect or impair any ongoing traditional and customary Native Hawaiian rights exercised in the <i>ahupua'a</i> in which the petition area is located.</p> <p>Therefore, the information provided in the Ka Pa'akai Analysis demonstrates that the proposed project will not have any adverse effect on traditional and customary Native Hawaiian rights within the <i>ahupua'a</i>. Under the Ka Pa'akai Case, the required analysis therefore ends after the determination that there are no known valued cultural, historical, or natural resources and no known traditional and customary native Hawaiian rights exercised in the petition area.</p>
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Section 1 Introduction

1.1 Project Background

At the request of R.M. Towill, Cultural Surveys Hawai‘i (CSH) has prepared this Ka Pa‘akai Analysis for the Honouliuli Wastewater Treatment Plant Secondary Treatment project, Honouliuli Ahupua‘a, ‘Ewa District, O‘ahu, TMKs: [1] 9-1-013:007, 9-1-069:003 and 004. The project area consists of the existing 51.33-acre Honouliuli Wastewater Treatment Plant (WWTP) (TMK: [1] 9-1-013:007) and the adjacent 48.4 acres of City and County of Honolulu (CCH) land (TMK: [1] 9-1-069:003) which combine for a total of 99.73 acres. Within the project area, the subject State Land Use (SLU) Boundary Amendment Application petition area consists of a 25.095-acre portion of Parcel 003 and the entire 2.702-acre area of Parcel 004, which are located in the SLU Agricultural District. The SLUDBA proposes to amend the SLU boundary to include these areas in the SLU Urban District. The project area is depicted on a 1998 Ewa U.S. Geological Survey (USGS) 7.5-minute topographic quadrangle (Figure 1), an aerial map (Figure 2), and tax map plat (Figure 3).

The CCH Department of Environmental Services (ENV) plans to expand the Honouliuli WWTP into the CCH-owned land abutting the north and east boundaries of the existing WWTP facility. The proposed expansion will accommodate construction of secondary treatment and support facilities required to comply with the 2010 Consent Decree, now referred to as the First Amended Consent Decree (FACD), between the CCH, the State of Hawai‘i Department of Health (DOH), and the Environmental Protection Agency (EPA).

In addition to the secondary treatment facilities, the ENV intends to relocate eight non-process support facilities from Sand Island WWTP and other WWTP locations onto TMK: [1] 9-1-069:003. The non-process support facilities include the Central Laboratory, Central Warehouse, Central Shop, Regional Maintenance, Administration Building, Covered Parking/Equipment Storage, Collection System Maintenance (CSM) Debris Drying Facility, and Truck Wash. Three of these facilities currently located at the Sand Island WWTP—the Central Laboratory, Central Warehouse, and Central Shop Building—are to be relocated to the Honouliuli WWTP by 2022 in order to create sufficient space at the Sand Island WWTP to construct secondary treatment facilities stipulated in the EPA Consent Decree. The remaining non-process support facilities will be relocated at a future undetermined date and are not subject to Consent Decree requirements.

1.2 Document Purpose

This Ka Pa‘akai Analysis was prepared to comply with the State of Hawai‘i’s environmental review process under Hawai‘i Revised Statutes (HRS) §343, which requires consideration of the proposed project’s potential effect on cultural beliefs, practices, and resources. The Constitution of the State of Hawai‘i makes clear that the state and its agencies are bound by a fiduciary duty to “protect all rights, customarily and traditionally exercised for subsistence, cultural and religious purposes and possessed by ahupua‘a tenants who are descendants of native Hawaiians who inhabited the Hawaiian Islands prior to 1778” (Hawai‘i State Constitution, Article XII, Section 7).

Protections for *ahupua‘a* (traditional land division usually extending from the uplands to the sea) or native tenants had been set forth far before the ratification of the State Constitution.

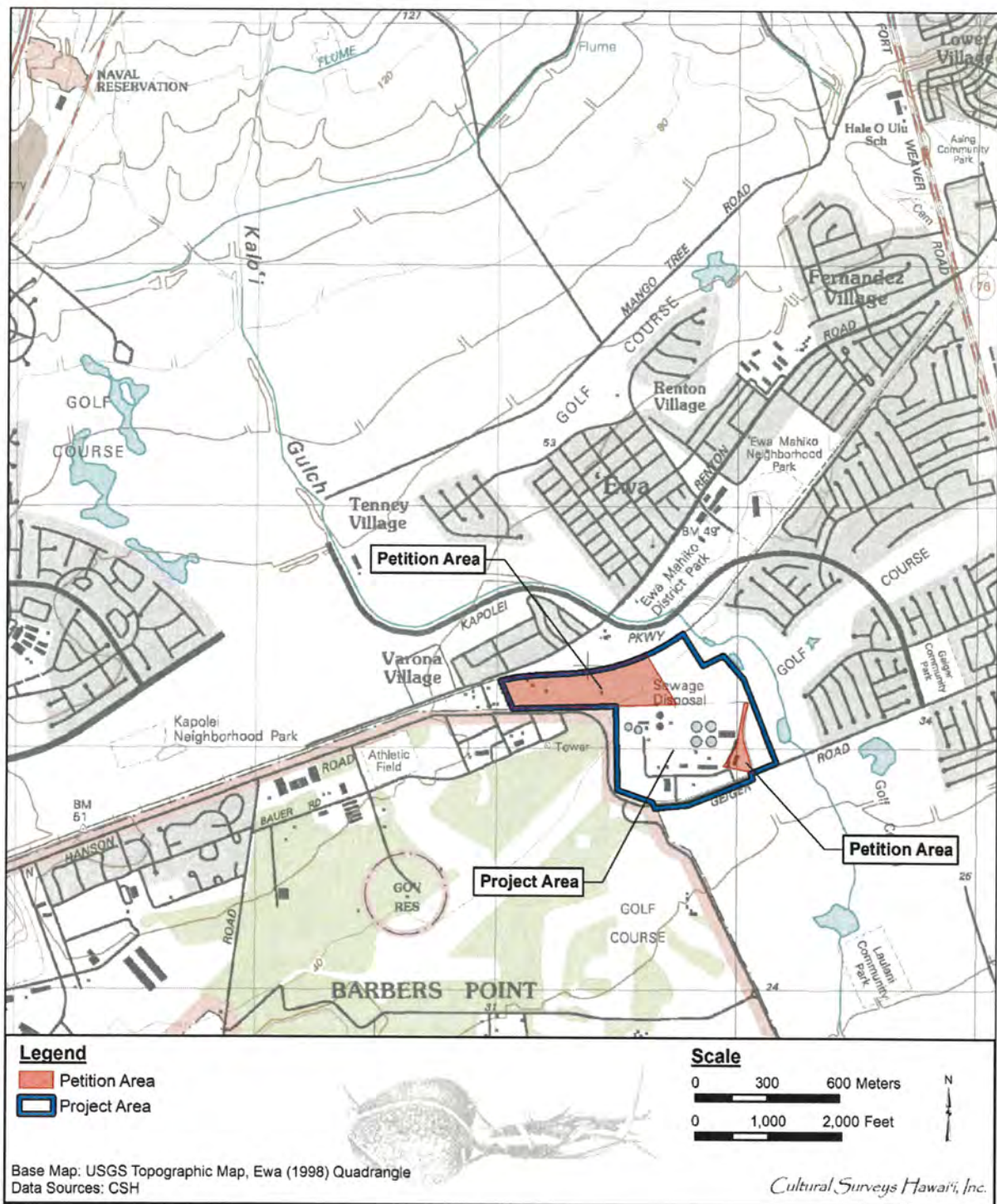


Figure 1. Portion of the 1998 Ewa USGS 7.5-minute topographic quadrangles showing the location of the project area and petition areas



Figure 2. 2015 aerial photograph showing project area and petition areas (Google Earth 2015)

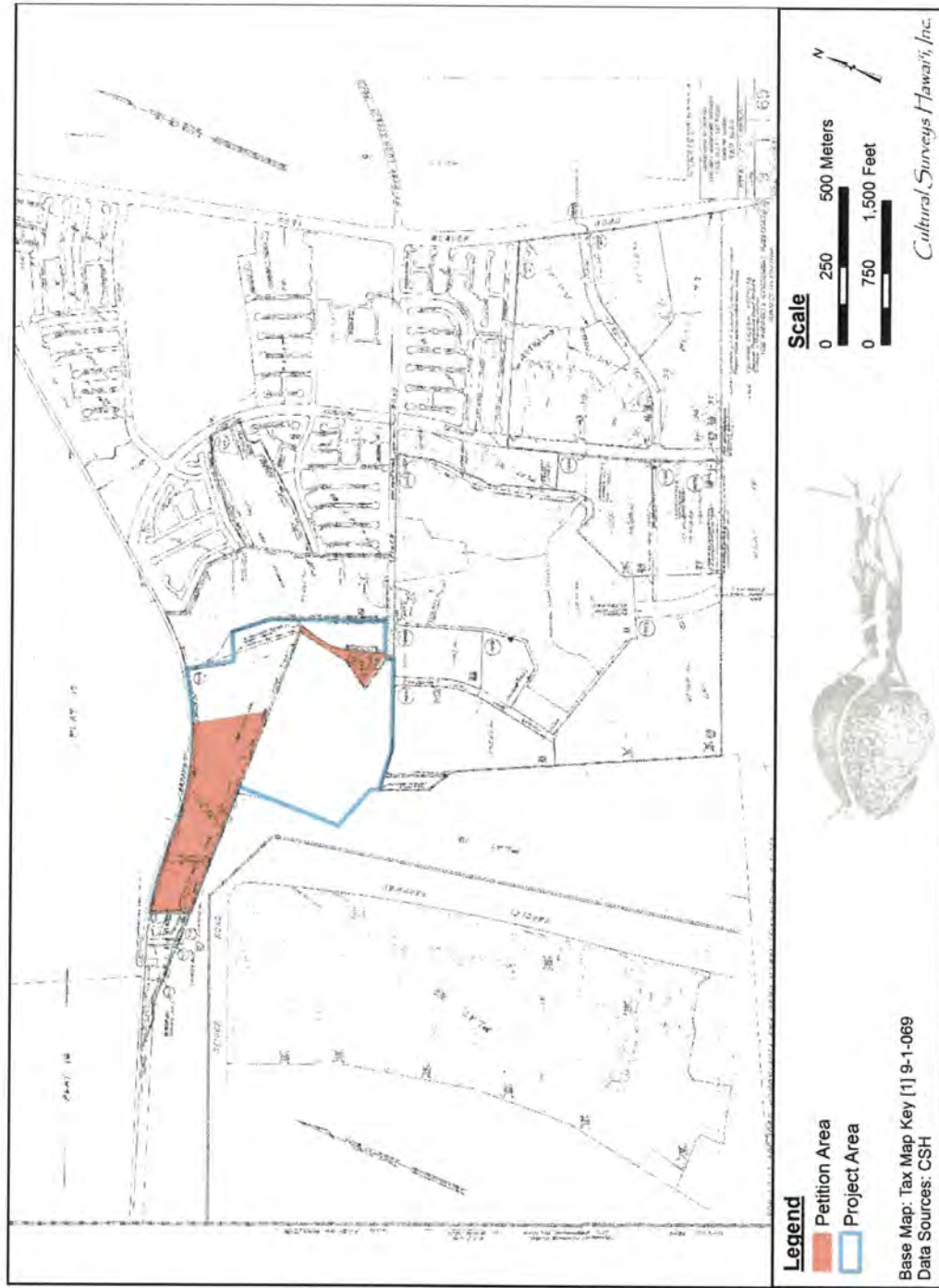


Figure 3. Tax Map Key [1] 9-1-069 showing the project area and petition areas (Hawai'i TMK Service 2014)

