

Figure 26. 1977 USGS Orthophotoquad aerial photograph, Ewa and Schofield Barracks quadrangles showing the project area



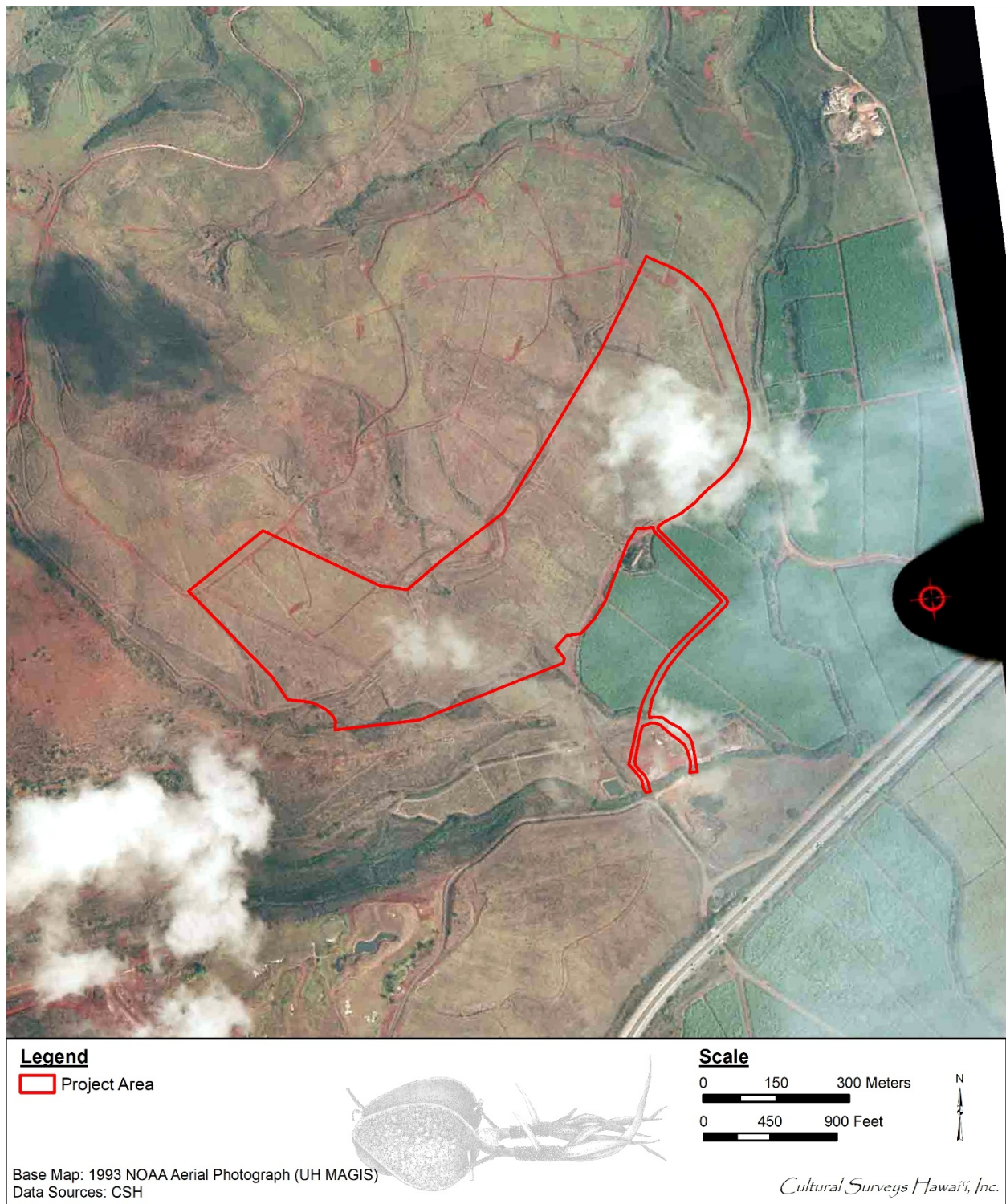


Figure 27. 1993 NOAA aerial photograph (UH MAGIS) showing the project area

## Section 5 Previous Archaeological Research

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Several archaeological studies have been conducted in the vicinity of the project area. This section discusses previous archaeological studies in the area (Figure 28 and Table 1) and identifies the types and locations of previously identified historic properties (Figure 29 and Table 2). There are no sites documented by McAllister (1933) in his early archaeological reconnaissance study of O'ahu in the vicinity of the project area.

### 5.1 Archaeological Investigations in the Vicinity of the Project Area

#### 5.1.1 Bordner 1977

In 1977, the Archaeological Research Center Hawaii, Inc. (Bordner 1977) conducted an archaeological reconnaissance survey of a then proposed Kalo'i Gulch landfill location, 500 m west of the present project area. The study concluded the lower section of the gulch had been extensively modified through quarrying operations and cattle ranching. Foundations of both crushing and loading facilities were noted. In the upper reaches of the property, three walls of possible pre-Contact origin were documented between 1,250 and 1,300 ft elevation and were designated as SIHP #s 50-80-12-2600, -2601 and -2602. These three historic properties were in the extreme, upslope end of the large property more than 1.5 km from the present project area. SIHP # -2600 was a low (only 0.61 m or 2.0 ft high) wall of poorly stacked *pāhoehoe* (smooth, unbroken type of lava), approximately 7.62 m (25.00 ft) long set on top of a small knoll jutting out from the slope. SIHP # -2600 is described as a wall built on the stream terrace cut following the course of the stream, and constructed of stacked *pāhoehoe* with a total length of 67.70 m (222.1 ft), an average height of 0.91 m (3.0 ft) and incorporating in situ boulders into the wall. The wall appeared to have been constructed to protect a stream terrace from erosion. It also retained a terrace measuring approximately 12.0 m (39.4 ft) by 31.0 m (101.7 ft). SIHP # 50-80-12-2602 was a free-standing 18.2-m (59.7-ft) wall of stacked *pāhoehoe* that had the appearance of being a boundary wall. The historic properties were regarded as of "a marginal status" and no further archaeological work was recommended for the area covered in the reconnaissance survey.

#### 5.1.2 Sinoto 1988

In 1988, the Bishop Museum Applied Research Group conducted a surface survey for a then proposed Makakilo Golf Course just southwest of the current project area (Sinoto 1988). The study concluded the majority of the project area had been damaged by severe erosion. No surface remains were documented within the project area and subsurface testing was deemed unnecessary. Just west (outside) of the golf course property, one deteriorated wall segment was documented on the northeast slope of Pu'u Makakilo. The wall, designated SIHP # 50-80-12-1975, may have served as an "historic erosional control feature" (Sinoto 1988:1). Due to the deteriorated condition of the wall remnant, no further work was recommended.

#### 5.1.3 Spear 1996

Scientific Consultant Services, Inc. conducted an archaeological reconnaissance survey of a large area extending from south of the H-1 freeway to the north side of Renton Road (Spear 1996). No historic properties were identified.



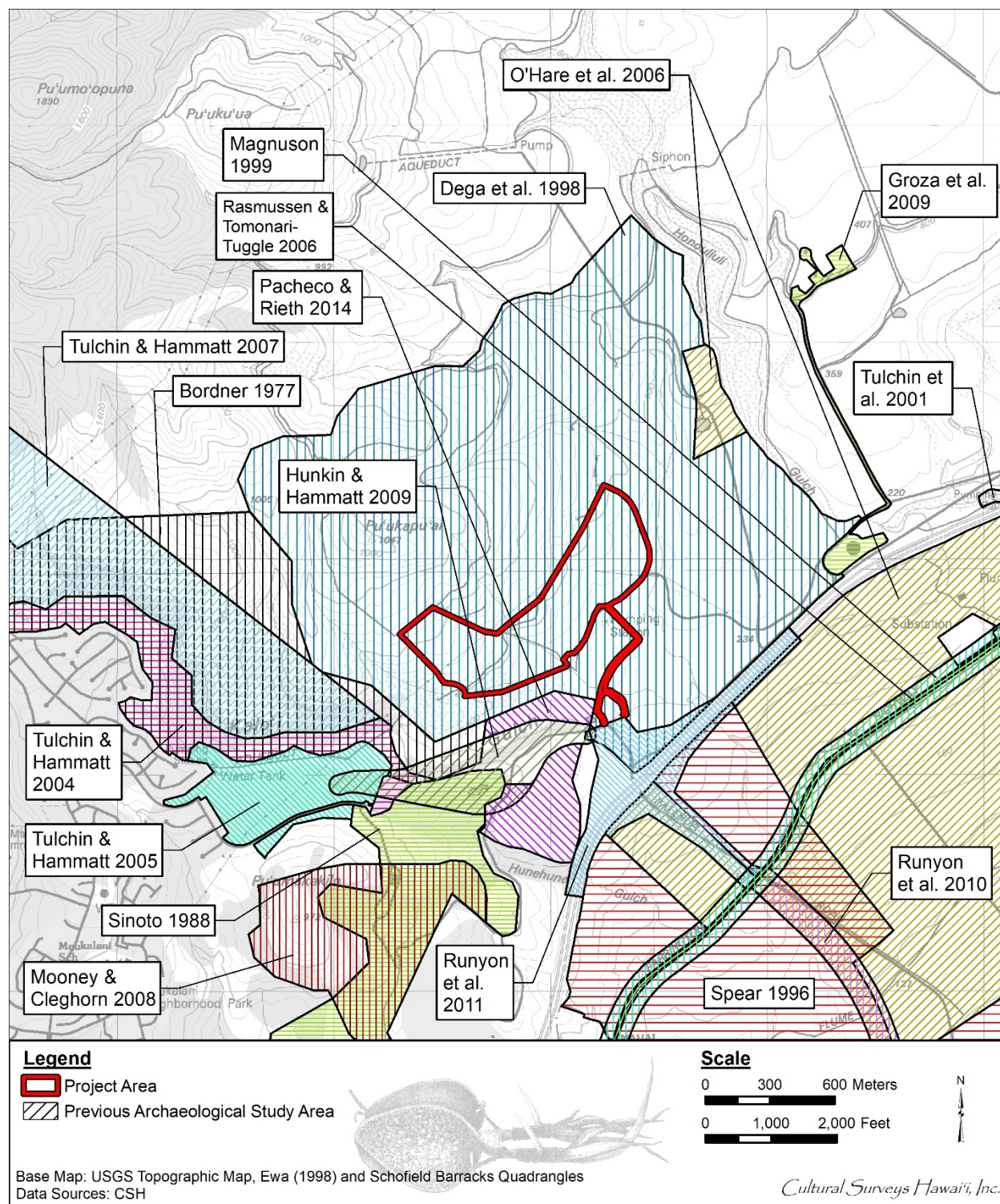


Figure 28. Portion of the 1998 Ewa and Schofield Barracks USGS topographic quadrangles showing the locations of previous archaeological studies in the vicinity (within approximately 1.5 km) of the project area



Table 1. Previous archaeological studies within the vicinity (within approximately 1.5 km) of the project area

Author	Type of Investigation	Location	Report Description and Results
Bordner 1977	Archaeological reconnaissance survey	Proposed Kalo'i Gulch landfill location	Three walls designated as SIHP #s 50-80-12-2600, -2601 and -2602 in extreme west, upslope end of large project area, more than 1.5 km from present project area (and hence are not depicted in Figure 29)
Sinoto 1988	Archaeological reconnaissance survey	Makakilo Golf Course	Low stacked boulder wall, SIHP # 50-80-09-1975
Spear 1996	Archaeological reconnaissance survey	East Kapolei, TMK: [1] 9-1-016:017	No historic properties identified
Dega et al. 1998	Archaeological inventory survey	UH West O'ahu, TMK: [1] 9-2-002:001	Two historic property complexes: historic irrigation and plantation infrastructure system (SIHP # 50-80-08-5593) and Waiahole Ditch System (SIHP # 50-80-09-2268)
Magnuson 1999	Archaeological reconnaissance survey	'Ewa Plain	Identified six concrete bridges, a railroad track, and a set of unidentified concrete features; no SIHP #s assigned
Tulchin et al. 2001	Archaeological inventory survey	Proposed 'Ewa Shaft Renovation project, Honouliuli Gulch, adjacent to west-bound lanes of H-1, TMK: [1] 9-2-001	SIHP # 50-80-08-6370, stone wall alignment; also documented large pumping station and shaft building
Tulchin and Hammatt 2004	Archaeological inventory survey	86-acre proposed Pālehua Community Association, TMKs: [1] 9-2-003:078 por. and 079	Four historic properties identified: a complex of concrete and iron structures associated with industrial rock quarry operations (SIHP # 50-80-12-6680); three boulder mounds believed to be related to land clearing or ditch construction by Oahu Sugar Co. (SIHP # 50-80-12-6681); a small terrace believed to function as a historic water diversion feature (SIHP # 50-80-12-6682); and a remnant portion of Waiahole Ditch (SIHP # 50-80-09-2268)

Author	Type of Investigation	Location	Report Description and Results
Tulchin and Hammatt 2005	Archaeological inventory survey	71-acre proposed Pālehua East B project, Makakilo, TMKs: [1] 9-2-003:076 and 078	Three historic properties identified: pre-Contact agricultural alignment and mound (SIHP # 50-80-12-6666), plantation-era stacked basalt boulder walls and a ditch (SIHP # 50-80-12-6667), and single alignment of upright basalt boulders and a small, low terrace (SIHP # 50-80-12-6668)
O'Hare et al. 2006	Archaeological inventory survey	Ho'opili East Kapolei	Documented six previously identified historic properties: plantation infrastructure (SIHP # 50-80-12-4344); railroad berm (SIHP # 50-80-12-4345); northern pumping station (SIHP # 50-80-12-4346); central pumping station (SIHP # 50-80-12-4347); southern pumping station (SIHP # 50-80-12-4348); and documented four newly identified features of SIHP # 50-80-12-4344: a linear wall, stone-faced berm, concrete ditch, and concrete catchment
Rasmussen and Tomonari-Tuggle 2006	Archaeological monitoring	Waiau Fuel Pipeline corridor	No historic properties identified
Tulchin and Hammatt 2007	Archaeological literature review and field inspection	Approx. 790-acre parcel, TMKs: [1] 9-2-003:002 por. and 005 por.	Documented features interpreted as related to pre-Contact indigenous Hawaiian habitation (SIHP #s 50-80-08-2316 and 50-80-12-2602); historic ranching and related features (SIHP # 50-80-12-2601); and historic quarrying and related features (SIHP # 50-80-12-6680) and various pre- and post-Contact features (designated with temporary #s CSH1–CSH22)
Mooney and Cleghorn 2008	Archaeological reconnaissance survey	TMK: [1] 9-2-003:018	No historic properties identified
Groza et al. 2009	Archaeological inventory survey	TMKs: [1] 9-2-001:001 por., 004, 005, 006, 007 por.; 9-2-002:002	No historic properties identified



<b>Author</b>	<b>Type of Investigation</b>	<b>Location</b>	<b>Report Description and Results</b>
Hunkin and Hammatt 2009	Archaeological inventory survey	TMKs: [1] 9-2-002:006; 9-2-003:079	Documented two newly identified historic properties: irrigation ditches (SIHP #s 50-80-12-6950 and -6951); and one previously identified historic property, Waiahole Ditch (SIHP # 50-80-09-2268)
Runyon et al. 2010	Archaeological monitoring	TMKs: [1] 9-2-002:006; 9-2-003:079	No historic properties identified
Runyon et al. 2011	Archaeological monitoring	TMKs: [1] 9-1-018:001, 003, 004, 005; 9-2-002:001, 006	Documented two historic properties: a water diversion and a trash deposit (SIHP #s 50-80-12-4664 and -7128)
Pacheco and Rieth 2014	Archaeological inventory survey	East Kapolei Solar Farm, TMK: [1] 9-2-002:006 por.	Documented SIHP # 50-80-12-7433, an unpaved early twentieth century agricultural (ranching and/or sugarcane cultivation) road, understood as created between 1918 and 1928

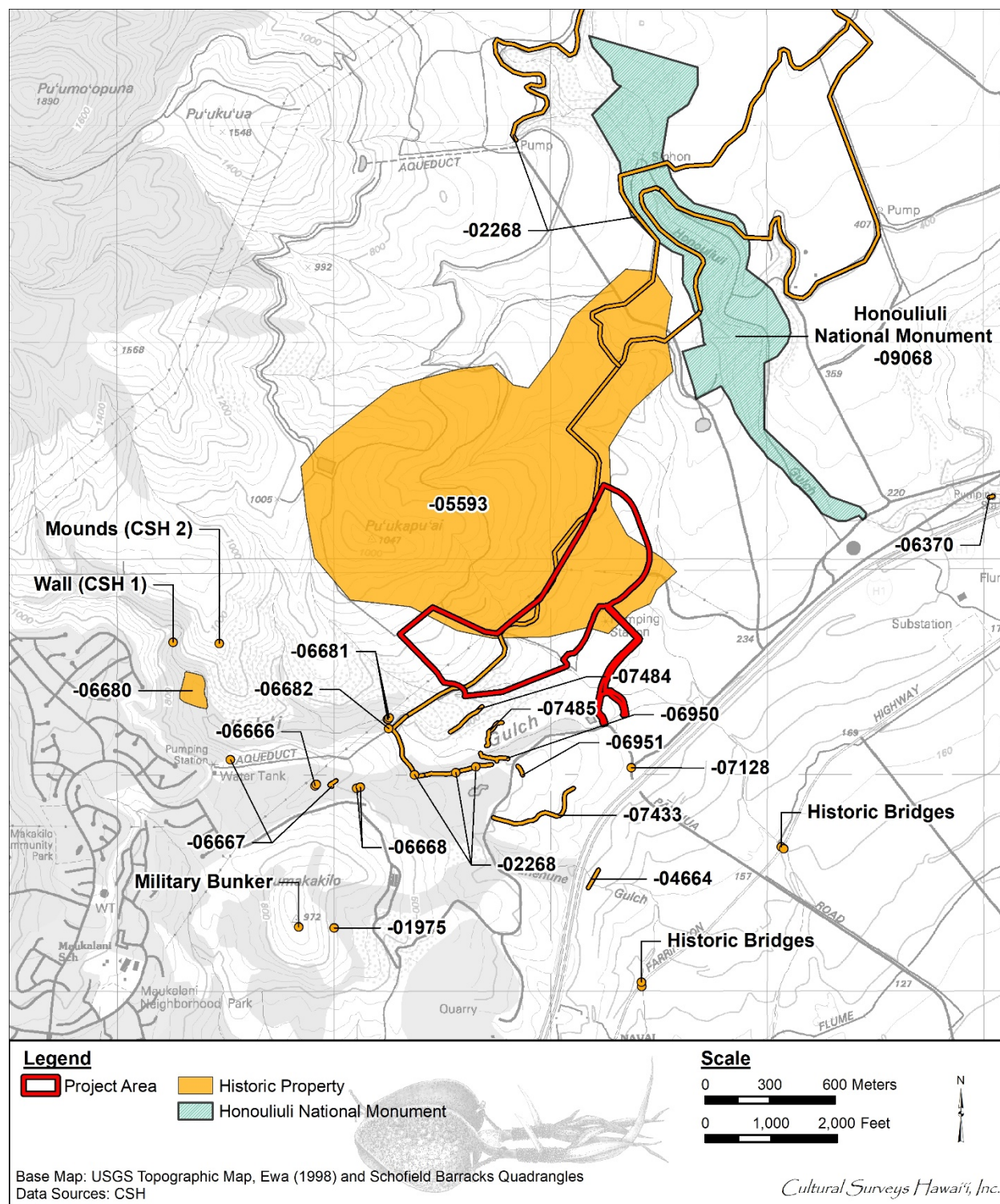


Figure 29. Portion of the 1998 Ewa and Schofield Barracks USGS topographic quadrangles showing the locations of previously identified historic properties in the immediate vicinity of the project area