Ka Pa'akai Analysis for Honouliuli Wastewater Treatment Plant Secondary Treatment Project, Honouliuli, 'Ewa, O'ahu
TMKs: [1] 9-1-013:007, 9-1-069:003 and 004

Recognizing the challenges of a Western system of private landownership in which the appurtenant rights of native tenants had not yet been codified into law, the Hawaiian Privy Council, on 19 October 1849, adopted resolutions to protect the rights of the *maka 'āinana* (people that attend the land). The Kuleana Act of 1850, comprised of seven articles, confirmed and protected the rights of native tenants. Article 7 established access to roads, water sources, and other natural resources:

When the landlords have taken allodial titles to their lands, the people on each of their lands, shall not be deprived of the right to take firewood, house timber, aho cord, thatch, or ti leaf, from the land on which they live, for their own private use, should they need them, but they shall not have a right to take such articles to sell for profit. They shall also inform the landlord or his agent, and proceed with his consent. The people also shall have a right to drinking water, and running water, and the right of way. The springs of water, and running water, and roads shall be free to all, should they need them, on all lands granted in fee simple: Provided, that this shall not be applicable to wells and water courses which individuals have made for their own use. [5 August 1850, Territory of Hawaii 1925:2112]

In 1992, the State of Hawai'i Supreme Court upheld these rights under HRS §7-1, amending it to include "native Hawaiian rights . . . may extend beyond the *ahupua'a* in which a native Hawaiian resides where such rights have been customarily and traditionally exercised in this manner" (*Pele Defense Fund v. Paty*, 73 Haw.578. 620, 837 P.2d 1247, 1272 91992 cited in Dagher and Dega 2017:5).

Act 50, enacted in 2000 with House Bill (HB) 2895, recognizes the importance of Native Hawaiian culture in defining the unique quality of life in Hawai'i. The act amended the definition of "significant effect" to include,

. . . the sum of effects on the quality of the environment, including actions that irrevocably commit a natural resource, curtail the range of beneficial uses of the environment, are contrary to the State's environmental policies or long-term environmental goals as established by law, or adversely affect the economic [or] welfare, social welfare[.], or cultural practices of the community and State. [H.B. 2895, Act 50, 2000]

Act 50 also requires that Environmental Impact Statements and Environmental Assessments "include the disclosure of the effects of a proposed action on the cultural practices of the community and the State."

Through document research and cultural consultation efforts, this analysis provides information compiled to date pertinent to the assessment of the proposed project's potential impacts to cultural beliefs, practices, and resources (pursuant to the Office of Environmental Quality Control's *Guidelines for Assessing Cultural Impacts*) which may include traditional cultural properties (TCPs). These TCPs may be significant historic properties under State of Hawai'i significance Criterion e, pursuant to Hawai'i Administrative Rules (HAR) §13-275-6 and §13-284-6. Significance Criterion e refers to historic properties that

have an important value to the native Hawaiian people or to another ethnic group of the state due to associations with cultural practices once carried out, or still carried out, at the property or due to associations with traditional beliefs, events or

oral accounts—these associations being important to the group’s history and cultural identity. [HAR §13-275-6 and §13-284-6]

In 2000, the State of Hawai‘i Supreme Court provided an analytical framework “to effectuate the State’s obligation to protect native Hawaiian customary and traditional practices while reasonably accommodating competing private [property] interests” (*Ka Pa‘akai O Ka ‘Aina v. Land Use Commission*). When reviewing land use applications, state and county agencies must independently assess: 1) the identity and scope of valued cultural, historical, or natural resources in the petition area, including the extent to which traditional and customary Native Hawaiian rights are exercised in the petition area; 2) the extent to which those resources—including traditional and customary Native Hawaiian rights—will be affected or impaired by the proposed action; and 3) the feasible action, if any, to be taken by the LUC to reasonably protect Native Hawaiian rights if they are found to exist.

The document is intended to support a State Land Use District (SLUD) Boundary Amendment petition for this project.

1.3 Scope of Work

The scope of work for this Ka Pa‘akai Analysis includes the following:

1. Review previous studies to identify and review cultural, historical, and natural resources in the affected area, and assess the extent to which traditional and customary rights and practices are exercised in that area;
2. Assess the extent to which those resources, rights, and practices will be affected by the proposed action; and
3. Propose feasible action, if any, to reasonably protect Native Hawaiian rights and practices.

1.4 Environmental Setting

Honouliuli Ahupua‘a is the largest *ahupua‘a* in the *moku* (district) of ‘Ewa. Extending from the West Loch of Pearl Harbor in the east, to the border of Nānākuli Ahupua‘a at Pili o Kahe in the west, Honouliuli Ahupua‘a includes approximately 19 km, or 12 miles, of open coastline from One‘ula westward to Pili o Kahe. The *ahupua‘a* extends *mauka* (inland) from West Loch nearly to Schofield Barracks in Wahiawā. The western boundary is the Wai‘anae Mountain crest running north as far as Pu‘u Hāpapa (or to the top of Ka‘ala Mountain, according to some).

Being on the leeward side of O‘ahu, Honouliuli is typically very hot and dry. Despite the relative lack of rainfall in this area, the Nāulu rain is known to be associated with the *ahupua‘a* of Honouliuli. This rain is generally understood as a sudden shower, and more commonly associated with Kawaihae, Hawai‘i and Ni‘ihau (notoriously dry locations as well) (Akana and Gonzalez 2015:187).

The general lack of rain names is indicative of historic environmental conditions within the *ahupua‘a*; these conditions, in turn, shaped agricultural practices in the area. McAllister provides written evidence of the innovative ways in which Honouliuli’s *kama‘āina* (native-born) approached agricultural activities:

. . . It is probable that the holes and pits in the coral were formerly used by Hawaiians. Frequently the soil on the floor of the larger pits was used for

cultivation, and even today one comes upon bananas and Hawaiian sugar cane still growing in them. They afford shelter and protection, but I doubt if previous to the time of Cook there was ever a large population here. [McAllister 1933:109]

Agricultural sinkholes were especially important on the 'Ewa plain. These "sink holes" would accumulate water within them via a subterranean water or karst system; this water also contained nutrient-rich sediment that allowed plants such as *kalo* (taro; *Calocasia esculenta*), *kī* (ti; *Cordyline fruticosa*), and *noni* (Indian mulberry; *Morinda citrifolia*) to survive.

According to the U.S. Department of Agriculture (USDA) Soil Survey Geographic (SSURGO) database (2001) and soil survey data gathered by Foote et al. (1972), soils within the project area primarily consist of Mamala stony silty clay loam, 0 to 12% slopes (MnC) with Ewa silty clay loam, moderately shallow, 0 to 2% slopes (EmA), Honouliuli clay, 0 to 2% slopes (HxA), and Waialua silty clay, 0 to 3% slopes (WkA) within the southeast corner (Figure 4).

1.5 Built Environment

The southern portion of the project area is currently occupied by the Honouliuli WWTP and facilities. The northern portion of the project area is currently located in vacant land. The project area is bordered by the Oahu Railway and Land Company (OR&L) right-of-way (ROW) to the north, Geiger Road on the south, Kalo'i Gulch on the east, and Roosevelt Avenue on the south and west.

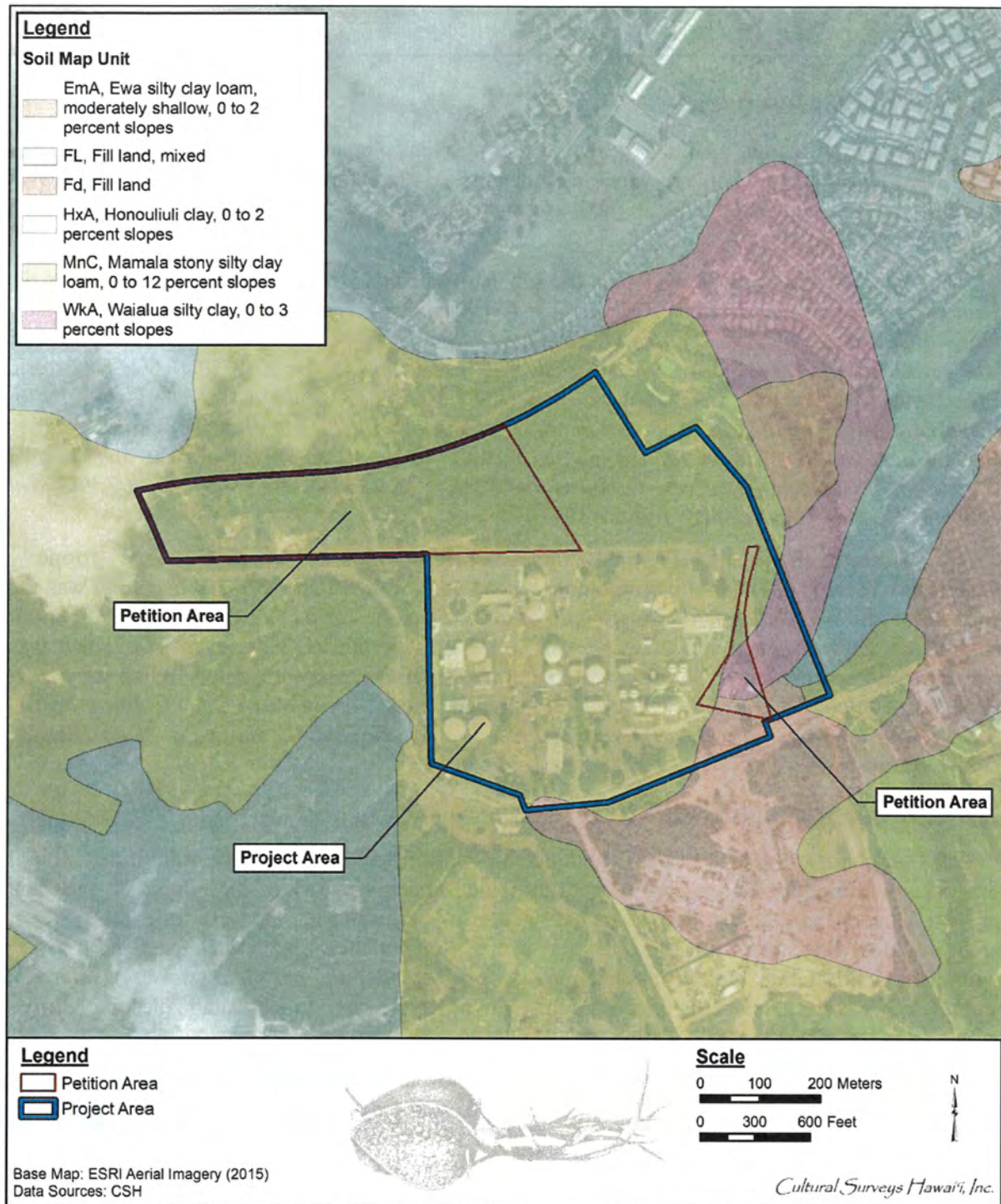


Figure 4. Portion of 2015 ESRI Aerial photograph with overlay of *Soil Survey of the State of Hawai'i* (Foote et al. 1972; USDA SSURGO 2001), indicating soil types within and surrounding the project area and petition areas

Section 2 Methods

2.1 Archival Research

Background research included a review of previous archaeological and cultural studies conducted within the project area which includes the existing Honouliuli WWTP (TMK: [1] 9-1-013:007) and the adjacent parcels to the north and east of the existing Honouliuli WWTP (TMK: [1] 9-1-069:003 and 004).

The existing Honouliuli WWTP was the subject of a *Final Archaeological Assessment of the Honouliuli Wastewater Treatment Plant (WWTP) Secondary Treatment and Facilities Project, Honouliuli Ahupua'a, 'Ewa District, O'ahu Island* TMK: [1] 9-1-013:007 (Yucha et al. 2016) that was reviewed and accepted in an State Historic Preservation Division (SHPD) §6E-8 Historic Preservation Review dated 3 February 2016 (LOG NO.:2015.03972, DOC NO.: 1602KN06; included as Appendix A) and a *Cultural Impact Assessment for the Honouliuli/Waipahu/Pearl City Wastewater Facilities, Honouliuli, Hō'ae'ae, Waikele, Waiawa, Mānana, Waimalu, and Hālawā Ahupua'a, 'Ewa Moku (District), O'ahu Island* TMK: [1] 9-1, 9-2, 9-4, 9-5, 9-6, 9-7, 9-8, 9-9 (*Various Plats and Parcels*) (Cruz et al. 2011).

The northern and eastern relatively undeveloped portions of the project area (formerly designated TMK [1] 9-1-069:003) amounting to an area of 48.18 acres (19.50 hectares) was the subject of an *Archaeological Assessment of the 'Ewa Industrial Park Project, Honouliuli Ahupua'a, 'Ewa District, O'ahu Island*, TMK: [1] 9-1-069:003 (O'Hare et al. 2007) that was reviewed and accepted in an SHPD §6E-42 Historic Preservation Review dated 10 February 2009 (Log No.: 2009.0664, Doc. No.: 0902WT22; included here as Appendix B) and a *Cultural Impact Assessment Report for the 'Ewa Industrial Park Project, Honouliuli Ahupua'a, 'Ewa District, O'ahu Island* TMK: [1] 9-1-069:003 (Souza et al. 2007).

2.2 Community Consultation

CSH seeks *kōkua* (assistance) and guidance in identifying past and current traditional cultural practices of the petition area. Those aspects include general history of the *ahupua'a*; past and present land use of the petition area; knowledge of cultural sites (for example, *wahi pana*, archaeological sites, and burials); knowledge of traditional gathering practices (past and present) within the petition area; cultural associations (*ka'ao* [legends] and *mo'olelo* [stories]); referrals; and any other cultural concerns the community might have related to Hawaiian cultural practices within or in the vicinity of the petition area.

CSH followed up with community members who participated in previous cultural studies conducted within the petition area (Souza et al. 2007 and Cruz et al. 2011). CSH reached out to previous interviewees through telephone and email correspondence, explained the details of the proposed Honouliuli Wastewater Treatment Plant Secondary Treatment project and asked them whether their *mana'o* (thoughts, opinions) regarding cultural resources within the petition area has changed. CSH also reached out to community members who were referred to CSH by the Office of Hawaiian Affairs (OHA) and the SHPD.

Section 3 Background Research

3.1 Traditional and Historical Background

‘Ewa is depicted as an abundant and populated land where chiefs of distinguished lineages were born and resided (Cordy 1996:1–6). The land was fertile and well fed by mountain streams that helped sustain the agricultural lifestyle needed to support the chiefs, their households, and their people. ‘Ewa literally means “crooked” or “unequal” (Pukui and Elbert 1986:42). Others interpret it as “strayed” in association with a story about the gods Kāne and Kanaloa, who threw a stone to determine the boundary of the district.

Honouliuli is the largest *ahupua‘a* in the *moku* (district) of ‘Ewa. The name Honouliuli means “dark water,” “dark bay,” or “blue harbor” (Pukui et al. 1974:51) and was named for the waters of Pearl Harbor (Jarrett 1930:22), which marks the eastern boundary of the *ahupua‘a*. The Hawaiians called Pearl Harbor Pu‘uloa (*lit.* long hill). Another explanation for the names comes from the “Legend of Lepeamoa,” the chicken-girl of Pālama. In this legend, Honouliuli is the name of the husband of the chiefess Kapālama and grandfather of Lepeamoa. The land district Honouliuli was named for the grandfather of Lepeamoa (Westervelt 1923:164–184).

The ‘Ewa coastal plain was a place of spiritual significance as it was associated with the *ao kuewa*, the realm of the homeless souls. According to Samuel Kamakau, there existed three spirit realms, the *ao kuewa*, *ao ‘aumakua*, and *ke ao o milu*. Upon death, the spirit of the recently deceased was said to leave the body and then proceed toward a *leina* (leaping place) where it would leap into Pō, the world of the unseen (Handy and Pukui 1977:146). The spirit was guided to and over the *leina* and into Pō by their *‘aumakua* (ancestral spirit) (Handy and Pukui 1977:146), however, if the soul of the deceased had no place in the *‘aumakua* realm, or was abandoned by an *‘aumakua*, it was destined to wander the *wiliwili* (*Erythrina sandwicensis*) grove of Kaupe‘a where it would catch night moths (*pulelehua*) and spiders (*nanana*) for food until such time that it was rescued by its *‘aumakua*. The association of Pu‘uokapolei and the plains of Kānehili with wandering souls is illustrated in a lament on the death of Kahahana, the paramount chief of O‘ahu, who was killed by his father, Kahekili, after Kahahana became treacherous and killed the high priest Ka‘opulupulu (Fornander 1919:6:297). Fornander (1919:6[2]:292) states that Pu‘uokapolei may have been a *leina*, a jumping off point associated with the wandering souls who roamed the plains of Kaupe‘a and Kānehili, *makai* (toward the sea) of the hill.

John Papa ‘Ī‘Ī described a network of Leeward O‘ahu *ala hele* (trails), which in historic times encircled and crossed the Wai‘anae Range, allowing passage from West Loch to the Honouliuli lowlands, past Pu‘uokapolei and Waimānalo Gulch to the Wai‘anae coast and onward (‘Ī‘Ī 1959:96–98). A cross-*ahupua‘a* (east-west) trail passed through Honouliuli north of Pu‘uokapolei, and continued along the coast to Wai‘anae following the route of the modern Farrington Highway. A *mauka-makai* (north-south) trail branched off the cross-*ahupua‘a* trail into two offshoots which led to the coastal settlements of Kūalaka‘i and One‘ula. Early historic maps show the *mauka-makai* trail which led to One‘ula crossed through the petition area, however, today no remnants of the trail remain within the project area and petition area, as well as, *mauka* and *makai* of the area (Figure 5).

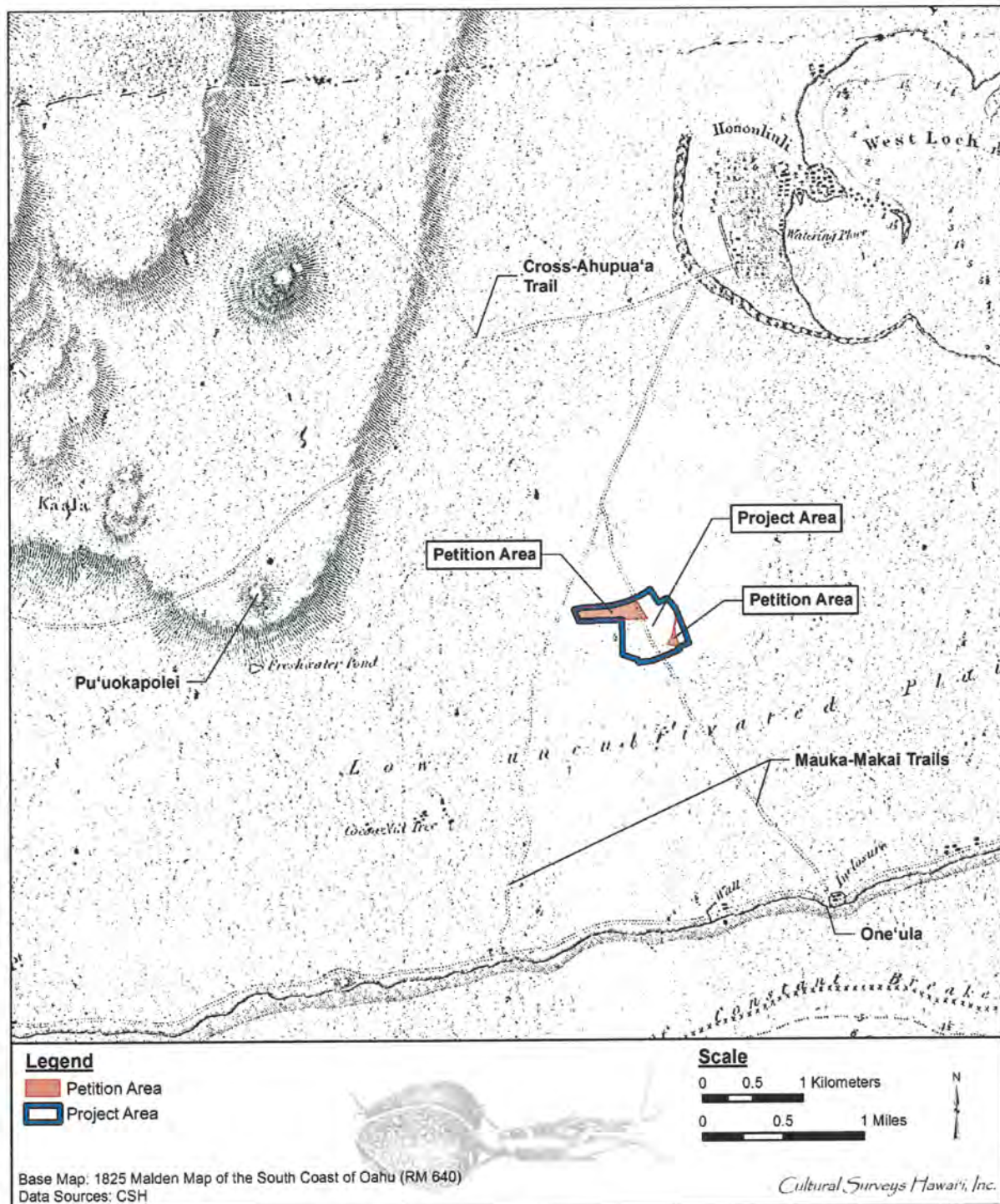


Figure 5. 1825 Malden Map of the South Coast of Oahu (RM 640) depicting the cross-ahupua'a trail and the mauka-makai trail which crossed through the petition area

Many references document that chiefs resided in ‘Ewa and that it was a political center in its day. Oral accounts of *ali‘i* (royalty) recorded by Hawaiian historian Samuel Kamakau date back to at least the twelfth century. *Ali‘i* associated with Honouliuli and greater ‘Ewa Moku included Kākuhihewa, Keaunui, Lakona, Mā‘ilikūkahi, and Kahahana.