Table 2. Previously identified historic properties in the vicinity of the project area

SIHP #	Description	Report Author(s)
50-80-08-5593	Plantation-era “flumes, aqueducts, ditches, pumps, and other irrigation features”	Dega et al. 1998
50-80-08-6370	Stone wall alignment, likely associated with cattle ranching or pumping station	Tulchin et al. 2001
50-80-09-2268	Waiahole Ditch System	Goodman and Nees 1991; Hammatt et al. 1996; Dega et al. 1998; Tulchin and Hammatt 2005; Hunkin and Hammatt 2009; Zapor et al. 2018; Shideler and Hammatt 2018
50-80-08-9068	Honouliuli National Monument (Internment Camp)	National Register
50-80-12-1975	Low-stacked boulder wall segment	Sinoto 1988
50-80-12-4664	Historic water diversion structure	Nakamura et al. 1993; Runyon et al. 2011
50-80-12-6666	Alignment and mound	Tulchin and Hammatt 2005
50-80-12-6667	Two walls	Tulchin and Hammatt 2005
50-80-12-6668	Alignment and terrace	Tulchin and Hammatt 2005
50-80-12-6680	Complex of concrete and iron structures associated with industrial rock quarry operations	Tulchin and Hammatt 2005
50-80-12-6681	Three boulder mounds believed to be related to land clearing or ditch construction by the Oahu Sugar Company	Tulchin and Hammatt 2005
50-80-12-6682	Terrace believed to function as an historic water diversion feature	Tulchin and Hammatt 2005
50-80-12-6950	Portion of a plantation-era irrigation ditch	Hunkin and Hammatt 2009
50-80-12-6951	Portion of a plantation-era irrigation ditch	Hunkin and Hammatt 2009
50-80-12-7128	Burned trash fill layer	Runyon et al. 2011

<b>SIHP #</b>	<b>Description</b>	<b>Report Author(s)</b>
50-80-12-7433	Unpaved early twentieth century agricultural (ranching and/or sugarcane cultivation) road, understood as created between 1918 and 1928	Pacheco and Rieth 2014
50-80-12-7484	Post-Contact irrigation ditch portion	Pacheco and Rieth 2014
50-80-12-7485	Post-Contact irrigation ditch portion	Pacheco and Rieth 2014
Historic Bridges	No SIHP #s assigned, no further documentation or mitigation recommended	Magnuson 1999
Military Bunker	WWII-era bunker	Mooney and Cleghorn 2008
CSH 1	Post-Contact wall related to historic ranching	Tulchin and Hammatt 2007
CSH 2 (Mounds)	Two basalt mounds interpreted as possible trail markers	Tulchin and Hammatt 2007



#### **5.1.4 Dega et al. 1998**

In 1998, Scientific Consultant Services, Inc. (SCS) conducted an archaeological inventory survey (AIS) for the University of Hawai'i, West O'ahu Campus project area (Dega et al. 1998). The project encompassed the entirety of the current project area. Several plantation-era "flumes, aqueducts, ditches, pumps, and other irrigation features occurring within the heavily modified landscape of the project area" were noted (Dega et al. 1998:i). The features represented an extensive complex of sugarcane irrigation features used from the 1920s through more recent times. The irrigation complex was designated SIHP # 50-80-08-5593. A portion of the Waiahole Ditch System (SIHP # 50-80-09-2268) (previously recorded by Goodman and Nees 1991) was also documented crossing through the northwest section of the subject parcel and continuing southwest through the lower agricultural fields. No artifacts were recovered from the project area. No further work was recommended for SIHP # 50-80-08-5593.

An overlay of the present project area on the Dega et al. (1998) plan map (Figure 30) indicates that it lies entirely within the south/central portion of that 1998 AIS project. While the Dega et al. (1998) plan map should probably be understood as a sketch, it does indicate certain remnants of plantation infrastructure (designated as SIHP # 50-80-08-5593) were present in the present project area in 1998.

#### **5.1.5 Magnuson 1999**

In 1999, an archaeological reconnaissance survey was completed by International Archaeological Research Institute, Inc. (IARII) for a Farrington Highway Expansion project extending along 5.3 km (3.3 miles) of Farrington Highway between Golf Course Road and Fort Weaver Road with a roughly 61-m (200-ft) wide corridor on each side (Magnuson 1999). The project identified six concrete bridges, one railroad track, and "a set of unidentified concrete features" (Magnuson 1999:17). The study concluded the following:

The sites observed in the Farrington Highway Expansion project are neither exemplary sites of their kind nor unique. Therefore these sites have been adequately recorded during the investigations and no further work is necessary should preservation not be possible. [Magnuson 1999:25]

#### **5.1.6 Tulchin et al. 2001**

CSH archaeologists completed an AIS in support of a proposed 'Ewa Shaft Renovation project. The 'Ewa Shaft project is within Honouliuli Gulch, adjacent to the west-bound lanes of the H-1 Interstate Highway, approximately 1.7 km east of the present project area. That property included a pumping station enclosure and the surrounding area of approximately 1 acre. One historic property was documented, a stone wall alignment designated SIHP # 50-80-08-6370. Subsurface testing was conducted adjacent to the wall. The wall alignment was interpreted as constructed in association with cattle ranching or the pumping station. The study also documented a portion of the large pumping station and shaft building on the property.

#### **5.1.7 Tulchin and Hammatt 2004**

In 2004, CSH conducted an AIS to the west of the current project area for the Pālehua Community Association (PCA) in Makakilo (Tulchin and Hammatt 2004). Three overhang shelters were observed and tested, however, no cultural material was identified during excavation.

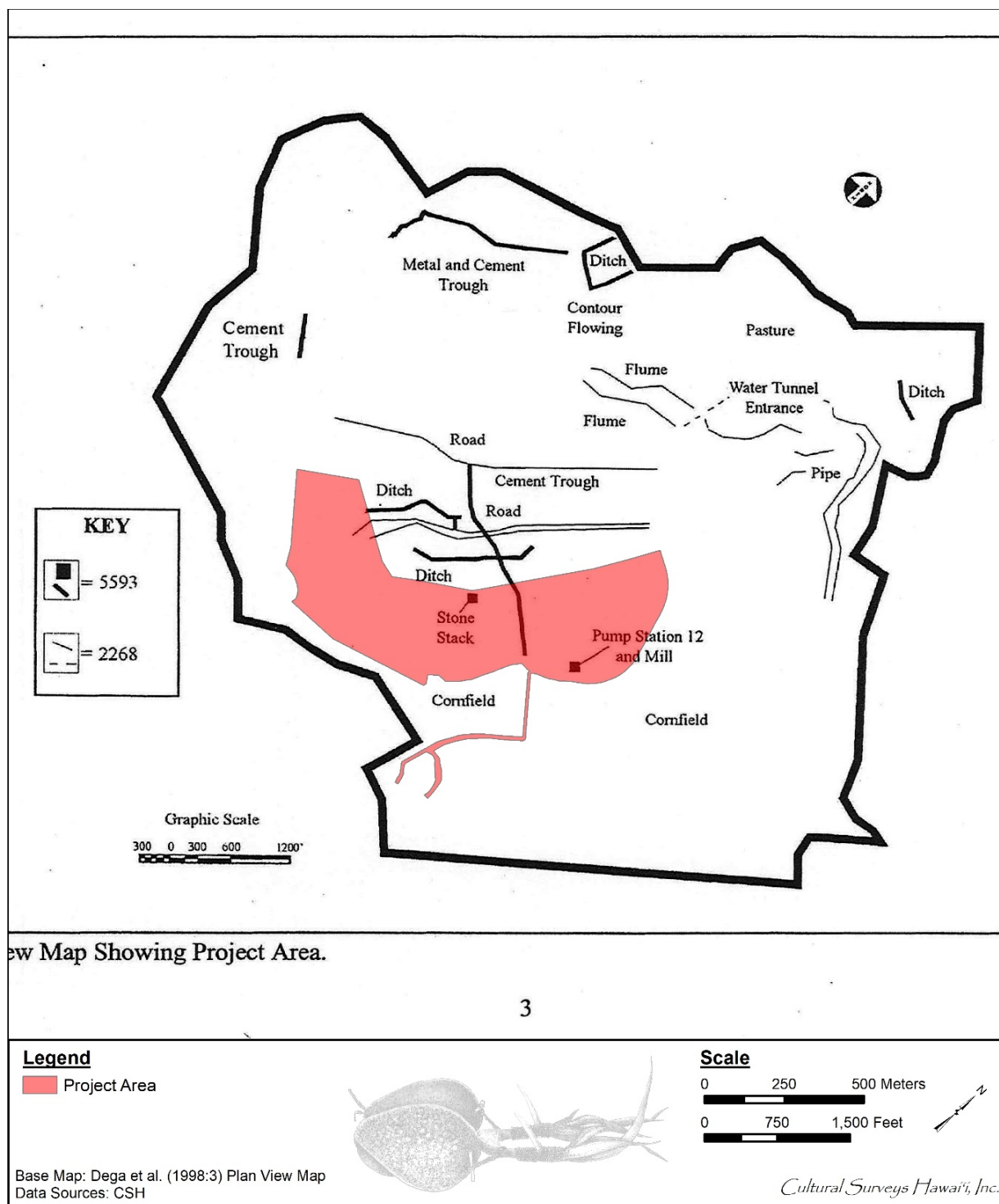


Figure 30. Plan map of the AIS for the University of Hawai'i, West O'ahu Campus project area showing historic properties (as of 1998) with an overlay of the current project area (adapted from Dega et al. 1998:3). This overlay suggests "Pump Station 12 and Mill" and a ditch were documented as within the present project area and another ditch and road and "Stone stack" were adjacent to the north side of the present project area.

The study documented several historic properties, including a complex of concrete and iron structures associated with industrial rock quarry operations (SIHP # 50-80-12-6680); three boulder mounds believed to be related to land clearing or ditch construction by the Oahu Sugar Company (SIHP # 50-80-12-6681); a small terrace believed to function as an historic water diversion feature (SIHP # 50-80-12-6682); and a remnant portion of the Waiahole Ditch (SIHP # 50-80-09-2268).

#### **5.1.8 Tulchin and Hammatt 2005**

In 2005, CSH conducted an AIS west of the current project area for the proposed Pālehua East B project in Makakilo (Tulchin and Hammatt 2005). The study identified three historic properties, including an alignment and a mound (SIHP #s 50-80-12-6666A and B), two walls (SIHP #s 50-80-12-6667A and B), and an alignment and terrace (SIHP #s 50-80-12-6668A and B). SIHP # 50-80-12-6667 is thought to contain remnants of plantation infrastructure. The historic properties were documented in an unnamed gully south of Kalo'i Gulch.

#### **5.1.9 O'Hare et al. 2006**

In 2006, CSH conducted an AIS of approximately 1,600 acres for the East Kapolei project (subsequently known as the Ho'opili project) (O'Hare et al. 2006) to the southeast of the present project area. The Ho'opili project was bounded on the east by Fort Weaver Road, *makai* by Mango Tree Road, and *mauka* by the H-1 Freeway.

Several historic properties documented by the O'Hare et al. (2006) study were previously identified during an archaeological survey in 1990 (Hammatt and Shideler 1990). These previously identified historic properties included SIHP # 50-80-12-4344, plantation infrastructure; SIHP # 50-80-12-4345, railroad berm; SIHP # 50-80-12-4346, northern pumping station; SIHP # 50-80-12-4347, central pumping station; and SIHP # 50-80-12-4348, southern pumping station. Four additional archaeological features were documented by the O'Hare et al. (2006) study. These additional features, grouped under SIHP # 50-80-14-4344, include Feature D, a linear wall along the east bank of Honouliuli Stream; Feature E, a linear wall along the west bank of Honouliuli Stream; Feature F, a stone-faced berm constructed perpendicular to the orientation of the stream; and Feature G, a concrete ditch and concrete masonry catchment basement on the west bank of Honouliuli Gulch. None of the historic properties identified in the O'Hare et al. study (2006) were near the present project area.

#### **5.1.10 Rasmussen and Tomonari-Tuggle 2006**

In 2006, IARII conducted archaeological monitoring along the Waiau Fuel Pipeline corridor, extending from the Hawaiian Electric Company's Barbers Point Tank Farm to the Waiau Generating Station (Rasmussen and Tomonari-Tuggle 2006). The Waiau Fuel Pipeline corridor follows Farrington Highway to Kunia Road, angles *makai* near Kunia Road, then continues east along the OR&L right-of-way near the Pearl Harbor coast. It appears no archaeological monitoring was conducted west of Waipi'o Peninsula, as the corridor to the west had been determined to not be archaeologically sensitive. No historic properties were identified during archaeological monitoring.

#### **5.1.11 Tulchin and Hammatt 2007**

In 2007, an archaeological literature review and field inspection (Tulchin and Hammatt 2007) was done of an approximately 790-acre parcel at Pālehua, Makakilo. The inspection covered



portions of Makaīwa Gulch, Awanui Gulch, and Kalo'i Gulch. Overall, 26 archaeological historic properties were identified during the field inspection. Four of these historic properties were identified during previous archaeological studies. SIHP # 50-80-08-2316 consists of a *ku'ula* stone documented by the Bishop Museum (Kelly 1959). SIHP # 50-80-12-2601, a pre-Contact wall utilized as a water control feature, and SIHP # 50-80-12-2602, a pre-Contact wall possibly utilized for agriculture, were originally documented by Bordner in 1977 (Bordner 1977). SIHP # 50-80-12-6680, a complex of concrete and iron structures associated with industrial rock quarry operations was identified by CSH in 2004 (Tulchin and Hammatt 2004).

Newly identified historic features (designated with temporary CSH site #s) included CSH 1, wall; CSH 2, mounds; CSH 3, large enclosure; CSH 4, platform; CSH 5, mounds; CSH 6, adze; CSH 7, platform; CSH 8, terraces; CSH 9, enclosure and two small caves; CSH 10, enclosure; CSH 11, mound; CSH 12, platform; CSH 13, enclosure; CSH 14 terrace; CSH 15, wall remnant, hearth, and military "foxhole"; CSH 16, terrace and *hau* thicket; CSH 17, level soil along ridge; CSH 18, enclosure; CSH 19, trail; CSH 20 water tunnel; CSH 21, large boulder with petroglyphs; and CSH 22, enclosure with stone uprights. These potential historic properties were not assigned SIHP #s.

Other than the previously reported SIHP # -6680 complex of structures associated with industrial rock quarry operations, none of the identified historic properties were in the vicinity of the present project area.

#### **5.1.12 Mooney and Cleghorn 2008**

In 2008, Pacific Legacy, Inc. conducted an AIS (recorded as an archaeological assessment due to lack of finds) for the proposed Makakilo Quarry expansion (Mooney and Cleghorn 2008). No historic properties were identified; however, the remnants of a modern, abandoned golf course were noted.

#### **5.1.13 Groza et al. 2009**

In 2009, CSH conducted an AIS (recorded as an archaeological assessment) for the Ho'opili project 440-Ft Elevation Reservoir and Water Line project (Groza et al. 2009). No historic properties were identified.

#### **5.1.14 Hunkin and Hammatt 2009**

In 2009, CSH completed an archaeological inventory survey for an approximately 62-acre Makakilo Drive extension project (Hunkin and Hammatt 2009). The project documented two newly identified historic properties (SIHP #s 50-80-12-6950 and -6951). Both historic properties are portions of plantation irrigation ditches. The ditches functioned to transport water for irrigation of the sugarcane fields.

In addition to the newly identified historic properties, a portion of the previously identified SIHP # 50-80-09-2268 alignment was documented. A meeting was held on site within the project area with CSH staff, SHPD staff, and Mr. Shad Kāne on 10 February 2009 to discuss the alignment within the project area. Mr. Kāne led the group along the graded alignment of SIHP # 50-80-09-2268, indicating the ditch had been constructed over the alignment of an ancient Hawaiian trail. SHPD staff observed the plantation irrigation ditch and associated infrastructure and concurred the alignment was a portion of the Waiahole Ditch System. SHPD staff also concluded the ditch was

most likely constructed over the alignment of a pre-Contact Hawaiian trail. SHPD staff expressed a concern that documentation make it clear the pre-Contact Hawaiian trail function was the dominant function of this designated site in the vicinity (which was then developed as the Waiahole Ditch in the early twentieth century).

Two new features (SIHP # 50-80-09-2268 Features B and C) associated with the main ditch were also documented. These features are drainage-related, with the function of preventing storm water and sediment from entering the main Waiahole Ditch.

#### **5.1.15 Runyon et al. 2010**

In 2010, CSH conducted archaeological monitoring for Phase 1B of the North-South Road project (Runyon et al. 2010). No historic properties were identified.

#### **5.1.16 Runyon et al. 2011**

In 2011, CSH completed archaeological monitoring for phase 1C of the North-South Road project (Runyon et al. 2011). Two historic properties were observed. A previously identified historic water diversion structure (SIHP # 50-80-12-4664), originally documented by Nakamura et al. (1993), was observed on the southwest edge of Ramp C. A newly identified burnt trash fill layer (SIHP # 50-80-12-7128) was documented directly under Pālehua Road on the west edge of Ramp A.

#### **5.1.17 Pacheco and Rieth 2014**

In 2014, IARII conducted an AIS (Pacheco and Rieth 2014) for an East Kapolei Solar Farm project (on approximately 19 acres of TMK: [1] 9-2-002:006). The study documented one historic property: SIHP # 50-80-12-7433, an unpaved early twentieth century road related to ranching and/or sugarcane cultivation in the area, understood as created between 1918 and 1928.

#### **5.1.18 Zapor et al. 2018**

CSH conducted a supplemental AIS for the Makakilo Drive Extension project. The survey identified two historic properties: portions of the Waiahole Ditch (SIHP # 50-80-09-2268) and irrigation ditches (SIHP # 50-80-12-6951). The project documented an additional feature of the Waiahole Ditch, an earthen mound and stacked stone wall, interpreted as likely remnants of a reservoir. SIHP # 50-80-12-6951 was observed as an irrigation ditch and associated retaining wall, pipe, valve, and sluice gate remnants.

## Section 6 Community Consultation

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### 6.1 Introduction

Throughout the course of this assessment, an effort was made to contact and consult with Native Hawaiian Organizations (NHO), agencies, and community members including descendants of the area, in order to identify individuals with cultural expertise and/or knowledge of the *ahupua'a* of Honouliuli. CSH initiated its outreach effort in May 2019 through letters, email, telephone calls, and in-person contact.

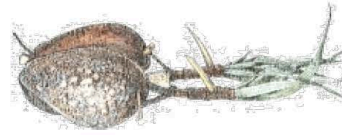
### 6.2 Community Contact Letter

Letters (Figure 31 and Figure 32) along with a map and an aerial photograph of the project were mailed with the following text:

On behalf of AES Distributed Energy, Inc. (AES), Cultural Surveys Hawai'i Inc. (CSH) is conducting a cultural impact assessment (CIA) for the AES West O'ahu Solar Plus Storage Project, Honouliuli Ahupua'a, 'Ewa District, O'ahu Island. AES is proposing a solar photovoltaic (PV) and battery energy storage system (BESS) project to be located approximately 3 miles northeast of Kapolei in West O'ahu. The project area includes approximately 80 acres and is within a portion of tax map key (TMK) 9-2-002:007, which is owned by the University of Hawai'i (UH) in an area commonly referred to as the UH West O'ahu Mauka property. The project area is depicted on a portion of the 2013 Ewa and Schofield Barracks U.S. Geological Survey (USGS) 7.5-minute topographic quadrangles, and 2018 Google Earth aerial photograph.