3.2 Early Historic Period

At Contact, the most populous *ahupua‘a* on the island was Honouliuli with the population concentrated at the western edge of West Loch in the vicinity of Kapapahu Point in the “Honouliuli Taro Lands.” This area was clearly a major focus of population due to the abundance of fish and shellfish resources in close proximity to a wide expanse of well-irrigated bottomland suitable for wetland taro cultivation. Dicks et al. (1987:78–79) concludes, on the basis of 19 radiocarbon dates and three volcanic glass dates that “Agricultural use of the area spans over 1,000 years.”

3.2.1 The Māhele and the Kuleana Act

In 1845, the Board of Commissioners to Quiet Land Titles, also called the Land Commission, was established “for the investigation and final ascertainment or rejection of all claims of private individuals, whether natives or foreigners, to any landed property” (Chinen 1958:8). This led to the Māhele, the division of lands among the king of Hawai‘i, the *ali‘i*, and the common people, which introduced the concept of private property into Hawaiian society. Kamehameha III divided the land into four categories: Crown Lands to be reserved for the king and the royal house; Government Lands set aside to generate revenue for the government; Konohiki Lands claimed by *ali‘i* and their *konohiki* (supervisors); and *kuleana*, habitation and agricultural plots claimed by the common people (Chinen 1958:8–15).

In 1855, the Land Commission awarded all of the unclaimed lands in Honouliuli, 43,250 acres, to Miriam Ke‘ahikuni Kekau‘ōnohi (Royal Patent #6971 in 1877; Parcel #1069 in the Land Court office, Land Commission Award [LCA] 11218), a granddaughter of Kamehameha I, and the heir of Kalanimōkū, who had been given the land by Kamehameha after the conquest of O‘ahu (Indices of Awards 1929; Kame‘eleihiwa 1992). Kekau‘ōnohi was one of Liholiho’s (Kamehameha II’s) wives, and after his death, she lived with her half-brother, Luanu‘u Kahalai‘a, who was governor of Kaua‘i (Kelly 1985:21). Subsequently, Kekau‘ōnohi ran away with Queen Ka‘ahumanu’s stepson, Keli‘iahonui, and then became the wife of Chief Levi Ha‘alelea. Upon her death on 2 June 1851, all her property passed to her husband and his heirs. In 1863, the owners of the *kuleana* lands deeded their lands back to Ha‘alelea to pay off debts owed to him (Frierson 1972:12). In 1864, Ha‘alelea died, and his second wife, Anadelia Amoe, transferred ownership of the land to her sister’s husband John Coney (Yoklavich et al 1995:16).

3.2.2 Ranching

In 1871, John Coney rented the lands of Honouliuli to James Dowsett and John Meek, who used the land for cattle grazing. In 1877, James Campbell purchased most of Honouliuli *Ahupua‘a*—except the *‘ili* (land division smaller than an *ahupua‘a*) of Pu‘uloa—for a total of \$95,000. He then drove off 32,347 head of cattle belonging to Dowsett, Meek, and James Robinson, and constructed a fence around the outer boundary of his property (Bordner and Silva 1983:C-12). He let the land rest for one year and then began to restock the ranch, so that he had 5,500 head after a few years (Dillingham 1885 in Frierson 1972:14).

3.2.3 Agricultural Enterprises

By the mid-nineteenth century traditional agriculture was becoming quickly supplanted by large-scale commercial ventures. The focus of agricultural production soon shifted toward sugarcane and pineapple, with concerted efforts made to turn open space into plantations. In 1879, cattle rancher James Campbell began drilling for artesian wells on the 'Ewa Plains (Board of Water Supply, City and County of Honolulu 2017). By 1930, Ewa Plantation had drilled 70 artesian wells to irrigate cane lands; artesian wells provided fresh water to Honouliuli for nearly 60 years (Ho'okuleana 2014).

An additional agricultural trial was conducted in the Honouliuli area for the cultivation of sisal, a plant used to make fibers for rope and other material. Some sisal was planted before 1898 and production continued until the 1920s (Frierson 1972:16). This was grown mainly on the coastal plain of Honouliuli in Kānehili, just *mauka* of Kualaka'i Beach (now Nimitz Beach).

3.3 1900s

3.3.1 Oahu Railway and Land Company (OR&L)

In 1886, Campbell and B.F. Dillingham put together the "Great Land Colonization Scheme," which was an attempt to sell Honouliuli land to homesteaders (Thrum 1887:74). This homestead idea failed due to the lack of water and the distance from 'Ewa to Honolulu. The water problem was solved by the drilling of artesian wells, and Dillingham decided the area could be used instead for large-scale cultivation (Pagliaro 1987:4). The transportation problem was to be solved by the construction of a railroad, which Dillingham soon began to finance under the company name of the Oahu Railway and Land Company (OR&L).

During the last decade of the nineteenth century, the railroad reached from Honolulu to Pearl City in 1890, to Wai'anae in 1895, to Wai'alua Plantation in 1898, and to Kahuku in 1899 (Kuykendall 1967:3:100). This railroad line eventually ran across the center of the 'Ewa Plain at the lower boundary of the sugar fields. Following World War II, most of the 150+ miles of OR&L track were pried up, locomotives were sold to businesses on the U.S. mainland, and railway cars were scrapped. In 1947, the U.S. Navy took over a section of the OR&L track for their own use to transport bombs, ammunition, and torpedoes from the ammunition magazines at Lualualei, West Loch in Pearl Harbor, and Waikale on OR&L's Wahiawā Branch to Pearl Harbor Naval Base (Treiber 2005:25–26). The track to Waipahu was abandoned in the 1950s, but the line from the magazines in Lualualei to the wharves in West Loch at Pearl Harbor remained open until 1968.

Remnants of the OR&L ROW have been identified outside the northern boundary of the petition area.

3.3.2 Ewa Plantation Company

The Ewa Plantation Company was incorporated in 1890 for sugarcane cultivation. The first crop, 2,849 tons of sugar, was harvested in 1892 at the Ewa Plantation. Ewa was the first all-artesian plantation, and it gave an impressive demonstration of the part artesian wells were to play in the later history of the Hawaiian sugar industry (Kuykendall 1967:3:69). By the 1920s, Ewa Plantation was generating large profits and was the "richest sugar plantation in the world" (*Paradise of the Pacific*, December 1902:19–22 in Kelly 1985:171). During the twentieth century, the Ewa Plantation continued to grow and by the 1930s, encompassed much of the eastern half of

Honouliuli Ahupua'a, including the petition area (Figure 6). This growth impelled the creation of plantation villages to house the growing immigrant labor force working the fields. After the outbreak of World War II, which siphoned off much of the plantation's manpower, along with the changeover to almost complete reliance on mechanical harvesting in 1938, the plantation no longer supported the large multi-racial (Japanese, Chinese, Okinawan, Korean, Portuguese, Spanish, Hawaiian, Filipino, European) labor force that had characterized most of the early history of the plantation. The Oahu Sugar Company took control over the Ewa Plantation lands in 1970 and continued operations until 1995, when they decided to shut down sugarcane production in the combined plantation areas (Dorrance and Morgan 2000:45, 50).

3.3.3 The Military Development of 'Ewa

Military development within the Honouliuli area included Barbers Point Military Reservation (a.k.a. Battery Barbers Point from 1937–1944). Located at Barbers Point Beach, Barbers Point Naval Air Station was used beginning in 1921 as a training area for firing 155 mm guns (Payette 2003). In operation from 1942 into the 1990s, it was the largest and most significant base built in the area, housing numerous naval and defense organizations, including maritime surveillance and anti-submarine warfare aircraft squadrons, a U.S. Coast Guard Air Station, and components of the U.S. Pacific Fleet.

In 1932, the U.S. government leased 206 acres from the Campbell Estate to construct a mooring mast to receive the dirigible aircraft, the *Akron*. The airship was built in 1931 and was the largest helium filled airship in the world at the time. Before it could arrive on O'ahu, the *Akron* crashed during flight in a storm. The next landing for a large airship was scheduled to be the *Macon*. Like the *Akron*, *Macon* also crashed in a storm. After the disaster, the Navy scaled back its large dirigible program (Tuggle and Tomonari-Tuggle 1997). The area remained largely unused until 1940, when the Marine Corps Air Station, Ewa, was constructed on the land.

Ewa Marine Corps Air Station was officially established on 1 September 1942 and the Naval Air Station Barbers Point was commissioned on 15 April 1942 (Department of Navy BRAC PMO 2006). In 1952, Ewa Marine Corps Air Station was formerly closed and the property absorbed into the Barbers Point Naval Air Station (World War II Database). Barbers Point Naval Air Station was eventually decommissioned by the Navy in 1998 as part of the large scale base realignment and closure (BRAC) action. The station was turned over to the State of Hawai'i and renamed Kalaeloa Airport (Department of Navy BRAC PMO 2006).

The petition area is located adjacent to the former Barbers Point Naval Air Station and Ewa Marine Corps Air Station.

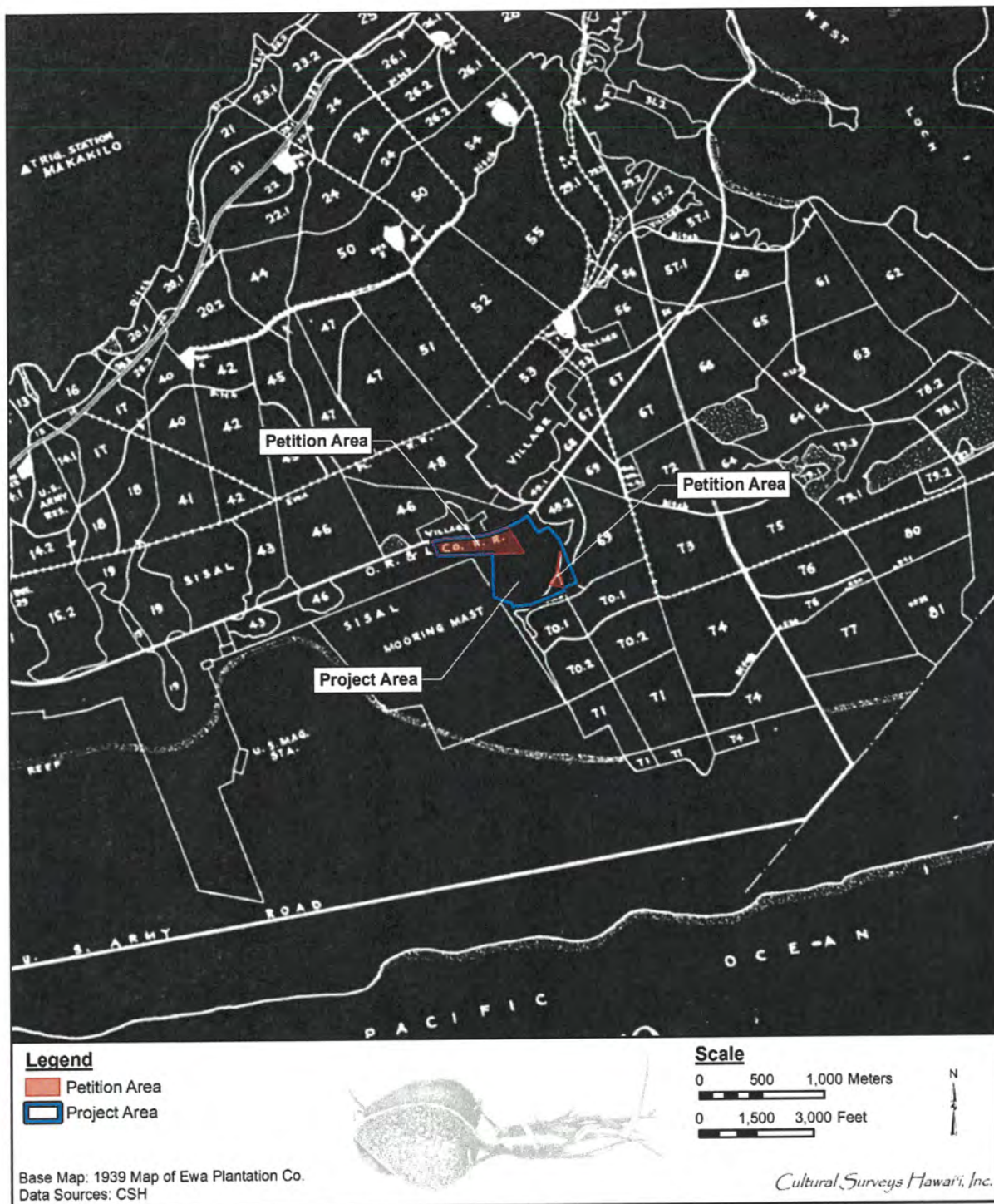


Figure 6. 1939 map of the Ewa Plantation Company depicting the location of the project area and petition areas

Section 4 Previous Archaeological Research

This section discusses previous archaeological and cultural studies conducted within the project area.

4.1 Previous Archaeological Studies within the Project Area

4.1.1 O'Hare et al. 2007

In 2007, CSH (O'Hare et al. 2007) conducted an archaeological assessment (no finds archaeological inventory survey) of the proposed 'Ewa Industrial Park. The report was reviewed and accepted in an SHPD §6E-42 Historic Preservation Review dated 10 February 2009 (LOG NO.:2009.0664, DOC NO.: 0902WT22).

The project area consisted of a 48.18-acre fenced lot, bound on the north by the ROW along the existing track of the OR&L, which runs parallel to the *makai* side of Renton Road. The parcel was bound on all other sides by existing properties; a southern dog-leg section extends south to Geiger Road. The western portion of the project area (and a portion of the eastern section) was open, with livestock pastures and paddocks, houses, and out-buildings. All surface features are associated with modern agricultural use. The central section had been extensively cleared of all vegetation and large rocks; this area was leased to private parties (such as for graduation parties, overnight scout troops, and the bon dance). Everywhere, there are large piles of rocks, trash and beer bottle piles, concrete, piled brush, and other evidence of extreme ground disturbance. No traditional surface Hawaiian features were found, and with the evidence of extreme ground disturbance in mind, it is highly unlikely there are any subsurface Hawaiian features intact.

The western portion of the project area is within the mapped area of surface-exposed Ewa karst, a topographic area in which many sinkholes have been found. These sinkholes often contain fossil animal bones, and were modified and used in the pre-Contact and historic eras for habitation, agriculture, and for burials. It is possible there were once sinkholes in the western and eastern sections of the project area, which were buried under erosional soils in the historic period. However, the evidence of the high degree of bulldozing and grading in the project area makes it likely that any sinkholes would have been filled in or destroyed. No sinkholes were found. There was also little evidence of post-Contact use by the Ewa Plantation, the OR&L Company, or the military.

4.1.2 Yucha et al. 2016

At the request of AECOM Pacific, Inc., CSH completed an archaeological inventory survey, reported as an archaeological assessment (AA), for the Honouliuli WWTP Secondary Treatment and Facility project. The AA report was reviewed and accepted in an SHPD §6E-8 Historic Preservation Review dated 3 February 2016 (LOG NO.:2015.03972, DOC NO.: 1602KN06).

The northern and eastern relatively undeveloped portions of the project area amounting to an area of 48.18 acres was the subject of an *Archaeological Assessment of the 'Ewa Industrial Park Project, Honouliuli Ahupua'a, 'Ewa District, O'ahu Island* (O'Hare et al. 2007). Fieldwork included a pedestrian inspection of the entire project area, GPS data collection, and general documentation. No historic properties were identified within the project area.

4.2 Previous Cultural Studies within the Project Area

4.2.1 Souza et al. 2007

CSH conducted a cultural impact assessment (CIA) for the 'Ewa Industrial Park project. Hawaiian organizations, government agencies, community members, and cultural and lineal descendants with ties to Honouliuli were contacted to 1) identify potentially knowledgeable individuals with cultural expertise and knowledge of the project area and its surroundings, and 2) identify cultural concerns and potential impacts within the project area. An effort was made to locate community members with ties to Honouliuli and neighboring *ahupua'a* who live or had lived in the region or who, in the past, used the area for traditional and cultural purposes. The people contacted for the assessment were not aware of any ongoing cultural practices, archaeological sites, or trails within the project area. However, two study participants mentioned that the 'Ewa plains is a well-known place for sinkhole burials. Most of the people contacted mentioned that pig farming, military, and ranching activities heavily altered the project area. This activity includes approximately eight houses on the east end of the project area which were owned by OR&L and used to house their workers.

Early historic maps show the project area was situated between two important *mauka-makai* trails, however, this use for transportation did not leave any surface or subsurface remains. As a result of the extensive ground disturbance observed in the project area, including cleared areas for pastures and paddocks in the central and western portions and trash/rock/concrete piles in the eastern area, any pre-Contact or any historic (more than 50 years ago) surface features have probably been destroyed.

No contemporary or continuing cultural practices were discovered within the project area, however, the report noted that subsurface properties associated with former traditional Hawaiian activities in the project area, such as artifacts, cultural layers, and burials may be present despite the decades of modern activities.

4.2.2 Cruz et al. 2011

At the request of AECOM and the CCH, CSH conducted a CIA for the Honouliuli/Waipahu/Pearl City Wastewater Facilities project. Based on information gathered from the community consultation effort as well as archaeological and archival research, the evidence indicates the proposed project may have minimal impact on potential burials and other cultural sites within the project area due to underground tunneling and boring at depths below known cultural sites. However, concerns raised by community participants include protection of water tables in the area and possible sewer backups due to flooding in the lower areas of 'Ewa. Interviewee Shad Kāne stated that the cultural layer of 'Ewa still exists today, however, buried or filled in by the Navy and the Department of Defense. He also stated that the likelihood of inadvertent burials at the points of deep excavation is low and that the cultural layers would not be disturbed during construction phases of the project.

Section 5 Community Consultation

5.1 Introduction

CSH previously conducted cultural impact assessments within the project area in 2007 and 2011 (Souza et al. 2007 and Cruz et al. 2011). During the consultation process for these studies, in-person interviews were conducted with numerous members of the community to document their *mana'o* regarding cultural resources within the project area. In May 2019, CSH reached out to participants in previous cultural studies conducted within the project area to notify them about the Ka Pa'akai Analysis for the proposed Honouliuli WWTP Secondary Treatment project and follow up with them regarding their *mana'o* on cultural resources and practices within the petition area. CSH also reached out to community members who were referred to CSH by the Office of Hawaiian Affairs (OHA) and the SHPD.

5.2 Community Contact Table

Table 1 contains names, affiliations, dates of contact, and comments from NHOs, individuals, organizations, and agencies contacted for this analysis. Results are presented below in alphabetical order.

Table 1. Community contact table

Name	Affiliation	Comments
Belcher, William	Assistant Professor of Anthropology, University of Hawai'i West O'ahu	CSH reached out via email 14 May 2019 CSH reached out via email 24 May 2019
Clark, Garnet	SHPD, Archaeology Assistant	CSH reached out via email 14 May 2019 Ms. Clark replied via telephone 14 May 2019: <i>Ms. Clark mentioned that she would contact community members from Honouliuli and see if they are willing to participate.</i>
Cook, Kealani	Assistant Professor of History, University of Hawai'i West O'ahu	CSH reached out via email 14 May 2019 CSH reached out via email 24 May 2019
Cordy, Ross	Professor of Hawaiian Studies, University of Hawai'i West O'ahu	CSH reached out via email 14 May 2019 CSH reached out via email 24 May 2019
Gomes, Ku'umeaaloha	Pearl Harbor Hawaiian Civic Club	CSH reached out via email 14 May 2019 CSH reached out via email 24 May 2019
Kamahele, Momi	Hawaiian Studies, Leeward Community College	CSH reached out via email 14 May 2019 Ms. Kamahele replied via email 14 May 2019: <i>Contact faculty at UH West O'ahu who may have on staff researchers and the like who may have access to cultural information in the Honouliuli area.</i>

Name	Affiliation	Comments
Kāne, Shad	Member of Kapolei Hawaiian Civic Club, Chair of O'ahu Council of Hawaiian Civic Clubs Committee on the Preservation of Historic Sites and Cultural Properties, Ali'i Ai Moku of Kapuāiwa Chapter of the Royal Order of Kamehameha Ekahi, and 'Ewa Moku Representative on the State Aha Moku Advisory Committee	CSH contacted Mr. Kane via telephone on 6 May 2019: <i>Mr. Kane stated that his mana'o has not changed. He does not see any impacts to cultural resources since most of the area has been compromised by previous development.</i>
McKeague, Kawika	Cultural Practitioner, Honouliuli historian and longtime resident	CSH reached out via email 14 May 2019 CSH reached out via email 24 May 2019
Tiffany, Nettie	Kahu of Lanikūhonua and former O'ahu Island Burial Council member, 'Ewa District	CSH contacted Mrs. Tiffany via telephone on 22 May 2019: <i>Mrs. Tiffany stated her mana'o has not changed. She noted that plantations and sugar cane have disrupted a lot but there may still be a chance of burials in the area.</i>

5.3 Kama'āina Interviews

5.3.1 Shad Kāne

In 2011, CSH interviewed Mr. Shad Kāne regarding the Honouliuli/Waipahu/Pearl City Wastewater Treatment Facilities project (Cruz et al. 2011). Mr. Kāne is member of the Kapolei Hawaiian Civic Club, Chair of the O'ahu Council of Hawaiian Civic Clubs Committee on the Preservation of Historic Sites and Cultural Properties, Ali'i Ai Moku of the Kapuāiwa Chapter of the Royal Order of Kamehameha Ekahi, and 'Ewa Moku Representative on the State Aha Moku Advisory Committee.