The proposed project will involve construction and operation of an approximately 12.5-megawatt (MW) ground-mounted solar PV system, coupled with a 50 MW-hour BESS and related interconnection and ancillary facilities. The solar PV panels will be arranged in a series of evenly-spaced rows across the project area. The BESS will consist of containerized lithium-ion battery units and inverters distributed across the project area. This equipment will connect with a project substation via underground electrical conduit. The substation will be constructed adjacent to an existing Hawaiian Electric Company (HECO) 46kV transmission line that traverses the project area and will facilitate interconnection of the project to the HECO grid; an overhead electrical connection between the substation and existing transmission line may be required for interconnection. The project will be accessed via the existing gated entry off Kualakai Parkway and will utilize a network of existing and new onsite access roads. Some site grading will be needed to accommodate the project facilities and to comply with stormwater and civil engineering requirements and some of the existing access roads may need to be improved to support access to the project site. The project area will be secured for use by AES through a long-term lease (or similar agreement) with UH. The Project will be owned and operated by AES, and the power generated by the Project will be sold to HECO under a new 25-year power purchase agreement (PPA). It is anticipated that construction will

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May 2019

Aloha,

On behalf of AES Distributed Energy, Inc. (AES), Cultural Surveys Hawai'i Inc. (CSH) is conducting a cultural impact assessment (CIA) for the AES West O'ahu Solar Plus Storage Project, Honouliuli Ahupua'a, 'Ewa District, O'ahu Island. AES is proposing a solar photovoltaic (PV) and battery energy storage system (BESS) project to be located approximately 3 miles northeast of Kapolei in West O'ahu. The project area includes approximately 80 acres and is within a portion of tax map key (TMK) 9-2-002:007, which is owned by the University of Hawai'i (UH) in an area commonly referred to as the UH West O'ahu Mauka property. The project area is depicted on a portion of the 2013 Ewa and Schofield Barracks U.S. Geological Survey (USGS) 7.5-minute topographic quadrangles, and 2018 Google Earth aerial photograph (Figure 1 and Figure 2).

The proposed project will involve construction and operation of an approximately 12.5-megawatt (MW) ground-mounted solar PV system, coupled with a 50 MW-hour BESS and related interconnection and ancillary facilities. The solar PV panels will be arranged in a series of evenly-spaced rows across the project area. The BESS will consist of containerized lithium-ion battery units and inverters distributed across the project area. This equipment will connect with a project substation via underground electrical conduit. The substation will be constructed adjacent to an existing Hawaiian Electric Company (HECO) 46kV transmission line that traverses the project area and will facilitate interconnection of the project to the HECO grid; an overhead electrical connection between the substation and existing transmission line may be required for interconnection. The project will be accessed via the existing gated entry off Kualakai Parkway and will utilize a network of existing and new onsite access roads. Some site grading will be needed to accommodate the project facilities and to comply with stormwater and civil engineering requirements and some of the existing access roads may need to be improved to support access to the project site. The project area will be secured for use by AES through a long-term lease (or similar agreement) with UH. The Project will be owned and operated by AES, and the power generated by the Project will be sold to HECO under a new 25-year power purchase agreement (PPA). It is anticipated that construction will require approximately 12-15 months, with commercial operations commencing in 2021 or 2022.

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

Figure 31. Community consultation letter page one



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HONOULIULI 172 – CIA for AES West O'ahu Solar Project

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Page 2

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

In advance, we appreciate your assistance in our research effort. If you are interested in participating in this study, please contact Kellen Tanaka at [ktanaka@culturalsurveys.com](mailto:ktanaka@culturalsurveys.com). I am also available by phone at (808) 262-9972.

Mahalo nui loa,

Kellen Tanaka  
Cultural Researcher

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Figure 32. Community consultation letter page two

require approximately 12-15 months, with commercial operations commencing in 2021 or 2022.

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

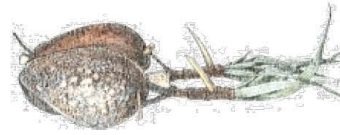
- **General history as well as present and past land use of the project area**
- **Knowledge of cultural sites which may be impacted by future development of the project area—for example, historic and archaeological sites, as well as burials**
- **Knowledge of traditional gathering practices in the project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

In December 2019, CSH was notified of a slight modification to the project area to include additional areas along the perimeter of the project area, as well as maintenance of the existing roadways approaching the project area from the southeast. Revised letters (Figure 33 and Figure 34) along with a map and aerial photograph of the project area were mailed with the following revised text.

In May and June 2019, Cultural Surveys Hawai'i (CSH), on behalf of AES Distributed Energy, Inc., reached out to the Honouliuli community regarding a cultural impact assessment (CIA) for the West O'ahu Solar Project, Honouliuli Ahupua'a, 'Ewa District, O'ahu Island TMK: [1] 9-002:007. As the project area has changed slightly, we are seeking additional input as part of the CIA consultation process.

As described in the previous consultation letter, the proposed West O'ahu Solar project will involve construction and operation of an approximately 12.5-megawatt (MW) ground-mounted solar PV system, coupled with a 50 MW-hour BESS and related interconnection and ancillary facilities. The solar PV panels will be arranged in a series of evenly-spaced rows across the project area. The BESS will consist of containerized lithium-ion battery units and inverters distributed across the project area. This equipment will connect with a project substation via underground electrical conduit. The substation will be constructed adjacent to an existing Hawaiian Electric Company (HECO) 46kV transmission line that traverses the project area and will facilitate interconnection of the project to the HECO grid; an

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January 2020

Aloha,

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As described in the previous consultation letter, the proposed West O'ahu Solar project will involve construction and operation of an approximately 12.5-megawatt (MW) ground-mounted solar PV system, coupled with a 50 MW-hour BESS and related interconnection and ancillary facilities. The solar PV panels will be arranged in a series of evenly-spaced rows across the project area. The BESS will consist of containerized lithium-ion battery units and inverters distributed across the project area. This equipment will connect with a project substation via underground electrical conduit. The substation will be constructed adjacent to an existing Hawaiian Electric Company (HECO) 46kV transmission line that traverses the project area and will facilitate interconnection of the project to the HECO grid; an overhead electrical connection between the substation and existing transmission line may be required for interconnection. The project will be accessed via the existing gated entry off Kualaka'i Parkway and will utilize a network of existing and new onsite access roads. Some site grading will be needed to accommodate the project facilities and to comply with stormwater and civil engineering requirements and some of the existing access roads may need to be improved to support access to the project site. The project area will be secured for use by AES through a long-term lease (or similar agreement) with UH. The Project will be owned and operated by AES, and the power generated by the Project will be sold to HECO under a new 25-year power purchase agreement (PPA). It is anticipated that construction will require approximately 12-15 months, with commercial operations commencing in 2021 or 2022.

Recently, CSH was notified of a slight modification to the project area to include additional areas along the perimeter of the project area, as well as maintenance of the existing roadways approaching the project area from the southeast. Both the original project area and the revised project area are depicted in the attached figures (please refer to Figure 1 and Figure 2 noting "Original Project Area" and Figure 3 and Figure 4 noting "Revised Project Area").

The purpose of this CIA is to gather information about the project area and the surrounding area through research and interviews with individuals that are knowledgeable about this area in order to assess potential impacts to cultural resources, cultural practices, and beliefs as a result of the proposed project. Specifically, the input sought through the CIA process includes the following aspects:

Figure 33. Revised community consultation letter page one



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Page 2

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

In advance, we appreciate your assistance in our research effort. Please contact us by telephone or email if your *mana'o* has changed or been affected by the changes to the project area. Please do not hesitate to contact Kellen Tanaka at [ktanaka@culturalsurveys.com](mailto:ktanaka@culturalsurveys.com) or by phone at (808) 262-9972 with any questions or additional *mana'o*.

Mahalo nui loa,

Kellen Tanaka  
Cultural Researcher

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Figure 34. Revised community consultation letter page two

overhead electrical connection between the substation and existing transmission line may be required for interconnection. The project will be accessed via the existing gated entry off Kualaka'i Parkway and will utilize a network of existing and new onsite access roads. Some site grading will be needed to accommodate the project facilities and to comply with stormwater and civil engineering requirements and some of the existing access roads may need to be improved to support access to the project site. The project area will be secured for use by AES through a long-term lease (or similar agreement) with UH. The Project will be owned and operated by AES, and the power generated by the Project will be sold to HECO under a new 25-year power purchase agreement (PPA). It is anticipated that construction will require approximately 12-15 months, with commercial operations commencing in 2021 or 2022.

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- **General history as well as present and past land use of the project area**
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- **Any other cultural concerns the community might have related to Hawaiian cultural practices within or in the vicinity of the project area**

In most cases, two or three attempts were made to contact individuals, organizations, and agencies. Community outreach letters were sent to a total of 70 individuals or groups, 12 responded, one provided written testimony, and three of these *kama'āina* and/or *kupuna* met with

CSH for more in-depth interviews. The results of the community consultation process are presented in Table 3.

### 6.3 Community Contact Table

Below in Table 3 are names, affiliations, dates of contact, and comments from NHOs, individuals, organizations, and agencies contacted for this project. Results are presented below in alphabetical order.

Table 3. Community contact table

Name	Affiliation	Comment
Alaka'i, Robert	Cultural practitioner	Letter and Figures sent via USPS 14 May 2019 Letter and Figures sent via email 15 May 2019 Letter and Figures sent via email 28 June 2019 Revised Letter and Figures sent via email 3 January 2020
Barbieto, Leda	Raised in Ewa Plantation (Banana / Varona Camp)	Letter and Figures sent via USPS 14 May 2019 Letter and Figures sent via USPS 27 June 2019 Revised Letter and Figures sent via USPS 3 January 2020
Barbieto, Pio	Raised in Ewa Plantation (Banana / Varona Camp)	Letter and Figures sent via USPS 14 May 2019 Letter and Figures sent via USPS 27 June 2019 Revised Letter and Figures sent via USPS 3 January 2020
Basham, Leilani	Associate Professor of Hawaiian-Pacific Studies, University of Hawai'i (UHWO)	Letter and Figures sent via email 15 May 2019 Letter and Figures sent via email 28 June 2019 Revised Letter and Figures sent via email 3 January 2020
Berg, Tom	Former Councilman, District 1	Mr. Berg contacted CSH via email 19 August 2019. His comments are provided below verbatim: <i>Please accept my comments for the Cultural Impact Assessment – AES West Oahu Solar and Storage Project- Please see attached [Tom Berg's letter is provided in full in Appendix A]. In brief- I captured hundreds of sightings of pueo on camera-many are on youtubes- these pueo are along the Hunehune and Kaloi and Honouliuli Gulch Corridor which is served by the hill/slope where you favor the development. But with all this evidence of pueo right there on youtubes- to this day, UHWO / Attorney General / UH BOR / DLNR / USFWS / and OEQC claim in concert the videos are "fake" -</i>



Name	Affiliation	Comment
Berg, Tom (cont.)	Former Councilman, District 1	<p><i>How did they do that--come to the conclusion my videos of pueo are fake?</i></p> <p><i>The answer is- the proof- smoking gun if you will- whereby the Hawaii State Attorney General Claire Connors wrote a letter to State Representatives Bob McDermott and Rida Cabanilla on February 26, 2019 that reads- paraphrasing [following bold text is in the original]:</i></p> <p><b><i>“No pueo use the property at UHWO- for no habitat is present on the property for the pueo to use- and thus, no pueo and their habitat existed or is on the property- per scientific research, surveys, and the Environmental Impact Statement done for the property.”</i></b></p> <p><i>Result? Entire pueo habitat destroyed. Pueo wrongfully extirpated from the property due to faulty protocol to inventory for these species from the onset.</i></p> <p><i>But alas- everyone can see with their own eyes two pueo engaged in courtship behavior at UHWO in these opening scenes [following bold text is in the original] -see <b>video link pasted below</b>- and it's a travesty our Attorney General would lie like this (and Chair DLNR Suzanne Case) and refute these scenes as rather being “fake and manufactured” and actually promote a faulty and deceptive representation of the property. The research/surveys that the Attorney General referenced in her letter covered up the fact the survey and research failed to include /physically go to the property for five months during the period/season when the pueo use and occupy UHWO: [link to Chant for Pueo @ UHWO by Michael Kumukauoha Lee]</i></p> <p><i>The pueo (and Hoary Bat) have been wrongfully extirpated from UHWO Makai Segment- and have henceforth, as can be proven, “transferred” their ecosystem/reliance from UHWO Makai Segment to the hill/UHWO Mauka Segment that you want to develop and place solar panels on.</i></p> <p><i>Remember now- DBEDT is bent on allowing what I have deduced to be possible illegal illumination of lighting on the Monsanto farm fields right next to your proposed solar project. The glare from these lights will most likely blind many avian species when reflected from your solar panels- at least contribute to their peril.</i></p> <p><i>Question is- are you going to adequately look for the bats and pueo or not at the solar project site before you blitz the area- what will be your protocol be to look for the endangered species on the property?</i></p>

Name	Affiliation	Comment
Berg, Tom (cont.)	Former Councilman, District 1	<p>CSH replied via email 6 September 2019: <i>Mahalo for your response. We appreciate your input and acknowledge your concerns regarding the pueo and 'ōpe'ape'a habitat within the project area and the importance of these species in Hawaiian culture. Your comments and concerns will be incorporated and addressed in the cultural impact assessment. Other due diligence studies that are being conducted for the project include an assessment of biological resources; your input regarding survey protocols for the two species will be shared with the biologists. The results of both the cultural and biological due diligence studies and impact analyses for the project will be included in an environmental assessment (EA) which will be published for public review.</i></p> <p>Mr. Berg replied via email 6 September 2019: <i>With the assistance of Senator Mike Gabbard, we are now astute as to what the illumination of the night sky is all about near the proposed solar project @ Monsanto.</i></p> <p><i>Thank you for responding and please do include the lighting information- provided with and by Senator Gabbard's Office/and DBEDT---Lights are used for soy bean growth and lighting are able to violate State Illumination Law as farmers were given waivers to blind migratory species.</i></p> <p><i>Please do inquire with Project Pueo Biologist Team- Dr. Melissa Price- and Dr. Javier Cotin and USFWS Jenny Hoskins- and DOFAW Biologist Afsheen Siddiqi- about pueo protocol.</i></p> <p><i>Mind you- this Pueo team approved of the FEIS (2005) for 500-acres of property known as UHWO - saying no pueo are there--</i></p> <p><i>I should say rather - these pueo experts had no objections to the FEIS protocol used at UHWO-----whereby in the biological survey for pueo at UHWO- get this---- the observer only looked for a few hours TOTAL over a period of two days within a week during the month of April when the pueo are not there.....and to cover 500-acres-----and the DLNR stated in writing in the FEIS for UHWO--- "That was a thorough inventory process to search for pueo- satisfactory."</i></p> <p><i>DLNR went on to state---</i></p> <p><i>"That's good enough of a look for us- only 3-4 hours of observation need take place to determine on 500-acres if pueo are on the property or not." ---And – in the FEIS for UHWO- they looked mid-morning hour- not before sunrise or at sunset when pueo are active----but mid morning when that bird ain't to be seen.</i></p>

Name	Affiliation	Comment
Berg, Tom (cont.)	Former Councilman, District 1	<p><i>DLNR has proven they are corrupt and very dishonest indeed--</i></p> <p><i>--</i></p> <p><i>These Project Pueo experts know that pueo do not have a defined breeding season- and are plot hoppers- and will deploy a foraging ecology- a breeding ecology- at different times of the seasons- and hence, these experts have stated that it is prudent to have the biological survey for pueo be conducted year round.</i></p> <p><i>These same pueo experts will also state the observation needs to take place at sunset and sunrise- if to be a proper protocol deployed.</i></p> <p><i>Can you answer if that will be done on this solar property? Year round observation?</i></p> <p><i>I have CC'd the Project Pueo experts in this email to have them confirm what a proper protocol of a duration of time should be deployed in which to observe a property / conduct the inventory/survey.</i></p> <p><i>I hope a three to four hour look on one day, then another couple of hours of a look on another day is not the protocol you will be using- and to do it while sitting in a car eating a burger and sipping on a milk shake. . . . like the protocol they used for UHWO.</i></p> <p><i>CSH sent summary of written testimony to Mr. Berg for approval via email on 2 October 2019</i></p> <p><i>Mr. Berg replied via email 3 October 2019:</i></p> <p><i>Wow- it's beautiful- your work- my verbiage was a bit sloppy- So- I found two places where I made a mistake- and two areas I lacked the supporting documentation- four points total---</i></p> <p><i>1. On page 2- I stated it was the UHWO Mauka Segement- oops- I meant the <b>Makai</b> Segment-</i></p> <p><i>And - the date the FEIS was executed- accepted and signed by the Governor was in February of 2007, and not executed in 2005 or 2006 where referenced. Maybe the inventory exercise took place in 2005/2006- but it wasn't codified until 2007-</i></p> <p><i>2. Date was 2007- date it was accepted.</i></p> <p><i>3. I should have included the video links to justify the claim of Willful Indifference, Institutional Prejudice, Administrative Bias- - I am making a serious claim here- and this two-part video is my evidence to defend and substantiate my claim- it would be appreciated if you would attach it somehow---</i></p> <p><i>[link to Mike Lee: The Willful Indifference /Pueo Habitat @ UHWO p.1; Mike Lee Willful Indifference @ UHWO p. 2]</i></p> <p><i>This is relevant for the purpose that pueo extirpated from UHWO Hunehune and Kalio Gulches - headed mauka for</i></p>

Name	Affiliation	Comment
Berg, Tom (cont.)	Former Councilman, District 1	<p><i>refuge- they can't go east- can't go west- can't go south- so they went north up the gulches as this was their only option- and they need the slopes where these solar farm(s) are to be placed to have habitat for the pueo to forage- of course, only if the pueo has been determined as present via an adequate survey performed for the property ----</i></p> <p><i>4. And finally- the lights that blind the bats and owls- and others- these grow lights- may have been the cause of this barn owl to lose its eye- this owl was found dead one -half mile from the solar site- and this video is relevant as evidence - for I captured it flying back and forth under the grow lights- I have a youtube on it- not included below- and just a few weeks later- it died with this eye injury---DLNR refused to accept the carcass for a necropsy.</i></p> <p><i>I would appreciate if this evidence in the video- were too added- to support and substantiate my claim - for since no necropsy was performed, my claim in the video may be wrong- and the owl did not suffer from rat bait poison- but from the grow lights- so the evidence in the video is all we have to make a deduction- could be relevant if found to be a pattern latter on- best to include it even though my assessment may be pure conjecture- I can't prove what killed this owl--- your call:</i></p> <p><i>[link to Brought to you by RAT Bait Poison/DEAD BARN OWL 7.22.19]</i></p> <p><i>Mahalo! My sentence structure is not great- plenty of errors on my end- but that's fine - you captured my points- well done. Your work is appreciated.</i></p> <p><i>Mr. Berg approved interview summary via email 3 October 2019: There is one change--- DOFAW---- is: Division of Forestry and Wildlife- under DLNR.</i></p> <p><i>This concludes my review of the submission- however, omitted from it- is that nearby - is the Honouliuli Internment Camp US National Park Service development-</i></p> <p><i>"Who conducted the survey for pueo and bats for that project- if executed already?"</i></p> <p><i>I can't find status on that--- to then include that subject for comment-</i></p> <p><i>Revised Letter and Figures sent via email 3 January 2020</i></p> <p><i>Mr. Berg replied via email 3 January 2020: Yes- I have issues on the changes - it appears the expansion to the south encroaches upon the gulch area- and or rather erodes any current foliage buffer of the gulch that is provided to wildlife-- this buffer appears to be taken /consumed by the project---</i></p>