Mr. Kāne stated that the cultural landscape—the ancient use of the land for such activities as fishing, gathering, collecting medicinal plants, and worshipping—of 'Ewa remains intact underground. While discussing the design of the Honouliuli/Waipahu/Pearl City Treatment Facilities project, he stated that “the likelihood of inadvertent burials at deep excavation should be of a low probability.” He noted that “the nature of the design and the depth of the transmission lines is to minimize impact to the surface cultural and burial layers,” therefore, the project “should have no effect to the cultural layer within the footprint of the proposed expansion and conveyance lines.”

On 6 May 2019, CSH contacted Mr. Kāne via telephone to follow up with him regarding his *mana'o* for the Honouliuli/Waipahu/Pearl City Wastewater Treatment Facilities project and to discuss the Ka Pa'akai Analysis for the Honouliuli Wastewater Treatment Plant Secondary Treatment project. Mr. Kāne stated his *mana'o* has not changed, noting that he does not expect any impacts to cultural resources within the petition area since most of the area has been compromised by previous development.

5.3.2 Nettie Tiffany

In 2007, Mrs. Nettie Tiffany participated in the CIA for the 'Ewa Industrial Park project (Souza et al. 2007). Mrs. Tiffany is *kahu* (caretaker) of Lanikūhona and former 'Ewa representative on the O'ahu Island Burial Council. Mrs. Tiffany stated that "there is always a chance for burials in sinkholes in the Honouliuli area."

On 22 May 2019, CSH contacted Mrs. Tiffany via telephone to discuss her *mana'o* for the Honouliuli/Waipahu/Pearl City Wastewater Treatment Facilities project. Mrs. Tiffany stated her *mana'o* has not changed. She added that even though plantations and sugarcane have disrupted a lot, there may still be a chance of burials within the petition area. She also noted that due to the previous ground disturbance from the plantations and sugarcane, burials may not be in their original place.

5.4 Summary of *Kama'āina* Interviews

Based on community consultation conducted during previous cultural studies within the project area (Cruz et al. 2011 and Souza et al. 2007), no contemporary or continuing cultural practices are occurring within the petition area.

In 2011, CSH conducted five formal interviews for the CIA for the Honouliuli/Waipahu/Pearl City Wastewater Treatment Facilities project (Cruz et al. 2011). Interviewees raised concerns including the protection of water tables in the area and possible sewer backups due to flooding in the lower areas of 'Ewa. Interviewee Shad Kāne stated that the cultural landscape of 'Ewa remains intact underground. While discussing the design for Honouliuli/Waipahu/Pearl City Wastewater Treatment Facilities project, he stated the project "should have no effect to the cultural layer within the footprint of the proposed expansion and conveyance lines." He added that "the likelihood of inadvertent burials at deep excavation should be of a low probability" since "the nature of the design and the depth of the transmission lines is to minimize impact to the surface cultural and burial layers." However, Mr. Kāne also noted that "there is never a certainty regarding burials."

From the original five formal interviews, four of the interviewees have since passed away. On 6 May 2019, CSH contacted the surviving interviewee, Mr. Shad Kāne, to discuss the Ka Pa'akai Analysis for the Honouliuli Wastewater Treatment Plant Secondary Treatment project. Mr. Kāne stated that he does not expect any impacts to cultural resources within the petition area since most of the area has been compromised by previous development.

In 2007, CSH held information gathering sessions with community members with ties to Honouliuli and the neighboring *ahupua'a* to discuss the 'Ewa Industrial Park project (Souza et al. 2007). Study participants were not aware of any ongoing cultural practices, archaeological sites, or trails within the project area. Most of the participants mentioned the project area has been heavily altered by pig farming, military, and ranching activities. It was also noted that on the east

end of the project area there were approximately eight houses that OR&L owned and used to house their workers.

The extensive ground disturbance observed in the project area, including cleared areas for pastures and paddocks in the central and western portions of the project area, and trash/rock/concrete piles in the eastern area, indicates that if there were once any pre-Contact or any historic (more than 50 years ago) surface features, these have probably been destroyed.

It should be noted that subsurface properties associated with former traditional Hawaiian activities in the project area, such as artifacts, cultural layers, and burials may be present despite the decades of modern activities. Study participants Nettie Tiffany and the late Arlene Eaton mentioned the 'Ewa plains is a well-known place for sinkhole burials. No sinkholes were found within the project area; however, it is possible there were once sinkholes in the western and eastern sections of the project area. Evidence of the high degree of bulldozing and grading in the project area makes it likely that any sinkholes would have been filled in or destroyed.

On 22 May 2019, CSH contacted with Mrs. Tiffany via telephone on 22 May 2019 to follow up regarding her *mana 'o* for the 'Ewa Industrial Park project. Mrs. Tiffany stated her *mana 'o* has not changed. She added that even though plantations and sugarcane have disrupted a lot, there may still be a chance of burials within the petition area. She also noted that due to the previous ground disturbance from the plantations and sugarcane, burials may not be in their original place.

Section 6 Traditional Cultural Practices

This section integrates information from Sections 3–5 in examining cultural resources and practices identified within or in proximity of the petition area in the broader context of the encompassing Honouliuli landscape. Excerpts from interviews are incorporated throughout this section where applicable.

6.1 Agricultural Resources

The *ahupua'a* of Honouliuli is one of the driest areas of O'ahu. Despite the relative lack of rainfall in this area, a traditional rain name is associated with the *ahupua'a* of Honouliuli. This rain, known as the Nāulu, is described as a sudden shower and is more commonly associated with Kawaihae, Hawai'i, and Ni'ihau (notoriously dry locations as well) (Akana and Gonzalez 2015:187). The general lack of distinctive, traditional rain names is indicative of historic environmental conditions within the *ahupua'a*. Due to these conditions, *maka'āinana* living within the *ahupua'a* were forced to modify or utilize freshwater resources in innovative ways.

Below the surface of Honouliuli, dissolution “pit caves” (Mylroie and Carew 1995) or “sink holes” would accumulate water within them via a subterranean water or karst system; this water also contained nutrient-rich sediment that allowed for the cultivation of significant plant resources such as *kalo*, *kī*, and *noni*. McAllister documented examples of traditional agricultural activity in Honouliuli, writing that the *kama'āina* of the *ahupua'a* utilized the soil on the floor of caves for cultivation. At the time of his survey in 1930 both *mai'a* (bananas) and *kō* (sugarcane) were still being cultivated within these pits.

Given the environmental constraints within this portion of the *ahupua'a*, it is likely that the major traditional cultural practice associated with the petition area would have been the gathering of native plant resources. The accessibility of Honouliuli lands, including the petition area, to the Hawaiians for gathering or other cultural purposes would have been radically curtailed during the second half of the nineteenth century. By the 1870s, herds of cattle grazing across the 'Ewa Plain likely denuded the landscape of much of the native vegetation. Subsequently, during the last decade of the nineteenth century, the traditional Hawaiian landscape was further altered by the introduction and rapid development of commercial sugarcane cultivation.

In pre-Contact Hawai'i, the petition area would have been mostly lowland dry shrub and grassland, dominated by species such as *wiliwili* (*Erythrina sandwicensis*), *lama* (*Diospyros ferrea*), sandalwood (*Santalum* sp.), *'a'ali'i* (*Dodonea eriocarpa*), scrub *'ōhi'a* (*Metrosideros collina*), and *pili* grass (*Heteropogon contortus*) (Cuddihy and Stone 1990:12–15). In contrast, the non-cleared portions of the petition area are currently dominated by introduced species such as *kiawe* (*Algaroba*, *Prosopis pallida*) and the prickly Lions Ear (*Leonotis nepetaefolia*).

6.2 Cultural Sites

Cultural sites, or Hawaiian *wahi pana* effectively contribute to the ways in which *kama'āina* remember and identify (Basso 1996; Holtorf and Williams 2006), and thus continue to manifest and perpetuate culture. As Cipolla (2008) makes clear,

... people inherit the places that they inhabit (from the past), connections between memory, identity and landscape are usually quite strong. In this sense, space, as

configured in the past (which could be the recent past) by either natural or cultural processes, ties reflexively to social relations in the present (see Bourdieu 1977; Lefebvre 1991) and, in turn, to social memories. [Cipolla 2008:199]

These social memories, in turn, work to inform world views and everyday practices. Counted among these practices, and largely subsumed under a “living contemporary culture” (Kawelu 2015:3), is the care or management of natural resources including cultural sites. There exist a myriad of cultural sites or *wahi pana* for ‘Ewa Moku, however, for the *ahupua‘a* of Honouliuli trails and plains were of particular importance.

Trails were and continue to be valuable resources for Native Hawaiian culture and life ways. In the past, trails were well used for travel within the *ahupua‘a* between *mauka* and *makai* and laterally between *ahupua‘a*. A historical trail system existed in O‘ahu extending from Honolulu to Wai‘anae. A cross-*ahupua‘a* (east-west) trail that bordered Pearl Harbor passed through Honouliuli north of Pu‘uokapolei and continued along the coast to Wai‘anae following the route of the modern Farrington Highway. A *mauka-makai* (north-south) trail branched off the cross-*ahupua‘a* trail into two offshoots which led to the settlements of Kūalaka‘i and One‘ula located along the southern coast. Early historic maps show the *mauka-makai* trail which led to One‘ula crossed through the petition area, however, today no remnants of the trail remain within the project area and petition area, as well as, *mauka* and *makai* of the area.

Several places on the ‘Ewa coastal plain are associated with *ao kuewa*, the realm of the homeless souls. The plains of Kaupe‘a is where ghosts wandered among the *wiliwili* trees to catch night moths and spiders for food (*Ke Au Hou*, 12 July 1911 in Sterling and Summers 1978). The association of Pu‘uokapolei and plains of Kānehili with wandering souls is illustrated in a lament on the death of Kahahana, the paramount chief of O‘ahu, who was killed by his father, Kahekili, after Kahahana became treacherous and killed the high priest Ka‘opulupulu (Fornander 1919:6:297). Fornander (1919:6[2]:292) states that Pu‘uokapolei may have been a *leina* (leaping off place) associated with the wandering souls who roamed the plains of Kaupe‘a and Kānehili, *makai* of the hill.

CSH previously performed an archaeological inventory survey of the petition area in 2006 and 2014 and did not identify any historic features (O‘Hare et al. 2007 and Yucha et al. 2016).

6.3 Burials

‘Ewa was famous for the many limestone caves formed in the uplifted coral, called the “Ewa Karst.” In traditional Hawaiian times, the areas of exposed coral outcrop were undoubtedly more extensive. Where not covered by alluvium or stockpiled material, this Pleistocene limestone outcrop has characteristic dissolution “pit caves” or “sink holes” (Mylroie and Carew 1995). These sinkholes often contain fossil animal bones, and were modified and used in the pre-Contact and historic eras for habitation, agriculture, and for burials. It is possible there were once sinkholes in the western and eastern sections of the project area, however, the evidence of the high degree of bulldozing and grading in the project area makes it likely that any sinkholes would have been filled in or destroyed. No sinkholes were found within the petition area.

Burials have been encountered in the coastal areas of the *ahupua‘a*, however, no burials have been encountered within the petition area. Study participants Nettie Tiffany and the late Arlene Eaton mentioned the ‘Ewa plains is a well known place for sinkhole burials. Ms. Eaton suggested that if people were living in the area, there is a possibility of burials:

My only thought is that for every person that lives in that area, that's where they bury their people . . . We never said anything. If people died, we'd go over there and they'd bury them right there where the house is. We'd never go four-hundred-million-miles away, its right there. All your *'ohana* [family] stay right in the same area. We never went afar, not in the rural areas.

Mr. Kāne also noted that "there is never a certainty regarding burials." Mrs. Tiffany also noted that despite the historic ground disturbance associated with the sugarcane plantations, there may be a chance for burials in the petition area.

Section 7 Results and Analysis

CSH undertook this Ka Pa'akai Analysis at the request of R.M. Towill. The research broadly covered the entire *ahupua'a* of Honouliuli, including the current petition area.

7.1 Results of Background Research

Background research for this analysis yielded the following results, presented in approximate chronological order:

1. The 'Ewa plains, south of the Wai'anae mountain range consist largely of limestone and alluvial deposits pockmarked with karsts formed by the dissolution of limestone by underground fresh water.
2. Honouliuli is the largest *ahupua'a* in the *moku* (district) of 'Ewa. One translation of the name for this district is given as "unequal" (Saturday Press, 11 August 1883). Others translate the word as "strayed" and associate it with the legends of the gods Kāne and Kanaloa.
3. Generally, Honouliuli was described as very hot and dry. Evidence for drought-like conditions are further supported by the relative lack of traditional rain names associated with Honouliuli *Ahupua'a*. The Nāulu rain is the only known associated rain name for Honouliuli. Due to the lack of rainwater, freshwater resources were accessed via a karstic system.
4. In traditional Hawaiian times, the areas of exposed coral (Pleistocene limestone) outcrop were undoubtedly more extensive. According to McAllister (1933), holes and pits in the coral were generally accessed for water, while larger pits, often containing soil, were used for cultivation.
5. Several places on the 'Ewa coastal plain are associated with *ao kuewa*, the realm of the homeless souls. The plains of Kaupe'a is where ghosts wandered among the *wiliwili* (*Erythrina sandwicensis*) trees to catch night moths (*pulelehua*) and spiders (*nanana*) for food (*Ke Au Hou*, 12 July 1911 in Sterling and Summers 1978). The plains of Kānehili were also associated with wandering souls as illustrated in a lament on the death of Kahahana (Fornander 1919:6:297).
6. A cross-*ahupua'a* (east-west) trail that bordered Pearl Harbor, passed through Honouliuli north of Pu'uokapolei, and continued along the coast to Wai'anae following the route of the modern Farrington Highway. A *mauka-makai* (mountains-sea; north-south) trail branched off the cross-*ahupua'a* trail into two offshoots which led to the settlements of Kūalaka'i and One'ula which are located along the southern coast. Early historic maps show the *mauka-makai* trail which led to One'ula crossed through the petition area, however, today no remnants of the trail remain within the project area and petition area, as well as, *mauka* and *makai* of the area.
7. 'Ewa Moku was also a political center and home to many chiefs in its day. Oral accounts of *ali'i* (royalty) recorded by Hawaiian historian Samuel Kamakau date back to at least the twelfth century. *Ali'i* associated with Honouliuli and greater 'Ewa Moku included Kākuhihewa, Keaunui, Lakona, Mā'ilikūhahi, and Kahahana.
8. In 1855, the Land Commission awarded all of the unclaimed lands in Honouliuli, 43,250 acres, to Miriam Ke'ahikuni Kekau'ōnohi (Royal Patent #6971 in 1877; Parcel #1069 in the Land Court office, LCA 11218), a granddaughter of Kamehameha I, and the

heir of Kalanimōkū, who had been given the land by Kamehameha after the conquest of O'ahu (Indices of Awards 1929; Kame'eleihiwa 1992). Kekau'ōnohi was one of Liholiho's (Kamehameha II's) wives, and after his death, she became the wife of Chief Levi Ha'alelea. Upon her death on 2 June 1851, all her property passed to her husband and his heirs. In 1864, Ha'alelea died, and his second wife, Anadelia Amoe, transferred ownership of the land to her sister's husband John Coney (Yoklavich et al. 1995:16).

9. With the increasing foreign interests on O'ahu Island during the last half of the nineteenth century, an array of agricultural enterprises were attempted. In 1877, James Campbell purchased most of Honouliuli Ahupua'a for a total of \$95,000.
10. By 1889, the Ewa Plantation Company was established and lands throughout Honouliuli were designated for sugarcane cultivation. Sugar production exploded with the successful drilling of an artesian well by James Campbell on the 'Ewa Plain. By 1930, Ewa Plantation had drilled 70 artesian wells to irrigate cane lands (Ho'okuleana 2014).
11. The early twentieth century saw the lands of Honouliuli heavily utilized by both civilians and the U.S. military for transportation. The Barbers Point Military Reservation was established in 1921.

7.2 Results of Community Consultations

CSH previously conducted cultural impact assessments within the project area in 2007 and 2011 (Souza et al. 2007 and Cruz et al. 2011). During the consultation process, in-person interviews were conducted with numerous members of the community to document their *mana'o* regarding cultural resources within the project area. In May 2019, CSH reached out to participants in these previous cultural studies to notify them about the Ka Pa'akai Analysis for the proposed Honouliuli WWTP Secondary Treatment project and follow up with them regarding their *mana'o* on cultural resources within the petition area. CSH also reached out to community members who were referred to CSH by OHA and the SHPD. Consultation was received from community members as follows:

1. Shad Kāne, member of the Kapolei Hawaiian Civic Club, Chair of the O'ahu Council of Hawaiian Civic Clubs Committee on the Preservation of Historic Sites and Cultural Properties, Ali'i Ai Moku of the Kapuāiwa Chapter of the Royal Order of Kamehameha Ekahi, and 'Ewa Moku Representative on the State Aha Moku Advisory Committee
2. Nettie Tiffany, *Kahu* of Lanikūhonua and former O'ahu Island Burial Council member, 'Ewa District

7.3 Impacts and Recommendations

Based on the evidence gathered for this analysis, no contemporary or continuing cultural practices were discovered within the petition area. However, two study participants mentioned that the 'Ewa plains is a well-known place for sinkhole burials.

It should be noted that subsurface properties associated with former traditional Hawaiian activities in the petition area, such as artifacts, cultural layers, and burials may be present despite the decades of modern activities. As a precautionary measure, it is recommended that personnel involved in the Honouliuli Wastewater Treatment Plant Secondary Treatment project be informed of the possibility of inadvertent cultural finds, and they should be made aware of the appropriate notification measures to follow. In the unlikely event that previously unidentified subsurface historic properties are encountered by project construction, the project proponents should

immediately stop work and contact SHPD's O'ahu Office. In the event that *iwi kūpuna* (Native Hawaiian skeletal remains) are identified, all earth moving activities in the area will stop, the area will be cordoned off, and the SHPD and Police Department will be notified pursuant to HAR §13-300-40. In addition, in the event of an inadvertent discovery of human remains, it is recommended that recognized cultural and lineal descendants of the area be notified to develop a burial treatment plan, in compliance with HAR §13-300 and HRS §6E-43.

7.4 Analysis

Based on information gathered from the cultural and historical background, and community consultation, no culturally significant resources were identified within the petition area. At present, there is no documentation nor testimony indicating traditional or customary Native Hawaiian rights are currently being exercised "for subsistence, cultural and religious purposes and possessed by ahupua'a tenants who are descendants of native Hawaiians who inhabited the Hawaiian Islands prior to 1778" (Hawai'i State Constitution, Article XII, Section 7) within the petition area. While no cultural resources, practices, or beliefs were identified as currently existing within the petition area, Honouliuli Ahupua'a maintains a rich cultural history.

Honouliuli Ahupua'a is the largest *ahupua'a* in the *moku* of 'Ewa. The environment of Honouliuli is very hot and dry. These environmental limitations forced ingenuity and innovation. *Kama'āina* of Honouliuli used agricultural sinkholes that accumulated water within them via a subterranean water or karst system; this water also contained nutrient-rich sediment allowing plants such as *kalo*, *kī*, and *noni* to survive.

The 'Ewa coastal plain was a place of spiritual significance as it was associated with the *ao kuewa*, the realm of the homeless souls, including the plains of Kaupe'a and Kānehili. The plains of Kaupe'a is where spirits wandered among the *wiliwili* trees to catch night moths and spiders for food (*Ke Au Hou*, 12 July 1911 in Sterling and Summers 1978). The association of the plains of Kānehili with wandering souls is illustrated in a lament on the death of the chief Kahahana, who was killed by his father, Kahekili, after Kahahana killed the high priest Ka'opulupulu (Fornander 1919:6:297).

In traditional times, trails were well used for travel within the *ahupua'a* between *mauka* and *makai* and laterally between *ahupua'a*. A historical trail system existed on O'ahu extending from Honolulu to Wai'anae. A cross-*ahupua'a* (east-west) trail passed through Honouliuli north of Pu'uokapolei, and continued along the coast to Wai'anae following the route of the modern Farrington Highway. Branching off the cross-*ahupua'a* trail was a *mauka-makai* (north-south) trail which split into two offshoots leading to the coastal settlements of Kūalaka'i and One'ula. Early historic maps show the *mauka-makai* trail which led to One'ula crossed through the petition area, however, today no remnants of the trail remain within the project area and petition area, as well as, *mauka* and *makai* of the area.

In pre-Contact Hawai'i, vegetation within the petition area would have been mostly lowland dry shrub and grassland, dominated by species such as *wiliwili*, *lama*, sandalwood, 'a'ali'i, scrub 'ōhi'a and *pili* grass (Cuddihy and Stone 1990:12-15). During the second half of the nineteenth century, the accessibility of Honouliuli lands, including the petition area, to the Hawaiians for gathering or other cultural purposes would have been radically curtailed. By the 1870s, much of the native vegetation was likely stripped by herds of cattle grazing across the 'Ewa Plain. Presently,

the non-cleared portions of the petition area are currently dominated by introduced species such as *kiawe* and the prickly Lions Ear.

Evidence of pre-Contact settlement and land use in the petition area has most likely been destroyed by post-Contact use by historic-era agricultural activities and development associated with the OR&L railroad and the United States military. Despite this loss, a reconstruction of the traditional landscape can still be achieved through an examination of the historic record.

The post-Contact period brought numerous changes to the *ahupua'a* of Honouliuli. Traditional agricultural was rapidly replaced by large-scale commercial ventures. The discovery of artesian water beneath the 'Ewa plains by James Campbell in 1879, led to the establishment of sugarcane plantations in Honouliuli including the Ewa Plantation Company. By the 1930s, the Ewa Plantation encompassed much of the eastern half of Honouliuli Ahupua'a including the petition area. Sisal, a plant used to make fibers for rope and other material, was also being cultivated in Honouliuli in an area adjacent to the petition area.