Name	Affiliation	Comment
Berg, Tom (cont.)	Former Councilman, District 1	<p><i>How long do I have until the deadline to get you comments on this notice?</i></p> <p><i>Why is it necessary to encroach upon the gulch?</i></p> <p><i>Is there an explanation?</i></p> <p><i>Who did the biological survey for this project- or will there be one in the future before development?</i></p> <p>CSH replied via email 7 January 2020: <i>The client has provided answers to your questions regarding the gulch area and the biological survey for the proposed project.</i></p> <p><i>AES does not intend to build any project facilities within the gulch along the southern boundary; however, the project area boundary has been adjusted to provide flexibility for natural features such as landscaping if warranted (either for visual screening purposes or in response to specific comments received as part of the cultural impact assessment). The preliminary project plans include maintenance of a natural vegetative buffer along the gulch.</i></p> <p><i>As part of the due diligence studies for the project, a general biological survey was conducted by Tetra Tech. In addition, surveys have been conducted specifically for pueo based on the protocol defined for The Pueo Project. Consistent with your previous input, the team has consulted with the State of Hawaii Department of Land and Natural Resources Division of Forestry and Wildlife (DOFAW) as well as researchers with The Pueo Project. This information will be detailed in the Draft Environmental Assessment, which is expected to be published in early 2020.</i></p> <p>Mr Berg replied via email 8 January 2020: <i>I don't see any reference to any studies from Project Pueo being conducted on the property in question- do you?</i></p> <p><i>Please take a gander- see files attached [Mr. Berg attached pdfs of The Pueo Project Final Report April 2017-March 2018; The Pueo Project Annual Report 2018; xcel file of UHWO pueo survey data] if can- what do you conclude?</i></p> <p><i>Was there a separate commissioned exercise conducted for the solar area not in these reports- ?</i></p> <p>CSH replied via email 10 January 2020: <i>Thank you for forwarding the attachments - we agree that the Pueo Project data do not appear to include surveys within the project area. The pueo surveys conducted within the project area, as referenced in our previous response, were not conducted by Pueo Project researchers as part of their research project. Rather, these were conducted as part of the due diligence efforts for the proposed solar project. These surveys were</i></p>



Name	Affiliation	Comment
Berg, Tom (cont.)	Former Councilman, District 1	<i>conducted by qualified biologists according to the protocol that was established for the Pueo Project (see Appendix 1 of the Final Report); DOFAW specifically references this protocol as the best methodology for pueo surveys. The results of these surveys will be included in the Draft Environmental Assessment, which is expected to be published in early 2020. Mr. Berg replied via email 10 January 2020: Ok- mahalo-</i>
Bond, John	Kanehili Cultural Hui	Letter and Figures sent via USPS 14 May 2019 Letter and Figures sent via USPS 27 June 2019 Mr. Bond replied via telephone on 28 June 2019 requesting letter and figures via email CSH followed up with Mr. Bond via email 6 August 2019 Revised Letter and Figures sent via USPS 3 January 2020
Caceras, Mana Kaleilani	OIBC Representative for 'Ewa	Letter and Figures sent via email 15 May 2019 Letter and Figures sent via email 28 June 2019 Mr. Caceras replied via email on 13 August 2019: <i>E kala mai for not responding to your earlier request, been in the field quite a bit lately. I do not personally know of any mo'olelo or cultural sites within the proposed project area but here is a short list of people who might. A few months ago I sat in a section 106 consultation for the Makakilo Drive Extension Project and these three gentlemen have so much knowledge of the area.</i> <i>Mr. Joseph Kūhiō Lewis, President, Kapolei Community Development Corporation</i> <i>Mr. Shad Kane, President, Kalaeloa Heritage and Legacy Foundation and Aha Moku Representative</i> <i>Mr. Douglas "McD" Philpotts, Hawaiian Cultural Practitioner</i> <i>Have a great evening.</i> CSH replied via email 14 August 2019 Revised Letter and Figures sent via email 3 January 2020 Mr. Caceras replied via email 15 January 2020: <i>Mahalo Kellen. Will look through the document and let you know if we have any information that could be useful to your CIA.</i> <i>Have a great weekend</i> CSH replied via email 23 January 2020
Cayan, Phyllis	Intake Specialist, SHPD	Letter and Figures sent via email 15 May 2019 DLNR.Intake.SHPD replied via email on 20 May 2019: <i>Aloha, your submittal is in the queue for review by the History &amp; Culture Branch and is assigned log 2019.01148 for reference. Direct all inquiries on this matter to Regina Hilo and Hinano Rodrigues at their emails above.</i>

Name	Affiliation	Comment
		Revised Letter and Figures sent via email 3 January 2020
Cordy, Ross	Professor of Hawaiian-Pacific Studies, University of Hawai'i (UHWO)	Letter and Figures sent via email 15 May 2019 Letter and Figures sent via email 28 June 2019 Revised Letter and Figures sent via email 3 January 2020
Cox, Malia	DHHL	<p>CSH contacted Ms. Cox via email 16 September 2019: <i>My name is Kellen Tanaka. I am a cultural researcher with Cultural Surveys Hawaii (CSH) and have been assisting with the cultural impact assessment for the AES West O'ahu Solar Plus Storage Project. We were forwarded DHHL's comments for the pre-assessment for the Environmental Assessment for the AES West O'ahu Solar Project. We would like to follow up with DHHL's recommendations of consulting with Hawaiian Homestead community associations and Native Hawaiian Organizations. In the letter, it states there are six Hawaiian Homestead communities less than three miles from the proposed project. We have reached out to the Kanehili Hawaiian Homestead Association, Kapolei Community Development Corporation, Kaupea Homestead Association, and the Malu'ohia Residents Association which were mentioned in the letter. Could you assist us in identifying the other two Hawaiian Homestead communities and contact information so we may reach out to them?</i></p> <p>Ms. Cox replied via email 17 September 2019: <i>Kauluokahai Is the newest community. I don't know that they have stood up a association at this time. KCDC might be able to help with identifying appropriate individuals in that community. Ill get back to you tomorrow on the remaining organization. I believe it is the undivided interests group, but will have to check my notes when I get back into the office tomorrow.</i></p> <p>Ms. Cox replied via email 18 September 2019: <i>Attached, please find a copy of a portion of the latest lease report submitted to the HHC commission on 9/16/19. I've highlighted the communities identified on the report. Hoolimalima lessees are part of Maluohai resident community. If you need more information about the communities, please contact homestead services division (HSD)</i></p> <p>Revised Letter and Figures sent via email 3 January 2020</p>
Crabbe, Kamana'o-pono	Ka Pouhana of OHA	Letter and Figures sent via USPS 14 May 2019 Letter and Figures sent via USPS 27 June 2019

Name	Affiliation	Comment
Cullen, Ty J.K.	Representative, House District 39	Letter and Figures sent via USPS 14 May 2019 Letter and Figures sent via email 15 May 2019 Letter and Figures sent via email 28 June 2019 Revised Letter and Figures sent via email 3 January 2020
DaMate, Leimana	Executive Director, DLNR-Aha Moku	Letter and Figures sent via USPS 14 May 2019 Letter and Figures sent via email 15 May 2019 Letter and Figures sent via email 28 June 2019 Revised Letter and Figures sent via email 3 January 2020 Ms. DaMate replied via email 8 January 2020: <i>Mahalo for contacting the Hawaii State Aha Moku and I would be happy to forward your request to our Aha Moku Representative Shad Kane, to whom I am encouraging a response to your email. Aside from being a historian of Ewa, and Honouliuli Ahupua'a, Shad is also in contact with generational cultural practitioners from the ahupua'a, including Kehaulani Lum (to whom I have also copied this email). I have also included Rocky Kaluhiwa, the Aha Moku Advisory Committee (AMAC) Chairperson for the State of Hawaii so she is aware of the activities on O'ahu. Rocky is also the AMAC rep for the Island of O'ahu. I am confident that between the three of these practitioners, you will be able to get answers and guidance for your project. Please feel free to contact me should you have any questions or concerns.</i> CSH replied via email 9 January 2020
De Santos, Kahulu	Cultural Advisor, Aulani, A Disney Resort and Spa	Letter and Figures sent via USPS 14 May 2019 Letter and Figures sent via USPS 27 June 2019 Revised Letter and Figures sent via USPS 3 January 2020
Eaton, Ku'uwainani	Hoakalei Cultural Foundation	Letter and Figures sent via USPS 14 May 2019 Mail returned 17 May 2019
Farden, Hailama	President, Association of Hawaiian Civic Clubs	Letter and Figures sent via USPS 14 May 2019 Letter and Figures sent via email 15 May 2019 Letter and Figures sent via email 28 June 2019 Revised Letter and Figures sent via email 3 January 2020
Faulker, Kirsten	Executive Director, Historic Hawai'i Foundation	Letter and Figures sent via USPS 28 May 2019 Letter and Figures sent via email 28 June 2019 Revised Letter and Figures sent via email 3 January 2020
Hanohano, Anolani	Kānehili Hawaiian Homestead	Letter and Figures sent via email 15 May 2019 Letter and Figures sent via email 28 June 2019 Revised Letter and Figures sent via email 3 January 2020

Name	Affiliation	Comment
Hilo, Regina	Burial Sites Specialist, SHPD	Letter and Figures sent via email 15 May 2019 Letter and Figures sent via email 28 June 2019 Ms. Hilo replied via email 28 June 2019: <i>Mahalo nui for sharing this. I'll forward to my colleagues.</i> CSH replied via email 28 June 2019 Revised Letter and Figures sent via email 3 January 2020
Holt Takamine, Victoria	Executive Director, PA'I Foundation	Letter and Figures sent via USPS 14 May 2019 Letter and Figures sent via email 15 May 2019 Letter and Figures sent via email 28 June 2019 Revised Letter and Figures sent via email 3 January 2020
Gabbard, Mike	Senatorial District 20	Letter and Figures sent via USPS 14 May 2019 Letter and Figures sent via email 15 May 2019 Senator Gabbard replied via email 15 May 2019: <i>Mahalo for the information.</i> CSH replied via email 9 July 2019 Revised Letter and Figures sent via email 3 January 2020
Ito, Wallace K.	KUA Ewa Limu Project	Letter and Figures sent via email 22 May 2019 CSH followed up with Mr. Ito via email 6 August 2019 Mr. Ito replied via email 21 August 2019: <i>Sorry for not following through sooner. I just forwarded your request to other organizations doing malama 'aina work in the Ewa Moku. You are cc'd on that so you should have received it a few minutes ago.</i> CSH replied via email 21 August 2019 Revised Letter and Figures sent via email 3 January 2020
Kai, G. Umi	President, 'Aha Kāne	Letter and Figures sent via USPS 14 May 2019 Letter and Figures sent via email 15 May 2019 Letter and Figures sent via email 28 June 2019 Revised Letter and Figures sent via email 3 January 2020
Kaleikini, Ali'ikaua	Cultural descendant	Letter and Figures sent via USPS 14 May 2019 Letter and Figures sent via USPS 27 June 2019 Revised Letter and Figures sent via USPS 3 January 2020
Kaleikini, Hāloa	Cultural descendant	Letter and Figures sent via USPS 14 May 2019 Letter and Figures sent via USPS 27 June 2019 Revised Letter and Figures sent via USPS 3 January 2020
Kaleikini, Kala	Cultural descendant	Letter and Figures sent via USPS 14 May 2019 Letter and Figures sent via USPS 27 June 2019 Revised Letter and Figures sent via USPS 3 January 2020
Kaleikini, Mahiamoku	Cultural descendant	Letter and Figures sent via USPS 14 May 2019 Letter and Figures sent via USPS 27 June 2019 Revised Letter and Figures sent via USPS 3 January 2020

Name	Affiliation	Comment
Kaleikini, Moehonua	Cultural descendant	Letter and Figures sent via USPS 14 May 2019 Letter and Figures sent via USPS 27 June 2019 Revised Letter and Figures sent via USPS 3 January 2020
Kaleikini, No'eau	Cultural descendant	Letter and Figures sent via USPS 14 May 2019 Letter and Figures sent via USPS 27 June 2019 Revised Letter and Figures sent via USPS 3 January 2020
Kaleikini, Paulette Ka'anohi	Cultural descendant	Letter and Figures sent via USPS 14 May 2019 Letter and Figures sent via email 15 May 2019 Letter and Figures sent via USPS 27 June 2019 Letter and Figures sent via email 28 June 2019 Revised Letter and Figures sent via USPS 3 January 2020 Revised Letter and Figures sent via email 3 January 2020
Kaleikini, Tuahine	Cultural descendant	Letter and Figures sent via USPS 14 May 2019 Letter and Figures sent via USPS 27 June 2019 Revised Letter and Figures sent via USPS 3 January 2020
Kane, Shad	'Ewa Moku Representative, Aha Moku; Kalaeloa Heritage and Legacy Foundation	Letter and Figures sent via USPS 14 May 2019 Letter and Figures sent via email 15 May 2019 Letter and Figures sent via email 28 June 2019 CSH spoke with Mr. Kane via telephone 13 August 2019: <i>Mr. Kane stated that he is not in opposition to the proposed project. He noted the project area has been previously disturbed by sugar cane production.</i> Revised Letter and Figures sent via email 3 January 2020
Kanekoa, Mikiala	Hālau 'o Kaulaulau'e	Letter and Figures sent via USPS 14 May 2019 Letter and Figures sent via email 15 May 2019 Letter and Figures sent via email 28 June 2019 Revised Letter and Figures sent via email 3 January 2020
Kauahi, R. Kaiulani Vincent	Culture and Arts Coordinator, Dept. Parks and Recreation	Letter and Figures sent via USPS 14 May 2019 Mail returned 17 May 2019
Keala, Jalna	Association of Hawaiian Civic Clubs	Letter and Figures sent via USPS 14 May 2019 Letter and Figures sent via email 15 May 2019 Letter and Figures sent via email 28 June 2019 Revised Letter and Figures sent via email 3 January 2020
Keaulana, Ha'a	Cultural Advisor at Four Seasons Resort at Koolina	Letter and Figures sent via USPS 14 May 2019 Mail returned 17 May 2019
Keli'inoi, Kalahikiola	Cultural descendant	Letter and Figures sent via USPS 14 May 2019 Letter and Figures sent via USPS 27 June 2019 Revised Letter and Figures sent via USPS 3 January 2020



<b>Name</b>	<b>Affiliation</b>	<b>Comment</b>
Keli'inoi, Kilinahe	Cultural descendant	Letter and Figures sent via USPS 14 May 2019 Letter and Figures sent via USPS 27 June 2019 Revised Letter and Figures sent via USPS 3 January 2020
Kruse, Kehaulani	Outrigger Enterprises, Cultural Advisor	Letter and Figures sent via USPS 14 May 2019 Letter and Figures sent via email 15 May 2019 Letter and Figures sent via email 28 June 2019 Revised Letter and Figures sent via email 3 January 2020
Lee, Mike Kumukauoha	Kanehili Cultural Hui	Letter and Figures sent via USPS 14 May 2019 Letter and Figures sent via email 15 May 2019 Letter and Figures sent via email 28 June 2019
Legal, Jack	Chair, Makakilo/Kapolei/Honokai Hale Neighborhood Board No. 34	Letter and Figures sent via USPS 14 May 2019 Letter and Figures sent via USPS 27 June 2019 Revised Letter and Figures sent via USPS 3 January 2020
Lewis, Joseph Kūhiō	President, Kapolei Community Development Corporation	Letter and Figures sent via USPS 14 May 2019 Letter and Figures sent via email 15 May 2019 Letter and Figures sent via email 28 June 2019 Revised Letter and Figures sent via email 3 January 2020
Lidstone, Miki'ala	Executive Director, Ulu A'e Learning Center	Letter and Figures sent via USPS 14 May 2019 Letter and Figures sent via email 15 May 2019 Letter and Figures sent via email 28 June 2019 Revised Letter and Figures sent via email 3 January 2020
Lilomaiaava-Doktor, Sa'iliemanu	Associate Professor of Hawaiian-Pacific Studies, University of Hawai'i (UHWO)	Letter and Figures sent via email 15 May 2019 Letter and Figures sent via email 28 June 2019 Revised Letter and Figures sent via email 3 January 2020
Lopez, Kealii	Imua Hawaii	Letter and Figures sent via USPS 14 May 2019 Letter and Figures sent via email 15 May 2019 Letter and Figures sent via email 28 June 2019 Revised Letter and Figures sent via email 3 January 2020

Name	Affiliation	Comment
Luthy, Tamara	Ethnographer, DLNR	<p>Letter and Figures sent via email 28 June 2019</p> <p>Ms. Luthy responded via email 1 July 2019: <i>Good to hear from you! Thank you for letting me know about the project. I am cc'ing Kaahiki Solis and Hinano Rodrigues on this email. We request that when you finish your CIA that we may receive a copy as a professional courtesy so that we can keep it for our records in case any other archaeological, architectural, or ethnographic work in the same or adjoining regions comes through our office for review. I have also attached a few reports which may be of interest from the Ewa/Honouliuli area, though I didn't see anything from the exact TMK your project is in.</i></p> <p><i>SHPD policy dictates that we can only recommend ways to find research participants rather than pointing you to specific individuals. I would recommend putting out a notice in the Honolulu Star Advertiser, notifying OHA as well to see if anyone there can send out the information to relevant parties. It would be useful to follow up with any Hawaiian civic clubs in the area. It may be worthwhile to contact folks involved with the Ewa Limu Project, as they may know local resource users both mauka and makai. There is also an interview with Julia Powell and also one with Louis Aila Junior through the UH Oral History Project which discuss life in Ewa in the past, including some information on gathering plants. If you want to know more about ongoing gathering practices in the area, it would be worthwhile to reach out to local hula halaus and lā'au lapa'au practitioners. Hawaiian Studies and/or professors at UH Manoa and Leeward Community College may be good resources as well.</i></p> <p>CSH replied via email 3 July 2019: <i>Mahalo for your quick response and all the information you provided. Those pdfs are very helpful. We will continue our outreach with those mentioned below. . .</i></p> <p>Revised Letter and Figures sent via email 3 January 2020</p> <p>Ms. Luthy replied via email 3 January 2020: <i>Hi there Kellen, I just got your email. I will look into it on Monday and get back to you soon.</i></p> <p>CSH replied via email 6 January 2020</p>
Lyman, Melissa	Kalaeloa Heritage and Legacy Foundation, President	<p>Letter and Figures sent via USPS 14 May 2019</p> <p>Letter and Figures sent via email 15 May 2019</p> <p>Letter and Figures sent via email 28 June 2019</p> <p>Revised Letter and Figures sent via email 3 January 2020</p>

Name	Affiliation	Comment
Malama, Tesha	'Ewa Villages Association	Letter and Figures sent via USPS 14 May 2019 Letter and Figures sent via USPS 27 June 2019 Revised Letter and Figures sent via USPS 3 January 2020
McKeague, Kawika	Cultural practitioner, Honouliuli historian and longtime resident	Letter and Figures sent via USPS 9 August 2019 Revised Letter and Figures sent via email 3 January 2020
Medeiros, Pōhai	PIKO Program Advisor, University of Hawai'i West O'ahu	Letter and Figures sent via USPS 9 August 2019 Revised Letter and Figures sent via email 3 January 2020
Nahulu-Mahelona, Moani	Hawaiian Studies Department, Kapolei HS	Letter and Figures sent via USPS 14 May 2019 Letter and Figures sent via USPS 27 June 2019 Revised Letter and Figures sent via USPS 3 January 2020
National Park Service Honouliuli National Monument		Letter and Figures sent via USPS 14 May 2019 Letter and Figures sent via email 15 May 2019 CSH reached out the Ms. Jacqueline Ashwell via email 30 July 2019 Ms. Ashwell replied via email 30 July 2019: <i>I am away on detail to another agency, returning to the NPS in November of 2019.</i> <i>While I am away, please direct all matters related to Pearl Harbor National Memorial and Honouliuli National Monuments to Steve Mietz . . .</i> CSH reached out to Mr. Steven Mietz via email 30 July 2019 Revised Letter and Figures sent via email 3 January 2020 Hanako Wakatsuki-Chong replied on behalf of the PWR Honouliuli on 14 January 2020: <i>Thank you for reaching out to us about the cultural impact assessment for the West O'ahu solar panel project. I have cc'd Katie Bojakowski, the Chief of Cultural and Natural Resources; Jacqueline Ashwell, Superintendent; and Melia Lane-Kamahele, NPS Regional Office Manager. When do you need comments by?</i> CSH replied via email 14 January 2020: <i>Mahalo for your response and for forwarding our request to those mentioned below. We look forward to hearing from them. We kindly ask for your response by February 3, 2020. Feel free to contact me if you any questions.</i>