During this period, a portion of the OR&L railroad line ran across the center of the 'Ewa Plain at the lower boundary of the sugar fields. Remnants of the OR&L ROW have been observed outside the northern boundary of the petition area.

Major land use changes continued in Honouliuli when the U.S. military began development in the area. Military installations in the vicinity of the petition area include Barbers Point Naval Air Station which was in operation from 1942 into the 1990s and Ewa Marine Corps Air Station which was in operation from 1942 to 1952 (Department of Navy BRAC PMO 2006 and World War II Database). During community consultation, interviewee Shad Kāne stated that the cultural layer of 'Ewa still exists today, however, it was buried or filled in by the Navy and the Department of Defense.

Archaeological assessments conducted within the project area (O'Hare et al. 2007 and Yucha et al. 2016) identified no surface Hawaiian features. O'Hare et al. 2007 noted that due to the evidence of extreme ground disturbance of the project area, it is highly unlikely there are any subsurface Hawaiian features remain intact. Portions of the project area are within the mapped area of surface-exposed Ewa karst, a topographic area in which many sinkholes have been found. In the pre-Contact and historic eras, these sinkholes were modified and used for habitation, agriculture, and for burials. No sinkholes were found within the petition area, however, it is possible there were once sinkholes in the western and eastern sections of the project area, which were buried under erosional soils in the historic period. O'Hare et al. 2007 noted that the evidence of the high degree of bulldozing and grading in the project area makes it likely that any sinkholes would have been filled in or destroyed.

No burials have been encountered within the petition area, however, study participants Nettie Tiffany and the late Arlene Eaton mentioned that the 'Ewa plains is a well known place for sinkhole burials. Ms. Eaton also suggested that if people were living in the area, there is a possibility of burials. Mr. Kāne also noted that "there is never a certainty regarding burials."

Based on information gathered from the community consultation effort (Souza et al. 2007 and Cruz et al. 2011), no contemporary or continuing cultural practices are occurring within the petition area, however, members of the community indicated cultural material may remain intact

underground. Most of the people contacted noted the petition area has been heavily altered due to pig farming, military, and ranching activities.

7.5 Ka Pa'akai Analysis

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

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

This analysis includes:

1. Practices which were undertaken in the past;
2. Practices which were undertaken in the past which continue to the present day; and
3. Practices which may be undertaken in the future which may or may not have been undertaken in the past.

Based on information gathered from the cultural and historical background, and the community consultation, culturally significant resources have been identified within the *ahupua'a*. Although not within the petition area, documentation and testimony indicates that traditional and customary Native Hawaiian rights are possessed and currently being exercised within the *ahupua'a* by *ahupua'a* tenants who are descendants of native Hawaiians who inhabited the Hawaiian Islands prior to 1778 (Hawai'i State Constitution, Article XII, Section 7). A former *mauka* to *makai* trail once passed through, or very near, the petition area. This trail is no longer extant. There are no known valued cultural, historical, or natural resources still extant in the petition area.

No known traditional or customary Native Hawaiian rights are exercised in the petition area.

In addition, the *ahupua'a* of Honouliuli maintains a rich cultural history in the exercising of traditional and customary Native Hawaiian rights within the project *ahupua'a*. However, the proposed action will not affect or impair any ongoing traditional and customary Native Hawaiian rights exercised in the *ahupua'a* in which the petition area is located.

Therefore, the information provided in the Ka Pa'akai Analysis demonstrates that the proposed project will not affect or impair any on traditional and customary Native Hawaiian rights within the *ahupua'a* or the petition area.

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Appendix A SHPD Acceptance of Prior Archaeological Assessment for the 'Ewa Industrial Park



LINDA LINGLE
GOVERNOR OF HAWAII



STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
STATE HISTORIC PRESERVATION DIVISION
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CONSERVATION AND RESOURCES ENFORCEMENT
ENVIRONMENT
FOREST AND WILDLIFE
HISTORIC PRESERVATION
KANOA LAKE ISLAND RESERVE COMMISSION
LAND
STATE PARKS

February 10, 2009

Mr. David Shideler
Cultural Surveys Hawai'i
P. O. Box 1114
Kailua, Hawai'i 96734

LOG NO: 2009.0664
DOC NO: 0902WT22
Archaeology

Dear Mr. Shideler:

**SUBJECT: 6E-42 Historic Preservation Review--
Archaeological Assessment--
of the 'Ewa Industrial Park Project, Hono'uli'uli, 'Ewa District, O'ahu Island,
Hawai'i.
TMK: (1) 9-1-069: 003**

Thank you for the opportunity to review this DRAFT Archaeological Assessment (*Archaeological Assessment of the 'Ewa Industrial Park Project, Hono'uli'uli, 'Ewa District, O'ahu Island, Hawai'i. TMK: (1) 9-1-069: 003 (O'Hare, Shideler and Hammatt PhD, March 2007)*). The survey area is 48.18 acres. The proposed project is the construction of an industrial park. No historic properties were recorded.

The initial communication from our office (LOG NO: 2006.3755/DOC NO: 0611amj12) requested some revisions. They included changes in wording in the Scope of Work, a clarification of the distance between crew members during pedestrian survey, an update of Figures 5 and 6, and a discussion on karstic sinkholes. The report was resubmitted and more revisions were requested by Lauren Morawski. These changes are clarification on the need for subsurface testing in the Introduction section; the distance between parallel sweeps in the Methods section; the addition of "View toward" in the captions for two photos, and a sinkhole discussion.

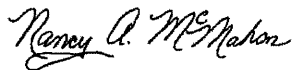
This report is accepted and it meets the minimum requirements for compliance with 6E-8 and Hawaii Administrative Rules (HAR) §13-13-276 *Rules Governing Standards for Archaeological Inventory Studies and Reports*.

The complete, finalized report should be free of errors, contain good quality color photographs, color maps and assigned State site numbers. Once this subject archaeological assessment survey report has received final acceptance pursuant to HAR §13-276, please send one hardcopy of the document, clearly marked FINAL, along with a copy of this review letter and a text-searchable PDF version on CD to the attention of Wendy Tolleson "SHPD Library" at the Kapolei SHPD office.

Mr. David Shideler
Page 2


Please call Wendy Tolleson at (808) 692-8024 if there are any questions or concerns regarding this letter.

Aloha,


A handwritten signature in cursive script that reads "Nancy A. McMahon".

Nancy A. McMahon (Deputy SHPO)
State Historic Preservation Officer

Appendix B SHPD Acceptance of Prior Archaeological Assessment of the Honouliuli Wastewater Treatment Plant Secondary Treatment and Facilities Project



DAVID V. IGE
GOVERNOR OF HAWAII



STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
STATE HISTORIC PRESERVATION DIVISION
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BUREAU OF HISTORICAL
COMMISSIONER OF WATER RESOURCES MANAGEMENT
CONSERVATION AND COASTAL LANDS
CONSERVATION AND RESOURCES ENFORCEMENT
DIVISION

FOREST AND RANGELAND
HISTORIC PRESERVATION
KAROLAWA ISLAND RESERVE COMMISSION
LAND
STATE PARKS

February 3, 2016

David Shideler
Cultural Surveys of Hawaii, Inc.
P.O. Box 1114
Kailua, HI 96734

Log No. 2015.03972
Doc. No. 1602KM06
Archaeology

Dear Mr. Shideler,

SUBJECT: Chapter 6E-8 Historic Preservation Review –
Archaeological Assessment for the Honouliuli Wastewater Treatment
Plant (WWTP) Secondary Treatment and Facilities Project
Honouliuli Ahupua'a, 'Ewa District, O'ahu
TMK: (1) 9-1-013:007

Thank you for the opportunity to review the revised draft report titled *Archaeological Assessment for the Honouliuli Wastewater Treatment Plant (WWTP) Secondary Treatment and Facilities Project, Honouliuli Ahupua'a, 'Ewa District, O'ahu, TMK: [1] 9-1-013:007* (Yucha et al., December 2015). SHPD received the original draft on November 24, 2014, and requested several revisions in a letter dated October 22, 2015 (Log No. 2014.05307, Doc. No. 1509AEM02). We received this revised draft on November 6, 2015; we apologize for the delayed review and thank you for your patience.

This archaeological inventory survey (AIS) was prepared at the request of AECOM Pacific, Inc. The project area totals 101 acres and is bounded by Geiger Road on the south, Roosevelt Avenue on the south and west, Kalo'i Gulch on the east, and the Oahu Railway and Land (OR&L) Right-of-Way on the north. The subject Parcel 007 consists of two recently consolidated parcels (TMK: [1] 9-1-013:007 and [1] 9-1-069:003). The land owner, the City and County of Honolulu, Department of Environmental Services, proposes to update and expand the existing Honouliuli Wastewater Treatment Plant (WWTP) in order to provide secondary treatment and to accommodate projected increased wastewater flows. Selected facilities for improvement include the Central Laboratory, Ocean Team Facilities, Administration Building, Operations Building, Leeward Regional Maintenance, Central Shops, Warehouse, Truck Wash, Processes Supervisory Control and Data Acquisition, Seepage Receiving Station, Odor Control, Grounds Keeping, Janitorial Service and Security, and Honouliuli Water Recycling Facility.

O'Hare et al. (2007) completed an archaeological assessment (AA) for the 48.18 acre northern and eastern portions of the project area (formerly TMK: [1] 9-1-069:003) in support of the 'Ewa Industrial Park Project. The AA report was reviewed and accepted by the SHPD on February 10, 2009 (Log No. 2009.0664, Doc. No. 0902WT22). The remaining 52.82 acres of the project area, which includes the built-up area of the Honouliuli Wastewater Treatment Plant, are addressed within the current AIS (Yucha et al. December 2015).

The archaeological inventory survey involved a 100% pedestrian survey and no subsurface testing. Fieldwork was completed on October 24, 2014. No historic properties were identified during the survey. Per Hawaii Administrative Rules (HAR) §13-284-7, the determination of effect is "no historic properties affected" and the report recommends no further archaeological work. Based on the results of the AIS, SHPD concurs with the effect determination and recommendation of no further work. Pursuant to HAR §13-284-5(b)(5)(A), the negative findings of the archaeological inventory survey are reported as an archaeological assessment.

Mr. Shideler
February 3, 2016
Page 2

The revised report adequately addresses the issues and concerns raised in our earlier correspondence (October 22, 2015; Log No. 2014.05307, Doc. No. 1509AEM02). The report provides sufficient discussion of the project, physical environment, cultural and historical background, previous archaeological studies, methods and field findings, and meets the requirements specified in HAR §13-276-5. **It is accepted.** Please send one hardcopy of the document, clearly marked FINAL, along with a copy of this review letter and a text-searchable PDF version on CD to the Kapolei SHPD office, attention SHPD Library.

Please contact Kimi Matsushima at (808) 692-8027 or at Kimi.R.Matsushima@hawaii.gov if you have any questions or concerns regarding this letter.

Aloha,



Susan A. Lebo, PhD
Archaeology Branch Chief