<b>Name</b>	<b>Affiliation</b>	<b>Comment</b>
Paglinawan, Lynette	Cultural practitioner; Educator, teaches a course on Native Hawaiian Healing at University of Hawai'i West O'ahu	CSH met with Ms. Palignawan 14 October 2019 Interview summary sent to Ms. Palignawan via USPS 22 October 2019 Revised summary sent for review and approval via USPS 19 November 2019 CSH followed up with Ms. Paglinawan via email 27 December 2019 Revised Letter and Figures sent via USPS 3 January 2020 Revised summary sent for review and approval 14 January 2020 Ms. Paglinawan approved summary 15 January 2020
Paik, Linda Kaleo	Cultural practitioner/ Secretary/Treasurer for Koa Ike Cultural Specialist; Former History and Culture, SHPD 'Aha Wahine Aha Moku Committee, Kona District, Oahu	Letter and Figures sent via USPS 14 May 2019 Letter and Figures sent via email 15 May 2019 Letter and Figures sent via email 28 June 2019 Revised Letter and Figures sent via email 3 January 2020
Paishon, Jr., Frank	Raised in Tenney Village	Letter and Figures sent via USPS 14 May 2019 Letter and Figures sent via USPS 27 June 2019 Revised Letter and Figures sent via USPS 3 January 2020
Patterson, Kaleo	Native Hawaiian Church; Pacific Justice & Reconciliation Center	Letter and Figures sent via USPS 14 May 2019 Letter and Figures sent via email 15 May 2019 Letter and Figures sent via email 28 June 2019 Revised Letter and Figures sent via email 3 January 2020
Puahala, Roth	President, Ke One O Kakuhihewa	Letter and Figures sent via USPS 14 May 2019 Letter and Figures sent via email 15 May 2019 Letter and Figures sent via email 28 June 2019 Revised Letter and Figures sent via email 3 January 2020
Ramos, Rodolfo	President, Ewa Villages Community Association; Chair of 'Ewa Task Force	Letter and Figures sent via USPS 14 May 2019 Letter and Figures sent via USPS 27 June 2019 Revised Letter and Figures sent via USPS 3 January 2020

Name	Affiliation	Comment
Rodenhurst, Roda	President, 'Ahahui Siwila Hawai'i o Kapolei Hawai'i O Kapolei (Kapolei Hawaiian Civic Club)	Letter and Figures sent via USPS 14 May 2019 Letter and Figures sent via email 15 May 2019 Letter and Figures sent via email 28 June 2019 Revised Letter and Figures sent via email 3 January 2020
Rodrigues, Hinano	SHPD, Interim History and Cultural Branch Chief (O'ahu and Maui)	Mr. Rodrigues forwarded email to Ms. Regina Hilo 14 June 2019 Revised Letter and Figures sent via email 3 January 2020
Saul, Melissa	Associate Specialist, Title III PIKO Project Director, University of Hawai'i West O'ahu	Letter and Figures sent via USPS 9 August 2019 Revised Letter and Figures sent via email 3 January 2020
Schaedel, Homelani	President, Malu'ohai Residents Association	Letter and Figures sent via email 17 September 2019 Revised Letter and Figures sent via email 3 January 2020
Serrao, Marleen Kau'i	Pelekikena, 'Ewa-Pu'uloa Hawaiian Civic Club	Letter and Figures sent via USPS 14 May 2019 Letter and Figures sent via email 15 May 2019 Letter and Figures sent via email 28 June 2019 Revised Letter and Figures sent via email 3 January 2020
Shibuya, Barbara	<i>Kama'āina</i> of 'Ewa, member of the Shibuya Dayanan Family	Letter and Figures sent via email 15 May 2019 Letter and Figures sent via email 28 June 2019 Revised Letter and Figures sent via email 3 January 2020
Silva, Adrian Nakea	Chariman, Hui Huliau Inc.	Letter and Figures sent via USPS 14 May 2019 Letter and Figures sent via email 15 May 2019 Letter and Figures sent via email 28 June 2019 Revised Letter and Figures sent via email 3 January 2020
Solis, Ka'āhiki	SHPD, Cultural Historian (O'ahu)	Letter and Figures sent via email 15 May 2019 Letter and Figures sent via email 28 June 2019 Revised Letter and Figures sent via email 3 January 2020 Ms. Solis replied via email 6 January 2020: <i>Mahalo and good luck with your project.</i> CSH replied via email 9 January 2020



Name	Affiliation	Comment
Suganuma, La'akea	President, Royal Hawaiian Academy of Traditional Arts and Nā Lei Ali'i Kawanānako	Letter and Figures sent via USPS 14 May 2019 Letter and Figures sent via email 15 May 2019 Letter and Figures sent via email 28 June 2019 Revised Letter and Figures sent via email 3 January 2020
Swinney, Shirley S.	Vice President, Kapolei Community Development Corporation; Hawaii Community Development Authority	Letter and Figures sent via USPS 14 May 2019 Letter and Figures sent via USPS 27 June 2019 Revised Letter and Figures sent via USPS 3 January 2020
Uyeoka, Kelly	Nohopapa	Letter and Figures sent via email 22 August 2019 Revised Letter and Figures sent via email 3 January 2020
Ward, Sandy	Executive Director, Mālama Pu'uloa	Ms. Ward was forwarded letter and figures by Mr. Wally Ito on 21 August 2019 Ms. Ward replied via email 21 August 2019: <i>did you follow up on the Nohopapa 'Ewa Inventory I suggested? - that is the best research on cultural significance and wahi pana I have seen -. . . It's organized by ahupua'a so it's easy to find information and I suggest you contact them directly to assist you if you don't find the information you are looking for in their publication.</i> CSH replied via email 22 August 2019 Revised Letter and Figures sent via email 3 January 2020
Wong-Kalu, Hinalaimoana	OIBC Chair	Letter and Figures sent via USPS 14 May 2019 Letter and Figures sent via email 15 May 2019 Letter and Figures sent via email 28 June 2019 Revised Letter and Figures sent via email 3 January 2020
Woode Jr., Lawrence A.	Pelekikena, Hawaiian Civic Club of 'Ewa-Pu'uloa	Letter and Figures sent via USPS 14 May 2019 Letter and Figures sent via USPS 27 June 2019 Revised Letter and Figures sent via USPS 3 January 2020
Woode, Napali	Native Hawaiian Economic Alliance	Letter and Figures sent via USPS 14 May 2019 Letter and Figures sent via email 15 May 2019 Letter and Figures sent via email 28 June 2019 Revised Letter and Figures sent via email 3 January 2020

Name	Affiliation	Comment
Wond, Kanani	Vice President, Kaupe'a Homestead Association	Letter and Figures sent via USPS 14 May 2019 Letter and Figures sent via email 15 May 2019 Letter and Figures sent via email 28 June 2019 Revised Letter and Figures sent via email 3 January 2020
Yee, Christian	<i>Kama'āina</i> , familiar with <i>wahi pana</i> and <i>mo'olelo</i>	Letter and Figures sent via USPS 14 May 2019 Letter and Figures sent via email 15 May 2019 CSH spoke with Mr. Yee briefly on 18 May 2019: Mr. Yee expressed interest in visiting the Honouliuli Internment Camp. Letter and Figures sent via email 28 June 2019 CSH followed up with Mr. Yee via telephone on 9 August 2019 CSH met with Mr. Yee on 9 August 2019 CSH sent summary for approval 24 September 2019 Mr. Yee approved summary 3 October 2019 Revised Letter and Figures sent via email 3 January 2020

## 6.4 Written Testimony from Tom Berg

Tom Berg, former City Councilman, provided CSH with written testimony on 19 August 2019 regarding the AES West O'ahu Solar Plus Storage Project. Mr. Berg's entire testimony is included in Appendix A.

Mr. Berg stated that the project has been “proposed on a pueo (owl) foraging and breeding ecosystem.” The *pueo* (Hawaiian short-eared owl, *Asio flammeus sandwichensis*) are found on all of the main Hawaiian islands and are listed by the State of Hawai'i as endangered on the island of O'ahu (DLNR 2005). The Department of Land and Natural Resources (DLNR) states that *pueo* are most commonly found in “open habitats such as grasslands, shrublands, and montane parklands, including urban areas and those actively managed for conservation” (DLNR 2005).

Mr. Berg noted that records indicate that per earliest colonial contact, the *pueo* is most abundant on the slopes from Pu'ukapuai to West Loch, in the area where the project is slated. He added that “Hunehune Gulch, Kaloi Gulch, and Honouliuli Gulch are migratory routes used by the pueo to go from mountain to sea to court, mate, forage, and raise their brood.” He noted that *pueo* are not forest dwellers, preferring “scrub, open fields/dirt landscapes with some grass.” He stated that the proposed project will “encroach on prime pueo habitat—considered to be graded A+—“a ten (10)”—when it comes to the degree of pueo habitat in use on this project site.”

Mr. Berg added that the *pueo* has “a direct connection to Native Hawaiian family lineage in Ewa Beach;” the *pueo* is the '*aumakua* for the Michael Lee family and their accounts, which go back over seven generations, are documented at the State Archives Building in Honolulu.

Mr. Berg also stated that the project site is “inhabited by the *ōpe'ape'a* [Hawaiian hoary bat, *Lasiurus cinereus semotus*] at various times of the seasons,” noting that in 1910, the State of Hawai'i documented '*ōpe'ape'a* within a half-mile of the project area. '*Ōpe'ape'a* is “the only land mammal native to the Hawaiian archipelago” and is found on all of the main Hawaiian islands except for Ni'ihau (DLNR 2005:3-13). DLNR states '*ōpe'ape'a* have been “found roosting in

‘ōhi‘a (*Metrosideros polymorpha*), pu hala (*Pandanus tectorius*), coconut palms (*Cocos nucifera*), kukui (*Aleurites moluccana*), kiawe (*Prosopis pallida*), avocado (*Persea americana*), shower trees (*Cassia javanica*), pūkiawe (*Styphelia tameiameia*), and fern clumps; they are suspected to roost in Eucalyptus (*Eucalyptus* spp.) and Sugi pine (*Cryptomeria japonica*) stands” (DLNR 2005).

Mr. Berg stated his concern that the “property in question will not receive the proper protocol to conclude no endangered species inhabit the area.” He asked “what protocol will be deployed to determine if the population of both the pueo and ‘ōpe‘ape‘a are served by habitat on the property?” He discussed five points which he felt need to be addressed:

1. Who will look for the *pueo* and ‘ōpe‘ape‘a on the land? What is their expertise and qualifications as observers?
2. Did the observation to inventory for the species transpire before sunrise and after the sunset periods when the ‘ōpe‘ape‘a and *pueo* are most active and can be recorded?
3. Did the observer conduct the biological survey whereby the inventory for the species was repeated year-round over the wet and dry seasons?
4. What tools were used—visual aids in the field—techniques to identify the species while observing/conducting the inventory?
5. Was the inventory to assess and survey for *pueo* and ‘ōpe‘ape‘a done completely on foot or was a vehicle used?

Mr. Berg stated that to properly account for the *pueo* and ‘ōpe‘ape‘a, the DLNR and United States Fish and Wildlife Service (USFWS) have developed a protocol which states inventory surveys should “be executed over the changing seasons year-round.” However, Mr. Berg noted that “this practice, to deploy the protocol year-round, is not being done in either the EA [Environmental Assessment] and or EIS [Environmental Impact Statement] review processes.” He added his opinion that surveys must be “undertaken after sunset and before the sunrise periods.”

Mr. Berg discussed the recent population distribution survey for *pueo* on the island of O‘ahu that included the University of Hawai‘i West O‘ahu (UHWO) Makai Segment. The survey, conducted between 31 December 2017 and early August 2018, concluded no *pueo* or its habitat existed on the UHWO property, however, Mr. Berg notes that *pueo* inhabit the property “throughout the months of late August, through September, October, November, and vacate late December.” He added that had the survey been conducted year-round, the survey would have “reported a pueo ecosystem thriving on the property and many Native Hawaiians’ ‘aumakua would be protected rather than purged from the property.”

In his statement, Mr. Berg provided links to videos of *pueo* observed on the UHWO property. He noted that despite these videos, UHWO, University of Hawai‘i (UH) Board of Regents, DLNR, and the Attorney General have stated the *pueo* “did not and have not ever existed there.” He stated that this claim is “a violation of the law- HRS [Hawai‘i Revised Statutes] Ch. 343 that protects endangered species and their habitat.”

He added that Governor Ige’s Administration’s claim that “absolutely no pueo used UHWO property,” is in his opinion, “not only patently false—but a deliberate act of Administrative Bias, Institutional Prejudice—and a willful act of Malice—to cause direct harm to an endangered species—a 100% violation of Article XII, Section VII of Hawai‘i’s State Constitution that protects Native Hawaiian Religious and Cultural Practices and their ‘aumakua.” To justify his claims, Mr. Berg

provided the links to the following videos hosted on YouTube: Mike Lee: The Willful Indifference / Pueo Habitat @ UHWO p.1 [<https://www.youtube.com/watch?v=7z8-7u3Q0Bo>] and Mike Lee: Willful Indifference @ UHWO p.2 [<https://www.youtube.com/watch?v=Db46xPfzVQ>]. He added that “pueo extirpated from UHWO Hunehune and Kaloi Gulches – headed mauka for refuge – they can’t go east- can’t go west- can’t go south- so they went north up the gulches as this was their only option- and they need the slopes where these solar farm(s) are to be placed to have habitat for the pueo to forage- of course, only of the pueo has been determined as present via an adequate survey performed for the property ----.”

Mr. Berg also expressed his concern for the possible negative aspects of light at an adjacent parcel. He expressed concern that a solar panel may reflect neighboring lighting operations into “the flight patterns of migrating birds and the ‘*ōpe‘ape‘a* and *pueo* in particular need to be addressed.”

On 6 September 2019, a corresponding email was sent by Mr. Berg. He noted that information provided by Senator Mike Gabbard and the Department of Business, Economic Development, & Tourism (DBEDT) indicates the lighting at the nearby property are used for soy bean growth. Mr. Berg asserted his opinion that the lighting violates State Illumination Law. Mr. Berg expressed his opinion that “farmers were given waivers to blind migratory species.” To support his claim, Mr. Berg provided a link to a video (<https://www.youtube.com/watch?v=rmVw04oWr6E&t=26s>) he filmed of the carcass of a barn owl which was “found dead one -half mile from the solar site-.” He believes the owl may have died from eating vermin laced with rat bait poison. The owl was also missing an eye. Mr. Berg stated his opinion that the “grow lights- may have been the cause of this barn owl to lose its eye.” He stated that “DLNR refused to accept the carcass for a necropsy.” He also acknowledged that he “can’t prove what killed this owl,” noting that “since no necropsy was performed, my claim in the video may be wrong- and the owl did not suffer from rat bait poison- but from the grow lights- the evidence in the video is all we have to make a deduction- could be relevant if found to be a pattern later on-.”

Mr. Berg also recommended inquiring with Dr. Melissa Price and Dr. Javier Cotin of the Project Pueo Biologist Team and DLNR’s Division of Forestry and Wildlife (DOFAW) Biologist Afsheen Siddiqi regarding *pueo* protocol. He made note that “this Pueo team approved of the FEIS [Final Environmental Impact Statement] (2007) for 500-acres of property known as UHWO – saying no pueo are there—.” He added that “these pueo experts had no objections to the FEIS protocol used at UHWO” in which, according to Mr. Berg, the “observer only looked for a few hours TOTAL over a period of two days within a week during the month of April when the pueo are not here.....and to cover 500-acres-----.”

He noted that in the FEIS for UHWO (PBR Hawaii 2006), DLNR stated in writing “that was a thorough inventory process to search for pueo- satisfactory.” He also characterized the DLNR evaluation as, “That’s good enough of a look for us- only 3-4 hours of observation need take place to determine on 500-acres if pueo are on the property or not.”

Mr. Berg added that surveyors for the FEIS “looked mid-morning hour- not before sunrise or at sunset when pueo are active---but mid morning when that bird ain’t to be seen.” He noted,

These Project Pueo experts know that pueo do not have a defined breeding season- and are plot hoppers- and will deploy a foraging ecology-a breeding ecology- at different times of the seasons- and hence, these experts have stated that it is prudent

to have the biological survey for pueo be conducted year round. [...] These same pueo experts will also state observation needs to take place at sunset and sunrise- if to be a proper protocol deployed.

Mr. Berg questions “if that will be done on this solar property? Year round observation?” He recommends that “a thorough and complete protocol is adopted to repeat the inventory exercise for pueo and ‘ōpe‘ape‘a over the course of a calendar year would be in order so the project does not inadvertently contribute to more endangered species habitat loss.”

## 6.5 *Kama‘āina* Interviews

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

### 6.5.1 Shad Kāne

CSH spoke with Mr. 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, President of Kalaeloa Heritage and Legacy Foundation, and ‘Ewa Moku Representative on the State Aha Moku Advisory Committee, via telephone on 13 August 2019. Mr. Kane stated that he is not in opposition to the proposed project. He noted the project area has been previously disturbed by sugarcane production.

### 6.5.2 Christian Kaimanu Yee

On 9 August 2019, CSH met with Mr. Christian Kaimanu Yee at Keaīwa Heiau State Recreation Area to discuss the AES West O‘ahu Solar Plus Storage project and to share his *‘ike* regarding *mo‘olelo* and *wahi pana* associated with the *ahupua‘a* of Honouliuli.

Mr. Yee was “made in ‘Ewa Beach, [but] born in England.” His father was a fireman for the United States Air Force and was stationed at Lakenheath Air Force Base (AFB) in England when Mr. Yee was born in 1980. His mother is a second-generation Filipina from ‘Ewa Beach. Mr. Yee lived in England until 1983 when his father got stationed at Nelles AFB in Las Vegas. In 1985, his family returned to Hawai‘i and moved to ‘Ewa Beach where he lived until 1986, when his parents “separated for a little while” and his father moved to Waimalu in ‘Aiea. After being honorably discharged from the military, Mr. Yee’s father worked for a trucking company. His father would take him on “drives” where they would visit cultural sites including *heiau* and Kūkaniloko, the sacred birthstones where the highest ranking *ali‘i* were born (Sterling and Summers 1978:139).

Kukaniloko is considered to be the very center of the Hawaiian culture. As a person and a nation, one can come here and directly be in contact with the past, present, and future of Hawaii. Only royalty were allowed in the area of Lihue. High ranking Ali‘i were born here, and the privileged were brought here to learn aspects of Hawaiian culture such as navigation. [Yee 2013]

Mr. Yee’s father continued to share numerous *mo‘olelo* regarding the mythical and ancient past of O‘ahu. Mr. Yee began studying Hawaiian history and culture and in 2013, equipped with the



knowledge that he had inherited from his father and his *kumu* (teacher) Kaipo'i, Mr. Yee began a blog, *Pohukaina Cave*. In this blog he shares, "Hawaiian history and places from a bicycle":

I am a resident of Waimalu in the moku [district] of Ewa with a fascination of history, and being a Hawaiian it's gotta be Hawaiian history for now! [...] I just want to share something that might appeal to you and hopefully things from the past will not be lost and covered by the fast present day life style! [Yee 2013]

Mr. Yee began the interview by discussing the importance of trails to the *ahupua'a* of Honouliuli noting that trails leading to Wai'anae and the North Shore pass through Honouliuli. He pointed out that the "north shore trail" traverses a portion of the eastern boundary of the *ahupua'a* between Honouliuli and Hō'ae'ae Ahupua'a before branching off and leading to Pōhākea Pass and traversing through the Wai'anae Mountain Range to Lualualei Ahupua'a in the *moku* of Wai'anae.

Mr. Yee added that Pōhākea Pass is associated with the goddess Hi'iakaikapoliopole, sister of volcano goddess Pele, and her epic journey across the Hawaiian Islands. Mr. Yee noted that from Pōhākea Pass, Hi'iaka could see the entire *moku* of 'Ewa.

Hi'iaka actually stands there and sees the whole *moku* of 'Ewa and pointed it out cause she stood there and seen Leilono from there. She stands at Pōhākea Pass and defines the entire *moku* of 'Ewa at that moment.

He also stated that from Pōhākea Pass, Hi'iaka could see her traveling companions, Lohi'au and Wahine'ōma'o, as they traveled by canoe to the harbor of Kou (Honolulu) (Ho'oulumahie 2008b:260): "I think Hi'iaka went this way and the guy's in the canoe went this way, Lohi'au and Wahine'ōma'o, that's when they first started falling for each other. She's like 'eh, no talk to my husband [...] No talking over there,' from the mountains, eh."

Pōhākea Pass is also the location where Hi'iaka chanted as she "gazed toward Hawai'i, and saw that her aikāne [friend], Hōpoe, had died in the fires of her elder sister Pele" (Ho'oulumahie 2008b:262).

Mr. Yee also noted that Pōhākea Pass is associated with the famous warrior, Palila. Mr. Yee referred to Palila as the "Hawaiian Thor," due to his supernatural war club which he could throw a long distance and fly along the club's path as he held on to the end of it. According to *mo'olelo*, Palila used his supernatural war club to carry himself from Ka'ena Point at Wai'anae, east across the *moku* of 'Ewa, landing in a number of places in Honouliuli including Pōhākea Pass, the peaks of Manuauna and Kānehōa, and the plain of Keahumoa (Fornander 1918:5[1]:142–143).

Mr. Yee stated the *'ili* of Lihue which is located in the northern region of Honouliuli Ahupua'a was associated with a class of chiefs known as the *lo ali'i*. Mr. Yee noted, "The *lo ali'i* were the highest ranking chiefs but then they were hidden so they were like the poorest at the same time. In the rain, eating ferns and stuff cause they were so sacred. It's a curse, blessing and a curse at the same time."

Samuel Kamakau discussed the *lo ali'i*:

The chiefs of Lihue, Wahiawa, and Halemano on Oahu were called *Lo* chiefs, *po'e Lo Ali'i* ["people from whom to obtain a chief"], because they preserved their chiefly kapus. The men had kapus, and the women had kapus, and when they joined their kapus and children were born, the children preserved their kapus. They lived

in the mountains (*i kuahiu 'i*); and if the kingdom was without a chief, there in the mountains could be found a high chief (*ali 'i nui*) for the kingdom. Or if a chief was without a wife, there one could be found-one from chiefly ancestors. [Kamakau 1991a:6]

He also discussed the *mo 'olelo* of Kelea, a chiefess of Maui, who was kidnapped and brought to O'ahu to marry Lō Lale, a *lo ali 'i* from Līhue in Honouliuli (Kamakau 1991b:46).

There's a story about that one Maui chiefess, the one who got kidnapped by the canoe guys and took to live over there. But she ends up being the female progenitor of most chiefs, like in Hawai'i, cause they had like the highest *mana* [spiritual power], cause she mated with the *lo ali 'i* and the *ali 'i nui* [high chief] of Waikīkī [...] She was like a surfer, but she lived up in the mountains, that's why they kidnapped her. [...] She wanted to go surf again, she asked him if she could go but then he knew that she was gonna leave forever cause she was gonna be out of his watch. And it says something like, 'she washes the red dirt of Līhue off' when she enters Waikīkī.

A version of the *mo 'olelo*, which appears in Samuel Kamakau's *Tales & Traditions of the People of Old*, states that Kelea lived with Lō Lale for ten years in the uplands of Līhue. They had three children, Kaholi-a-Lale, Luli-wahine, and Luli-kāne, who were among "the ancestral chiefs of O'ahu" (Kamakau 1991b:46–47). Kelea was unhappy living in Līhue, longing for the ocean and her favorite pastime of surfing (Kamakau 1991b:47). She left Līhue to "go down to the seashore of 'Ewa to go sightseeing," traveling through the plain of Keahumoa, to Waipahu, 'Ewa-uli, and Hālawā before reaching Waikīkī.

When Kelea and her companions reached the coconut grove of Kawehewehe in Waikīkī, they were welcomed by the *kama 'āina* of Waikīkī who stated "this is a place for enjoyment. Over there is the *kou* [Cordian subcordata] grove of Kahaloa where one may view the surfing of the chiefs and the *ali 'i nui* Kalamakua" (Kamakau 1991b:48). Kamakau describes Kalamakua:

KALAMAKUA-A-KAIPŪHŌLUA was a good chief. He was noted for cultivating, and it was he who constructed the large pond fields Ke'okea, Kualulua, Kalamanamana, and the other *lo 'i* [irrigated terrace] in Waikīkī. He traveled about his chiefdom with his chiefs and household companions to cultivate the land and gave the produce to the commoners, the *maka 'ainana*. They loved him. [Kamakau 1991b:45]

Kelea proceeded to borrow a surfboard and before entering the ocean she "rubbed the red dirt of 'Ewa from her feet so as to look fresh" (Kamakau 1991b:48). She jumped on her board and paddled out past the "place where the surf broke" and waited for a wave to rise.

When Kelea reached the place where the surf broke, she left that place to the *kama 'āina* and paddled on out to wait for a wave to rise. As she floated there, the first wave rose up but she did not take it, nor did she take the second or third wave, but when the fourth wave swelled up, she caught it and rode it to shore. As she caught the wave, she showed herself unsurpassed in skill and grace. The chiefs and people who were watching burst out in cheering the cheering rising and falling, rising and falling. [Kamakau 1991b:48–49]

Kalamakua was working in his fields when he was startled by loud shouts coming from the shoreline. He asked his men, “What is that shouting reverberating from the seashore?” They replied, “It is probably because of a skilled woman surfer.” Kalamakua realized that the “skilled woman surfer” was Kelea, a chiefess of Maui, and left his work to stand on the shore and watch. When Kelea came ashore, Kalamakua wrapped his *kīhei* (cape) around her and made her his wife (Kamakau 1991b:49).

As Kelea rode in on a wave, the *mō'ī* ran to the edge of the sea and stood there. When the chiefess reached the sand, he took hold of her board and asked, ‘Are you Kelea?’ ‘Yes,’ she answered. She stood up, naked. The *mō'ī* removed his *kihei* shoulder covering and wrapped it around her as a *pā'ū* [skirt] and took her to a *kapu* place. That was the beginning of her life as the *ali'i wahine mo'i* [queen] and she married (*ho 'iio mal-e*) the *mō'ī* Kalamakua. [Kamakau 1991b:49]

In another version of the *mo'olelo*, which appears in David Kalākaua's *The Legends and Myths of Hawaii*, Kalamakua is described as “Lo-Lale's cousin [...] a noble of high rank whose lands were on the coast of the Ewa district” (Kalākaua 1990:233). In this version, Kalamakua is sent on the mission to find Lō Lale a wife. On the voyage returning to O'ahu, Kalamakua had “become very much interested in Kelea” (Kalākaua 1990:240). Kelea lived with Lō Lale for a while, however, she longed for Kalamakua. When Kelea decided to leave Lō Lale, he voiced no “spoken bitterness;” however, after she left, he sang this lament:

Farewell, my partner of the lowland plains,  
 On the waters of Pohakeo, above Kanehoa,  
 On the dark mountain spur of Mauna-una!  
 O, Lihue, she is gone!  
 Sniff the sweet scent of the grass,  
 The sweet scent of the wild vines  
 That are twisted by Waikoloa,  
 By the winds of Waiopua,  
 My flower!  
 As if a mote were in my eye.  
 The pupil of my eye is troubled.  
 Dimness covers my eyes. Woe is me!  
 [Kalākaua 1990:224–245]

When Kelea left Lihue, she traveled to 'Ewa where she “found a large number of nobles and retainers of Kalamakua, the high chief of the district, amusing themselves in the surf” (Kalākaua 1990:245). Kelea borrowed a surfboard and “joined the party of surf-riders beyond the breakers” (Kalākaua 1990:245). Upon hearing that “a beautiful woman from Lihue had beaten all the chiefs at surf-riding,” Kalamakua realizes that the woman is Kelea and proceeds to the beach, greeting Kelea by placing his *kihei* over her shoulders (Kalakaua 1990:245). Kalakaua notes that Kelea and

Kalamakua “lived happily together, and were blessed with a daughter Laielohelohe, who inherited her mother’s beauty, and became the wife of her cousin Piilani, son and successor of Kawao, moi of Maui [...]” (Kalākaua 1990:246).

Mr. Yee also discussed Kūali‘i, a “celebrated chief [...] noted for his strength and bravery” who defeated the chiefs of Ko‘olaupoko on the plains of Keahumoa (Fornander 1917b:4[2]:364). When the chiefs of Ko‘olaupoko and their army of twelve hundred arrived in Honouliuli, they were outnumbered by Kūali‘i’s army of twelve thousand, however, the battle was averted when a *mele* in honor of Kūali‘i was chanted and the chief of Ko‘olaupoko ceded the districts of Ko‘olaupoko, Waialua and Wai‘anae to Kūali‘i (Fornander 1917b:4[2]:400).

Mr. Yee stressed the importance of two brothers, Kapa‘ahulani and Kamaka‘aulani, who were on opposing sides of the battle. According to the *mo‘olelo*, Kapa‘ahulani and Kamaka‘aulani composed the *mele* in honor of Kūali‘i and devised a plan in which Kapa‘ahulani would go to Waialua where the chief of Ko‘olaupoko was residing and urge him to make war on Kūali‘i, and Kamaka‘aulani would take Kūali‘i and “conceal yourselves in the bushes” at the place where the battle is to be fought (Fornander 1917b:4[2]:366). When the forces of Ko‘olaupoko arrived in Honouliuli at the location which the brothers have agreed upon, Kapa‘ahulani tells the chief of Ko‘olaupoko that their army is surrounded, and states that “I will chant my prayer, and if it should be acceptable this morning, we will be saved” (Fornander 1917b:4[2]:368). As Kapa‘ahulani chanted the *mele* which he had composed in honor of Kūali‘i, Kamaka‘aulani convinces Kūali‘i to delay the battle (Fornander 1917b:4[2]:380). When the chant was finished the “two armies came together and the battle was declared off” (Fornander 1917b:4[2]:400).

Mr. Yee also pointed out Mauna Kapu, a peak located in the Wai‘anae Mountain Range bordering the *ahupua‘a* of Nānākuli. The name Mauna Kapu translates to “sacred mountain” (Pukui et al. 1974:148). He believes “Mauna Kapu” were “meeting places, or something like that, for the chiefs,” noting that another Mauna Kapu is located in the *ahupua‘a* of Moanalua. Sterling and Summers describe Pu‘u Kapu (sacred hill) in Moanalua Ahupua‘a, noting that “this was where the chiefs and commoners met to discuss matters of importance” (Sterling and Summers 1978:334). There is also a hill named Mauna Kapu located in Līhue on the island of Kaua‘i (Pukui et al. 1974:148).

Mr. Yee discussed the hill of Pu‘uokapolei, stating that during the summer solstice, the sun sets over Pu‘uokapolei. He noted that the pathway of the sun aligns a *heiau* located on Pu‘uokapolei with Papa‘ena‘ena Heiau located in the *ahupua‘a* of Waikīkī.

Pu‘uokapolei. Supposedly, that has an alignment with a *heiau* where, is it Papa‘ena‘ena Heiau, I think it lines up with that, or if there was another *heiau*. [...] ‘Ōlelo Hawai‘i class [...] they go there, that class goes there on one of the solstices or something like that and they chant for the sunset because the sun sets on Pu‘uokapolei at a certain time, as viewed from Papa‘ena‘ena Heiau [...]

Sterling and Summers also stated that Pu‘uokapolei was used by ancient Hawaiians as an astronomical marker to designate the seasons, noting that the annual season of Kau which is marked by a high-sun period and corresponds with warmer temperatures and steady trade winds begins when the sun sets over Pu‘uokapolei.

[...] the people of Oahu reckoned from the time when the sun set over Pu'uokapolei until it set in the hollow of Mahinaona and called this period Kau, and when it moved south again from Pu'uokapolei and it grew cold and the time came when young sprouts started, the season was called from their germination (oilo) the season of Ho-'oilo. [Sterling and Summers 1978:34]

Mr. Yee also noted the possibility of a burial cave located on Pu'uokapolei which contained a canoe inside of it: "Supposedly, what the guy told me is that there's a burial cave in Pu'uokapolei that has a canoe inside of it. But that's probably long gone cause if you look at it, it's all leveled already, on the *makai* side."

Mr. Yee also noted the area where the 'Ewa by Gentry subdivision is located was once the site of the largest grove of *wiliwili* trees on the island of O'ahu.

My most beloved thing ever, the *wiliwili* tree. There was a *wiliwili* grove over there cause that's 'Ewa [...] there was a *wiliwili* grove there, where 'Ewa by Gentry is now. The biggest one on the island, and that's why all the birds. The land birds lived over there. The extinct ones, the flightless birds.

Traditional accounts (Kamakau 1991a:47–49) associate the *ao kuewa* with a grove of *wiliwili* trees on the plains of Kaupe'a in Honouliuli.

When a man who had no rightful place in the 'aumakua [family or personal gods] realm (*kanaka kuleana 'ole*) died, his soul would wander about and stray amongst the underbrush on the plain of Kama'oma'o on Maui, or in the *wiliwili* grove of Kaupe'a on Oahu.

On the plain of Kaupe'a beside Pu'uloa [Pearl Harbor], wandering souls could go to catch moths (*pulelehua*) and spiders (*nanana*). However, wandering souls could not go far in the places mentioned earlier before they would be found catching spiders by 'aumakua souls, and be helped to escape [...] [Kamakau 1991a:47–49]

Mr. Yee also stated "there was those two ladies who were down by the archery, that's two *pōhaku*, the lizards in the Hi'iaka story." According to the *mo'olelo*, as Hi'iaka traveled toward the 'Ewa coast, two women, who were also *mo'o* (lizard or water spirit), saw Hi'aka coming. Fearing that Hi'iaka would kill them, the women changed into their lizard form and hid from her. One of the lizards hid in a little space on a stone along the coastal trail, and the other hid nearby. (*Ka Hōkū o Hawai'i*, 15 February 1927, translated in Maly 1997:19). This stone is known as Pe'ekāua which translates to "we two hidden." Hi'iaka greeted the two women and passed on without hurting them.

Mr. Yee discussed visiting Kalaeloa Heritage Park which is located in the coastal region of Honouliuli. He described observing a *heiau* that was partially underground and built using upright coral stones. He noted that Shad Kāne, *kahu* (caretaker) of Kalaeloa Heritage Park, believes the *heiau* is of Tahitian descent. He also noted the presence of a trail marked by upright coral slabs that "supposedly led all the way to another *heiau* that was by Laulaunui Island" near the West Loch of Pu'uloa (Pearl Harbor).

He also noted that Ko'olina is the site of one of the oldest fishing encampments on the island of O'ahu.

At Ko'olina is one of the oldest fishing encampments, or even oldest carbon dates, on Oahu. Cause there's like some fishing cave near Ko'olina or those cliffs by Tracks [Beach Park] before this side of the island was inhabited, people from the Ko'olau were going on fishing expeditions and coming all the way over here. Camping out.

In *The Rise and Fall of the O'ahu Kingdom*, Ross Cordy discussed evidence of early settlement at "sites on the arid western fringe of the 'Ewa Plain in today's Ko Olina Resort" (Cordy 2002:13–14).

Apparent human manipulation of the inland marsh's (site 3357) flora dates to at least A.D. 225–565. Backhoe trenches uncovered a buried habitation deposit (site 1446-1) at the base of the low limestone escarpment next to the marsh. This site has complex stratigraphy with overlapping firepits, midden deposits, and intervening non-cultural alluvium. Fishbone, shellfish, bird bone (flightless goose, etc.), early types of one-piece bone and pearlshell fishhooks, and basalt adze blanks of unusual and often early forms were found. This site yielded an initial use date of A.D. 145–600. Rockshelters (site 3355) in the escarpment across the marsh were also excavated, and deposits dated back to the A.D. 600s–1000s. Also, the coastal dune had subsurface deposits (site 1438-1) with one date of A.D. 410–660, but most post-1200s. The dune deposits contained food remains (fish, molluscs, sea birds and extinct geese), postholes, firepits and fishhooks of early type. The researchers concluded that these three sites reflected 'very dispersed' 'temporary encampments utilized by fishermen and bird collectors'. [Cordy 2002:13–14]

Mr. Yee stated that as a child his favorite beach, which he referred to as "Hamburgers," was located at Ko'olina. He believes the beach was "annihilated" during the development of Ko'olina.

I get my own *mo'olelo*, brah, here we go, so my favorite beach as a child, try find out where this place is, it's this place called Hamburgers. I think the whole Ko'olina development or the harbor that they made, the fake harbor, just totally annihilated it. I didn't even know what road we took off, which led us there, but it was a beach that we could play as a kid cause the water would come around this rock, you couldn't jump off of it cause the rock was huge, brah, like two stories, as a child, I believe. And it looked like a hamburger, like of sand, sandstone, and the waves would hit it and come around and it would have this little pond. Kind of felt like Magic Island, but it was smaller than that, but you couldn't jump in cause it's like six inches deep, like and it's like super high.

The *wahi pana* and *mo'olelo* associated with Honouliuli which were shared by Mr. Yee demonstrate the importance of Honouliuli in traditional Hawaiian times. Honouliuli was the largest *ahupua'a* on O'ahu. *Kama'āina* travelling from the *moku* of Kona to the *moku* of Wai'anae and Waialua crossed through the *ahupua'a* of Honouliuli through a network of trails. Numerous *mo'olelo* and *wahi pana* associate Honouliuli with the *akua* including Hi'iaka and Pālila, as well as the *ali'i*, including a class of chiefs known as the *lo ali'i* who lived in the *'ili* of Līhue located in the northern region of Honouliuli and the *ali'i* Kūali'i who defeated the chiefs of Ko'olauloa on the plains of Keahuamoa when a *mele* honoring Kū'ali'i was chanted.

### 6.5.3 Lynette Paglinawan

On 14 October 2019, CSH met with Ms. Lynette K. Kaopuiki Paglinawan at her home to discuss the West Oahu Solar Project and to share her *'ike* of the traditional cultural practice of *ho'oponopono* (to correct) and the *ao kuewa* in the *ahupua'a* of Honouliuli.

Ms. Paglinawan is a social worker. For about eight years, she was on the Historic Sites Review Board. She is also an educator, teaching a class at the University of Hawai'i West O'ahu (UHWO) about Native Hawaiian healing which includes the traditional cultural practices of *ho'oponopono*, *lomilomi* (massage), and *lā'au lapa'au* (herbal medicines). She discussed *ho'oponopono* which is the process of setting things right within the context of a family. She explained:

In *ho'oponopono*, which is what I practice, if you do transgressions and if I broke the glass pane in a picture window of a house, my going up to them and just apologizing and saying I'm sorry is not going to make them happy, I have to replace it or give them monetary value to have it replaced. When I do that, then the relationship becomes harmonious.

Since Ms. Paglinawan began working at UHWO, she has “come to learn about the area and the cultural impact that has happened in the *moku* of 'Ewa and [*ahupua'a* of] Honouliuli [...]” Through her research of the works of Mary Kawena Pukui, she has learned that “the area from Waimānalo Gulch over to Kapolei to the location of UHWO was known by very early residents there to be the place where “*ao kuewa*,” wandering spirits, congregated from *makai* to *mauka* up Pālehua and especially near the cluster of *wiliwili* trees in Kaupē'a.” She noted that “families in the Hawaiian definition includes the souls of these families.” She added:

The souls of deceased individuals have three areas to go to, one to *pō* [the realm of the gods] which is like heaven, to be with ancestors, one to *milu* [underworld] which is like hell, the other one is to designated areas within a district and it happens to be in the area of Waimānalo Gulch on over as you go *mauka*.

Ms. Paglinawan's great-great-grandparents were “born and reared in Honouliuli.” She added:

If my great-grandparents were born and reared there and my great-grandfather had inherited land and was reared in the area, I can surmise that my *'ohana* [family], my relatives, the big branch of relatives, some of them when they died, they went to heaven, some of them when they died might have gone to hell, but possibly there were some who just were not good enough to go to heaven so they were relegated to roam in this area [...]

She stated that she has heard numerous stories of “strange happenings” which are “due to the presence of spirits.” She noted that “this is their territory.” She mentioned that “there are stories of them being known to go down to the oceanside and cause havoc with the living” and “even going up into the mountain of Pālehua beyond Makakilo,” noting “the families who live there talk about ghosts and strange happenings [...]” She stated:

I've had discussions with some people who live up Makakilo and they finally had to leave because things happened and when I talk about it with my students, some of them are residents in the Hawaiian Homes subdivision, they have given me examples of their kids screaming because they see things in the house.



She also recalled an experience Mary Kawena Pukui had when she was a teenager walking on the beach in 'Ewa with her dog. As she walked to visit her relatives in Kalaeloa, Ms. Pukui's dog was attacked by an *'uhane* (spirit) who wanted to eat the animal.

Tutu Pukui said, she was about a teenager, went to visit the relatives, they were walking on the beach, 'Ewa Beach, going to Kalaeloa, they had the dog with them, the dog suddenly started growling and jumped up and the next thing they saw was the dog fell down, frothing and the heart pounding. Her aunty said to her, "Take this, go get salt water, bring it back." The aunty sprinkled the salt water on the dog. She talked to the spirits and scolded the spirits, "This animal is not ready to die, you folks leave him alone, you go look for something else, he needs to live yet." And then she prayed. By the time she got finished, he could bring his body upright, but they had to walk slowly. Because this was an animal and in the old days, Hawaiians ate dog. So they used to what they ate in real life, but because her aunty lives that area, she knows how to deal with it. After that she asked the aunty, "Why the dog was like that?" The aunty explained to her about the *ao kuewa*.

Ms. Paglinawan expressed her concerns regarding the effects that the proposed project will have on the *ao kuewa*, noting her belief that ghosts are attracted at night to lights and to energy. She stated that "the building that has the most energy, electrical energy is our library, it is temperature and humidity controlled, it has all the electronic equipment for media and dispersal of information." She recalled speaking with staff at the UHWO library:

So, the stories that have been told to me is staff turned off the lights and everything in the library [when] they leave. When the guard make their round again, even before midnight, the huge monitor is lit up. Who turned it on? They have constant problems with the elevators on campus and the newest building on campus that was just completed about a year ago has had electrical difficulties "left and right."

She added that, "on top of the library we have this huge art piece that is highlighted at night and our chancellor says, "It's a beacon for the people, Nānākuli, Wai'anae," but hell, it's a beacon for the ghosts, too. Because they're energy, they seek the thrill of electricity."

She also noted that "we've had documentation of the double pane picture windows in the library for humidity control and temperature control, they had an incident where somebody from the inside was trying to break their way out. The inner panel was broken, they hadn't gotten to the outer panel. So, it was from the inside going out, and yet, staff will swear nobody was in the building."

She also stated that people "have seen lights coming from the second floor ground, lights from the carpet shining up and they're wondering, "What the hell is that?" They go down, there is nothing underneath."

She noted that these "strange happenings" are not limited to the library. She stated that:

[...] every single building, the workers, they work late, they feel it and we have in the back of [UH] West O'ahu towards this end, we have the housing of the electrical unit. The ones who work there during the day say it is spooky, so you know what they have, Hawaiian salt, if they feel a presence, they eat some Hawaiian salt and they sprinkle, so they have to contend with that.

She also expressed her concerns of the effect of the *'uhane* on the solar panels, noting "that's high energy. It will be like going to the game room." She also noted her concerns regarding the Honolulu Rail Transit System, stating that:

I hate to think what it's going to be like when the rail comes on. This thing lit up at night going zoom, zoom. They gonna be on it, but there's going to be a lot electrical outage cause the more power the faster the excitement.

She also stated that she expects to "see a lot of repair and maintenance on electrical parts." She stated that following exam periods when there is a "high utilization of night classes, night classrooms and study areas," they experience "things breaking down or burning out." She added that "in the long run, the cost for electrical repair and maintenance is a heavy burden for the contractor, but once that contract has finished the problem still remains [...]"

Ms. Paglinawan stated that "spirits travel on ancient trails" noting that "they go from *mauka* going down to *makai*" and that, "ancient trails were there to go up and down, and so, *lōlō* [crazy] for them [ghosts] to just stay one place when they don't have to." She added that these "ancient trails are still in use," stating that:

The people who have residence in Kapolei area tell me the stories about somebody trying to enter the house and break the door down. And when they swear, and they go to the front door, they going fight with them, they open the door, no more nothing. And I asked them, "How often does this happen?" They said, "Not that often, once in a while." But that's the ghost who walked the trails on certain nights.

She also discussed an old home on Hawaiian Home Lands in the *ahupua'a* of Waimānalo, Ko'olaupoko. She noted that this house has "never ever been completed" because the residents built the home on the ancient pathway to the beach and they were getting "bothered all the time."

[...] you know down Waimānalo [Ahupua'a], [...] across from the beach is Hawaiian Home Lands, there's one old house that has never ever been completed. It's because the residents built that house right on the beach pathway and they get bothered all the time, so they've given it up.

She also recalled that while her husband, the late Richard K. Paglinawan, was a student at the University of Hawai'i, he heard spirits travelling on the ancient pathways "coming from the ocean going up Waiāhole Road into the mountains."

My husband lived in Waiāhole and when he studied for the University it would be like 2-3 o'clock in the morning, as soon as he hears the drums, he turn off all the lights, he put his head under the pillow and he will himself to go sleep because he can hear it coming from the oceanside going up Waiāhole Road into the mountains.

She added that "this area where the University [of Hawai'i West O'ahu] is located has a lot of trails that go from *mauka-makai*, come from Honolulu going towards Nānākuli." She asked, "Is this going to be built on ancient trails?" She added that the project proponents should be "mindful of the ancient trails because when the ghosts march, they begin from the mountain, but they also begin from the oceanside and they go into the valley."

Ms. Paglinawan stated that the development of the *moku* of 'Ewa including the *ahupua'a* of Honouliuli resulted in the displacement of the *ao kuewa*. She noted that "we destroyed the habitat

of the *ao kuewa* which is the *wiliwili* trees.” She added that “if we destroy the habitat of the ghosts, they have no place to go but into the facilities.”

[...] if we recognize we destroyed their habitat, we are making restitution cause we know we did that. It is reciprocal *aloha* [love]. So we do this with the right intentions, righting the wrong that we have done and they will respond in right ways. We have the saying, “When *aloha* is given unconditionally, you never know when, but it comes back to you.” So, I really believe in that and because I believe that these may be the spirits of my ancestors, I lay my genealogy on the line to reach out to them. That with *aloha* we want to rectify our sins, our transgressions.

To illustrate reciprocal *aloha*, Ms. Paglinawan shared a *mo'olelo* of the goddess Hi'iakaikapoliopole who passed through the 'Ewa District. She stated:

[...] Hi'iakaikapoliopole, who traveled through from Ka'ena Point across the west side and then from Pu'u Kapu and descended down into the 'Ewa District. She as a goddess can see if you're human or you're a ghost. She saw in the distance, two women, they were stringing *leis* [garlands]. She thought in her mind, “I wonder if they still remember *aloha*?” Now for a Hawaiian, *aloha* is your behavior that is hospitable, it is welcome. And the practices during that time, if you were a stranger coming through that desolate area, you're invited to partake in whatever water you have and whatever limited food you have. So she said, “I wonder if they still remember *aloha*?” So she did an *oli* [chant], *oli aloha*, and as soon as they heard it, they looked up and they saw that's a *malihini* [stranger] and the smile just graced their faces. Hi'iaka said, “they still know *aloha*.” They stopped everything, the *leis* that they had, they rushed to her and said, “Welcome,” and bedecked her with the *leis*. So, the lesson for us, the living, if our intentions is good, if it is *pono* [proper], it increases the opportunity for *aloha* to be reciprocal.

Ms. Paglinawan recommended planting “a wall of trees” surrounding the proposed project area which would provide a home for the displaced spirits. She asked, “Can we entice them to go there?” She went on to state that:

I'm also very mindful that any kind of tree that we put there, that produces food, not just for the living but for the ghosts cause you know if you get *'ulu* [breadfruit, *Artocarpus altilis*], you get coconut, not everybody picks up everything, some go on the ground. Coconut leaves, if you leave it on the ground, it begins to be a cover that bugs begin to cluster, the bugs are also the things the ghosts ate. They also ate whatever foods fell down, but they were Hawaiian so they went *makai* and they go catch crab and they eat crab, they eat the seaweed.

She added that:

I'm thinking we're gonna have a conference in January and Kūkaniloko, the birthing stones, were promised a donation of 10,000 Hawaiian plants. They've offered as many of the *wiliwili* trees as I want, so I want to start a campaign that, like Hawaiian Home Lands, they allow their residents to plant a tree and maybe it might be a border of the road, plant a whole row of trees and that way they have their own houses, man have their own houses. And Hawaiian's have rituals that can

clear them [ghosts] out of the house and prevent them from entering again with bamboo.

She added that, "I'd like to see us repair the habitat, so in our rituals and in our belief in the gods listening to our plea, our needs, they would consider that these souls want to live with *aloha*, with man, the living man, cause for me it's family. I want them to live with *aloha*, so if they sacrifice and having to move outside so that man is comfortable in his area, let's set aside a wall of trees."

Ms. Paglinawan discussed the types of plants that were previously found in the area which include *noni* (Indian mulberry, *Morinda citrifolia*) plants, coconut trees, *lauhala* (*Pandanus tectorius*) trees, and 'ulu trees. She noted that these plants were "very plentiful but sparse not like a big grove where it's like a park of trees, it was interspersed throughout." She also noted that the destruction of the foliage has also "affected the number of Hawaiian birds who no longer come around." She noted:

There used to be *noni* trees in the area and it was known that the birds sought the nectar from the *noni* flower, now they don't have this around. As a result, the count of the Hawaiian birds has really diminished.

Ms. Paglinawan stated that she would like to "reverse the negative impact and do restitution." She noted that "if you have a border of trees that's long, it meets the needs for life, you have physical food, you have supplies that you use for making crafts and getting along, and you create habitat, not just for the *ao kuewa*, but for birds, as well, who used to be a larger number of them there like the *pueo* (Hawaiian short-eared owl; *Asio flammeus sandwichensis*) and 'i'iwi (Scarlet Hawaiian honey creeper; *Vestiaria coccinea*)."

She also mentioned that she wanted to do plantings in the gulch which is located near the UHWO campus, noting that "we wanted to do plantings, keep the ravine clear, but on the sides we do the plantings, so that they [ghosts] leave [UH] West O'ahu and they go to the plants [...]"

She also noted that planting of "a wall of trees" around the proposed project area would have other benefits including the production of oxygen. She stated that "we need to create this area to have an opportunity to equalize the airspace that's going to reduce carbon dioxide but can we replace it with oxygen." She noted that,

[Solar] Energy is a replacement of carbon dioxide emission but what are we promoting to occupy the space carbon dioxide had because trees produce oxygen, we need oxygen for living.

Ms. Paglinawan also noted that,

For me, it's *ho'oponopono*. If you destroy a part of an ecosystem, how do you bring it back to retain balance? Otherwise it will always be uneven, you remove the oxygen from fossil fuel emission, what are you gonna replace with it? Other chemicals, well, what about oxygen that we need to live and survive on.

Ms. Paglinawan also expressed her concerns about the psychological impacts on the people who encounter these spirits, asking, "What kind of psychological impact is being created when we occupy certain space and then the spirits have to cluster?" She noted her belief that "children who are more pure and more innocent, they see many more things than we do." She added that:

Mary Kawena Pukui says, “if you talk to the ghosts and they know what’s happening, if they know they’re not wanted there cause they’re making people scared. You ask them to go back where they belong, they will go.” But, that is an act of *aloha* because they making life good for the living. The children not going get scared.

Ms. Paglinawan also noted that each island has areas which are home to the *ao kuewa*. She stated:

[...] like on Maui, you know where the sand dunes are, lot of bones yeah, Hawaiian Home Lands had land right at the edge of the sand dunes, they built a subdivision, the grandchildren see ghosts. Kaua‘i has Manā (sands of Manā) by Polihale, the cliffs of Polihale. That is where the good spirits are judged to leap off and to join their ancestors and they go, but there’s also some that never make that jump. So, it happens over there. So, Hawaiians have the leaping off place to get to *pō*, so that area means there are pathways that you shouldn’t build houses on because it’s gonna happen with Hawaiian deaths.

Ms. Paglinawan would like to use the traditional cultural practice of *ho‘oponopono* to make things right with the *‘uhane* who have been displaced by the development of the *moku* of ‘Ewa and in the *ahupua‘a* of Honouliuli. She recommends planting “a wall of trees” around the proposed project area as restitution to the *‘uhane* who may be displaced by the proposed project. She expressed concerns regarding the effects that the *‘uhane* will have on the solar panels, noting the numerous electrical problems experienced by the UHWO due to the presence of the *‘uhane*. She stated that planting of “a wall of trees” around the proposed project area would provide a home for the *‘uhane* who may be attracted to the energy being generated by the proposed solar farm, as well as, providing a habitat for Native Hawaiian birds and producing oxygen.

She would also like the project proponents to be mindful of the locations of ancient trails which she noted are still in use by the *‘uhane* to travel from *mauka* to *makai* in Honouliuli Ahupua‘a with less worry about money.

Ms. Paglinawan also expressed her concerns for the people that encounter the *‘uhane*. She noted the psychological trauma on workers at the UHWO, as well as, families who live in the area. She was particularly concerned for the children who encounter these spirits, noting her belief that children “see many more things than adults do.”

## 6.6 Summary of *Kama‘āina* Interviews

Based on reviewed and approved interview summaries of Tom Berg, Shad Kāne, Christian Kaimanu Yee, and Lynette Paglinawan, the following is a synthesis of findings within Honouliuli Ahupua‘a.

CSH met with Mr. Christian Kaimanu Yee on 9 August 2019 to share his extensive *‘ike* of *wahi pana* and *mo‘olelo* associated with the *ahupua‘a* of Honouliuli. Mr. Yee discussed several *wahi pana* in the *ahupua‘a* of Honouliuli including Pōhakea Pass, Mauna Kapu, Pu‘uokapolei, a *wiliwili* grove and a *pōhaku* known as Pe‘ekāua on the plains of Kaupe‘a, and a *heiau* and trail located at Kalaeloa Heritage Park. He also noted that one of the oldest fishing encampments on the island of O‘ahu was found at Ko‘olina.

Mr. Yee noted the importance of trails to the *ahupua'a* of Honouliuli pointing out that trails leading to Wai'anae and the North Shore pass through Honouliuli. He stated that the “north shore trail” travels along the boundary between Honouliuli and Hō'ae'ae Ahupua'a before branching off and leading to Pōhākea Pass where it continues through the Wai'anae Mountain Range to Lualualei Ahupua'a in the *moku* of Wai'anae. Mr. Yee added that Pōhākea Pass is associated with the goddess Hi'iakaikapoliopole and her epic journey across the Hawaiian Islands, as well as the famous warrior, Palila, who Mr. Yee referred to as the “Hawaiian Thor.”

Mr. Yee also discussed the *'ili* of Līhue which was associated with a class of chiefs known as the *lo ali'i*. He shared the *mo'olelo* of Kelea, a chiefess of Maui, who was kidnapped and brought to O'ahu to marry Lō Lale, a *lo ali'i* from Līhue in Honouliuli (Kamakau 1991b:46).

He also discussed Kūali'i, a chief who defeated the chiefs of Ko'olaupoko on the plains of Keahumoa (Fornander 1917:364) when a *mele* in honor of Kūali'i was chanted and the chief of Ko'olaupoko ceded the districts of Ko'olaupoko, Ko'olaupoko, Waialua, and Wai'anae to Kūali'i (Fornander 1917:400). He noted that the *mele* in honor of Kūali'i was composed by Kapa'ahulani and Kamaka'aulani, two brothers who were on opposing sides of the battle.

On 13 August 2019, CSH spoke with Mr. Shad Kāne via telephone. Mr. Kane stated he is not in opposition to the proposed project, noting that the project area has been previously disturbed by sugarcane production.

In written testimony provided to CSH on 19 August 2019, Mr. Berg stated that the project has been “proposed on a pueo (owl) foraging and breeding ecosystem.” He noted that records indicate that per earliest colonial contact, the *pueo* is most abundant on the slopes from Pu'u Kapua'i to West Loch, adding that “Hunehune Gulch, Kalo'i Gulch, and Honouliuli Gulch are migratory routes used by the pueo to go from mountain to sea to court, mate, forage, and raise their brood.” He stated the proposed project will “encroach on prime pueo habitat—considered to be graded A+—“a ten (10)”—when it comes to the degree of pueo habitat in use on this project site.” Mr. Berg also stated the project site is also “inhabited by the *ōpe'ape'a* at various times of the seasons,” noting that in 1910, the State of Hawai'i documented *ōpe'ape'a* within a half-mile of the project area.

Mr. Berg also stated that the *pueo* has “a direct connection to Native Hawaiian family lineage in Ewa Beach,” noting the *pueo* is the *'aumakua* for the Michael Lee family and their accounts, which go back over seven generations, are documented at the State Archives Building in Honolulu.

Mr. Berg stated his concern that the “property in question will not receive the proper protocol to conclude no endangered species inhabit the area.” He recommended that “a thorough and complete protocol is adopted to repeat the inventory exercise for pueo and *ōpe'ape'a* over the course of a calendar year would be in order so the project does not inadvertently contribute to more endangered species habitat loss.” He added that “this practice, to deploy the protocol year-round, is not being done in either the EA and or EIS review processes.” Mr. Berg also recommended consulting with Dr. Melissa Price and Dr. Javier Cotin of the Project Pueo Biologist Team and DOFAW Biologist Afsheen Siddiqi regarding *pueo* protocol.

Mr. Berg also expressed his concern for the possible negative aspects of neighboring lighting operations at an adjacent parcel which may reflect off a solar panel into “the flight patterns of migrating birds and the *ōpe'ape'a* and *pueo* in particular need to be addressed.”

Ms. Lynette Paglinawan stated that “whole area in Honouliuli going *mauka* is the space that was occupied by the *ao kuewa*” which she defined as the “ghosts or spirits of the deceased relatives that belong in a family.” She expressed her concerns regarding the effects that the proposed project will have on the *ao kuewa*, which she believes are attracted to energy. She also expressed her concerns of the effect of the spirits on the solar panels, noting “that’s high energy. It will be like going to the game room.” She also noted that UHWO experiences numerous electrical problems due to the presence of these spirits.

Ms. Paglinawan noted that “this area where the University [of Hawai‘i West O‘ahu] is located has a lot of trails that come from *mauka-makai*, come from Honolulu going towards Nānākuli.” She stated that project proponents should be mindful of the locations of ancient trails, noting that the ancient trails are still used by spirits to travel from *mauka* to *makai* within Honuliuli Ahupua‘a.

Ms. Paglinawan recommended planting “a wall of trees” surrounding the proposed project area as restitution to the spirits who may be displaced by the proposed project. She also noted that planting of “a wall of trees” around the proposed project area would have other benefits including the production of oxygen and providing a habitat for Native Hawaiian birds.

Ms. Paglinawan also expressed her concerns regarding the psychological impacts for the people that encounter the spirits, noting trauma on workers at the UHWO, as well as, families who live in the area. She was particularly concerned for the children who encounter these spirits, noting her belief that children “see many more things than we do.”



## Section 7 Traditional Cultural Practices

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

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

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

This section integrates information from Sections 3–6 in examining cultural resources and practices identified within or in proximity of the project area in the broader context of the encompassing Honouliuli landscape. Excerpts from interviews are incorporated throughout this section where applicable.

### 7.1 Gathering of Plant and Aquatic Resources

Lying in the lee of the Wai‘anae Mountain Range, Honouliuli is one of the driest areas of O‘ahu with most of the area averaging about 550 mm (22 inches) of rain on the coastal and inland region of the *ahupua‘a* and about 1,200 mm (39 inches) in the northern region up into the Wai‘anae Mountain Range (Giambelluca 2013). Despite the relative lack of rainfall in this area, there exists a traditional rain name 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 other notoriously dry locations, such as Kawaihae, Hawai‘i and Ni‘ihau (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.

No natural streams are located in the vicinity of the project area. However, fresh water remains available 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 (1933) 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.

The lowlands fronting the west loch of Pearl Harbor (Kaihuopala'ai) were suitable for the cultivation of the traditional Hawaiian staple crop, *kalo*. The production (and consumption) of *kalo* was vitally important to many communities of Native Hawaiians living in 'Ewa. Captain James King, visiting Hawai'i in 1779, noted that “the natives of these islands are, in general, above the middle size and well made; they walk very gracefully, run nimbly and are capable of bearing great fatigue” (Shintani 1993:10). Accordingly, the high level of physical activity and physical fitness described by Captain King was a normal part of Hawaiian life and was largely attributable to the availability of plant and food resources such as *kalo*, *'uala* (sweet potato; *Ipomoea batatas*), *niu*, *mai'a*, *limu* (seaweed), and *i'a* (fish). Besides the observed contributions to stamina and health, *kalo* was also a revered staple food, believed to have derived from the first-born son of Wakea and Papa.

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

'Ewa was also famous for a rare taro called the “*kāi o 'Ewa*,” which was grown in mounds in marshy locations (Handy and Handy 1972:471). The cultivation of this prized and delicious taro led to the saying, “*Ua 'ai i ke kāi-koi o 'Ewa*, He has eaten the Kāi-koi taro of 'Ewa” (Pukui 1983:305).

Traditional Hawaiian diets were also supplemented with ocean-based proteins. Native Hawaiians historically fished the reefs, farmed fishponds, and utilized the freshwater springs in the *ahupua'a* of Honouliuli. The lochs of Pearl Harbor were ideal for the construction of fishponds and fish traps. References to the abundance of ocean resources can be found within *mo'olelo*, *wahi pana*, and *'ōlelo no'eau* associated with Honouliuli Ahupua'a.

The *mo'olelo* “Legend of the Children” describes the coastal area of Kūalaka'i as being plentiful in fish. Clark (1977:74) and Pukui et al. (1974:119) describe Kūalaka'i as a type of sea cucumber (*Tethys*) that squirts purple fluid when squeezed. The *'ōlelo no'eau*, “*Kai a hali a ka makani*,” translates to “the fish fetched by the wind” which describes the migration of the *'anae* that travels from the leeward coast to the windward coast of O'ahu.

Interviewee Christian Kaimanu Yee noted that the site of one of the oldest fishing encampments on the island of O'ahu was discovered at Ko'olina. Ross Cordy (2002:13–14) discussed evidence of early settlement at “sites on the arid western fringe of the 'Ewa Plain in today's Ko Olina Resort,” which included “fishbone, shellfish, bird bone (flightless goose, etc.), early types of one-piece bone and pearlshell fishhooks, and basalt adze blanks” which date back to AD 145-600.

## 7.2 Faunal Resources

The *pueo* (*Asio flammeus sandwichensis* or short-eared owl), which is endemic to Hawai‘i, are found on all of the main Hawaiian islands and are listed by the State of Hawai‘i as endangered on the island of O‘ahu (DLNR 2005). The DLNR states that *pueo* are most commonly found in “open habitats such as grasslands, shrublands, and montane parklands, including urban areas and those actively managed for conservation” (DLNR 2005).

In written testimony provided to CSH via email on 19 August 2019, Mr. Tom Berg stated that the project has been “proposed on a pueo (owl) foraging and breeding ecosystem.” He noted that historic records indicate the *pueo* is most abundant on the slopes from Pu‘u Kapua‘i to West Loch. He added that “Hunehune Gulch, Kaloi Gulch, and Honouliuli Gulch are migratory routes used by the pueo to go from mountain to sea to court, mate, forage, and raise their brood.” He also stated the proposed project will “encroach on prime pueo habitat—considered to be graded A+—“a ten (10)”—when it comes to the degree of pueo habitat in use on this project site.”

The *pueo* is one of the most important ‘aumākua gods and ancestral deities of the family (Valeri 1985:19, 21). Mr. Berg noted the *pueo* has “a direct connection to Native Hawaiian family lineage in Ewa Beach,” noting that the *pueo* is the ‘aumakua for the Michael Lee family and their accounts, which go back over seven generations, are documented at the State Archives Building in Honolulu.

Mr. Berg also stated that the project site is “inhabited by the ōpe‘ape‘a [Hawaiian hoary bat, *Lasiurus cinereus semotus*] at various times of the seasons,” noting that in 1910, the State of Hawai‘i documented ‘ōpe‘ape‘a within a half-mile of the project area. “The only land mammal native to the Hawaiian archipelago,” ‘ōpe‘ape‘a are found on all of the main Hawaiian islands except for Ni‘ihau (DLNR 2005:3-13) and have been “found roosting in ‘ōhi‘a (*Metrosideros polymorpha*), pu hala (*Pandanus tectorius*), coconut palms (*Cocos nucifera*), kukui (*Aleurites moluccana*), kiawe (*Proscopis pallida*), avocado (*Persea americana*), shower trees (*Cassia javanica*), pūkiawe (*Styphelia tameiameia*), and fern clumps; they are suspected to roost in Eucalyptus (*Eucalyptus* spp.) and Sugi pine (*Cryptomeria japonica*) stands” (DLNR 2005). The ‘ōpe‘ape‘a was listed as an endangered species under the Endangered Species Conservation Act of 1969.

## 7.3 Wahi Pana

There exist a myriad of cultural sites or *wahi pana* for ‘Ewa Moku, however, for the *ahupua‘a* of Honouliuli trails, plains, and temples 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. Mr. Yee pointed out that the “north shore trail,” which branches off the cross-*ahupua‘a* trail, traverses a portion of the eastern boundary of the *ahupua‘a* between Honouliuli and Hō‘ae‘ae Ahupua‘a before branching off and leading to Pōhākea Pass and traversing through the Wai‘anae Mountain Range to Lualualei Ahupua‘a in the *moku* of Wai‘anae.

Mr. Yee noted that Pōhākea Pass is associated with the goddess Hi'iakaikapoliopole, sister of volcano goddess Pele, and her epic journey across the Hawaiian Islands. He noted that from Pōhākea Pass, Hi'iaka could see the entire *moku* of 'Ewa. From Pōhākea Pass, Hi'iaka also saw her traveling companions, Lohi'au and Wahine'ōma'o, as they traveled by canoe to the harbor of Kou (Honolulu) (Ho'oulumahie 2008b:260). She also saw that her *aikāne*, Hōpoe, had "died in the fires of her elder sister Pele" as she "gazed towards Hawai'i" from Pōhākea Pass (Ho'oulumahie 2008b:260).

Mr. Yee also noted that Pōhākea Pass is associated with the famous warrior, Palila, who could throw his supernatural war club a long distance and fly along the club's path as he held on to the end of it. According to the *mo'olelo*, Palila used his supernatural war club to carry himself from Ka'ena Point at Wai'anae, before landing at Pōhākea Pass and continuing east across the *moku* of 'Ewa.

Ms. Paglinawan stated that "this area where the University [of Hawai'i West O'ahu] is located has a lot of trails that go from *mauka-makai*, come from Honolulu going towards Nānākuli." She noted that the ancient trails are still used by spirits to travel from *mauka* to *makai* within Honuliuli Ahupua'a. She mentioned that "there are stories of them being known to go down to the oceanside and cause havoc with the living" and "even going up into the mountain of Pālehua beyond Makakilo," noting "the families who live there talk about ghosts and strange happenings [...]" Ms. Paglinawan asked, "Is this going to be built on ancient trails?" She stated that the project proponents should be "mindful of the ancient trails because when the ghosts march, they begin from the mountain, but they also begin from the oceanside and they go into the valley."

Mr. Yee stated the *'ili* of Līhue, which is located in the northern region of Honuliuli Ahupua'a, was associated with a class of chiefs known as the *lo ali'i*. Mr. Yee noted the "*lo ali'i* were the highest ranking chiefs but then they were hidden so they were like the poorest at the same time." He also discussed the *mo'olelo* of Kelea, a chiefess of Maui, who was kidnapped and brought to O'ahu to marry Lō Lale, a *lo ali'i* from Līhue in Honuliuli (Kamakau 1991b:46).

Mr. Yee pointed out Mauna Kapu, a peak located in the Wai'anae Mountain Range bordering the *ahupua'a* of Nānākuli. He noted the existence of another Mauna Kapu in the *ahupua'a* of Moanalua, adding that he believes that Mauna Kapu were "meeting places, or something like that, for the chiefs."

The 'Ewa coastal plain was also 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* where they would leap into Pō, the world of the unseen (Handy and Pukui 1972:146). The spirit was guided to and over the *leina* and into Pō by their *'aumakua* (Handy and Pukui 1972:146), however, if the soul of the deceased had no place in the *'aumakua* realm, or was abandoned by an *'aumakua*, they were destined to wander the *wiliwili* grove of Kaupe'a until such time that they were rescued by their *'aumakua*. Mr. Yee also noted largest grove of *wiliwili* trees on the island of O'ahu was once located in the area where the 'Ewa by Gentry subdivision is now. Fornander (1919a:6[2]:292) states that Pu'uokapolei may have been a *leina*, jumping off point associated with the wandering souls who roamed the plains of Kaupe'a and Kānehili, *makai* of the hill.

Pu'uokapolei was also known to be the home of Kamapua'a's grandmother, Kamaunuanihō, (Nakuina 1904:50). After conquering the majority of O'ahu, he established his grandmother as queen (Pukui 1974:203). There was once a large rock shelter on the *makai* side said to have been the residence of Kamapua'a and his grandmother (McAllister 1933:108). Another account (*Ka Loea Kālai āina*, 13 January 1900 in Sterling and Summers 1978:34) stated that Kekele'aikū, the older brother of Kamapua'a, also lived on Pu'uokapolei.

The plain of Pukaua is also located near Pu'uokapolei, northwest of the project area. Two distinct *mo'olelo* are connected with this cultural site. The first of these two stories was presented within a 13 January 1900 edition of *Ka Loea Kālai āina* which states that two old women with supernatural powers were heading to their home to Pukaua following an evening of fishing at the village of Kualaka'i. As the sun began to rise, the women hid to avoid being seen and their bodies turned to stone. The second *mo'olelo* involves Hi'iaka, and was spread across several daily editions of *Ka Hōkū o Hawai'i* from February 1927. According to the *mo'olelo*, the two women were *mo'o*. The women saw Hi'iaka as she journeyed toward the 'Ewa coast. They were afraid that Hi'iaka would kill them, so they transformed into their lizard form and hid from Hi'iaka (*Ka Hōkū o Hawai'i*, 15 February 1927, translated in Maly 1997:19). This stone was known as "Pe'e-kāua," which translates to "we two hidden." Mr. Yee also discussed the plain of Pukaua, mentioning that "there was those two ladies who were down by the archery, that's two *pōhaku*, the lizards in the Hi'iaka story."

Mr. Yee also discussed Kūali'i, a "celebrated chief [...] noted for his strength and bravery" who defeated the chiefs of Ko'olauloa on the plains of Keahumoa (Fornander 1917b:4[2]:364). Mr. Yee stressed the importance of two brothers, Kapa'ahulani and Kamaka'aulani, who were on opposing sides of the battle. According to the *mo'olelo*, Kapa'ahulani and Kamaka'aulani composed the *mele* in honor of Kūali'i and devised a plan in which Kapa'ahulani would urge the chief of Ko'olauloa to make war on Kūali'i, and Kamaka'aulani would take Kūali'i and "conceal yourselves in the bushes" at the place where the battle is to be fought (Fornander 1917b:4[2]:366). When the forces of Ko'olauloa arrived in Honouliuli, their army of twelve hundred were outnumbered by Kūali'i's army of twelve thousand, however, the battle was averted when the *mele*, which was composed by Kapa'ahulani and Kamaka'aulani in honor of Kūali'i was chanted and the chief of Ko'olauloa surrendered, ceding the districts of Ko'olauloa, Ko'olaupoko, Waialua and Wai'anae to Kūali'i (Fornander 1917b:4[2]:400).

Kūalaka'i is the name of an ancient fishing village located on the southwestern side of Honouliuli Ahupua'a, southwest of the project area. Kūalaka'i is mentioned in the "Legend of the Children" which foretells the breaking of the eating *kapu* by the *ali'i* (*Ka Loea Kālai āina*, 22 July 1899:15; translation in Sterling and Summers 1978:7). This area was also once the site of a spring called Hoaka-lei ("lei reflection"), where according to *mo'olelo*, Hi'iaka picked *lehua* and saw her reflection in the water (Pukui et al. 1974:119).

Kalaeloa is an area located at the southwestern point of O'ahu. Kalaeloa Point was the home of Uhu Makaikai, a *kupua* who could take the form of a man or a giant parrotfish (*uhu*). He is mentioned in several legends concerning the hero Kawelo and with Kawelo's struggles with 'Aikanaka, the ruling chief of Kaua'i (Hawaiian Ethnological Notes, Bishop Museum Vol. II:114, translation in Sterling and Summers 1978:41).

Cultural practices within Honouliuli of late have been inspired by traditional understandings of caring for natural and cultural resources. The Kalaeloa Heritage and Legacy Foundation has adopted practices wherein the community can *mālama* (care for) cultural sites, and in turn benefit from the knowledge inherent in such sites. Previously documented cultural sites within the Kalaeloa Heritage Park are actively cared for while also the subject of numerous university-level studies. These sites have been established as important centers for an *‘āina*-based education. Mr. Yee recalled visiting Kalaeloa Heritage Park where he observed a *heiau* which was partially underground and built using upright coral stones. He also observed a trail marked by upright coral slabs which “supposedly led all the way to another *heiau* that was by Laulaunui Island” near the West Loch of Pu‘uloa (Pearl Harbor).

## 7.4 Religious Practice

Several *heiau* stood in Honouliuli Ahupua‘a including Pu‘uokapolei Heiau, Pu‘u Ku‘ua Heiau, and two unidentified *heiau* located at the foot of Pu‘u Kanehoa and Pu‘u Kuina, respectively. Each year, a ceremony commemorating the changing of the seasons is still observed in the beginning of May at Waikīkī and Honouliuli. Sam ‘Ohukani‘ōhi‘a Gon III, Na Wa‘a Lalani Kahuna O Pu‘u Koholā, and the late Kumu Hula John Keola Lake’s *hula hālau* perform *oli* and *hula* during the ceremony (Genz et al. 2012). The ceremony occurs at Pu‘uokapolei Heiau which is oriented so that it views the setting of the sun behind Pu‘ula‘ila‘i farther west, and maintains a line of sight extending eastward from Pu‘ula‘ila‘i toward Papa‘ena‘ena Heiau located in Waikīkī. Mr. Yee also noted that during the summer solstice, the sun sets over Pu‘uokapolei, adding that the pathway of the sun aligns a *heiau* located on Pu‘uokapolei with Papa‘ena‘ena Heiau.

Interviewee Lynette Paglinawan stated that “the area from Waimānalo Gulch over to Kapolei to the location of UHWO was known by very early residents there to be the place where “*ao kuewa*,” wandering spirits, congregated from *makai* to *mauka* up Pālehua and especially near the cluster of *wiliwili* trees in Kaupē‘a.” Ms. Paglinawan stated that the development of the *moku* of ‘Ewa including the *ahupua‘a* of Honouliuli resulted in the displacement of the *ao kuewa*. She noted that “we destroyed the habitat of the *ao kuewa* which is the *wiliwili* trees.” She added that “if we destroy the habitat of the ghosts, they have no place to go but into the facilities.” She would like to use the traditional cultural practice of *ho‘oponopono* to make things right with the spirits who have been displaced. Ms. Paglinawan suggests planting “a wall of trees” surrounding the proposed project area which would provide a home for the displaced spirits.

## 7.5 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” (Mylroie and Carew 1995). The caves of Pu‘uloa were sometimes also used as burial caves. Following the death of Keali‘iahonui, son of Kaua‘i’s last king, Kaumuali‘i, in 1849, his body was buried in Pu‘uloa (Alexander 1907:27). Burials have been encountered in the coastal areas of the *ahupua‘a*, however, no burials have been encountered within the project area nor within the vicinity of the project area.

Mr. Yee noted the possibility of a burial cave located on Pu'uokapolei which contained a canoe inside of it, however, he added that it's "probably long gone cause if you look at it, it's all leveled already, on the *makai* side."



## Section 8 Results and Analysis

CSH undertook this CIA at the request of Tetra Tech, Inc., and on behalf of AES Distributed Energy. The research broadly covered the entire *ahupua'a* of Honouliuli, including the current project area.

### 8.1 Results of Background Research

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

1. Honouliuli is the largest *ahupua'a* in the *moku* of 'Ewa. Honouliuli translates literally as “dark water,” “dark bay,” or “blue harbor,” and thus is named for the waters of Pearl Harbor which marks the eastern boundary of the *ahupua'a* (Jarrett 1930:22). Another source translates Honouliuli as “The blue bays or inlets” (*Saturday Press*, 11 August 1883). Honouliuli appears in the “Mo'olelo of Lepeamoa,” the chicken-girl of Pālāma, where Honouliuli is the name of the husband of the chiefess Kapālāma, and grandfather of Lepeamoa (Westervelt 1923:164–184).
2. 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.
3. 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. McAllister additionally remarked that at the time of his 1930s survey *mai'a* (banana; *Musaceae*) and *kō* (sugarcane; *Saccharum officinarum*) were being cultivated within the pit caves (sinkholes) (McAllister 1933:109).
4. The traditional *ka'ao* associated with the area speak of the *akua* brothers, Kāne and Kanaloa. It was their supernatural feat of hurling *pōhaku* across the island that determined the boundaries of land divisions (Sterling and Summers 1987:1). Additional *mo'olelo* speak of Hi'iaka and her travels across the plains of 'Ewa. In particular, the *wahi pana* of Kaupe'a (located south of the current project area) is described. Kamakau describes Kaupe'a as a wide plain where a grove of *wiliwili* (*Erythrina sandwicensis*) stands (Kamakau 1991a:47). This plain is an *ao kuenta*, a realm belonging to homeless souls. In general, the *kama'āina* of both Honouliuli Ahupua'a and 'Ewa District made a point to avoid this place.
5. Pu'uokapolei is a prominent hill located on the 'Ewa coastal plain that was the primary landmark for travelers on the trail running from Pearl Harbor to Wai'anae. A *heiau* was once on the summit of the hill, however, by the time of McAllister's survey of O'ahu it had been destroyed (McAllister 1933:108). The hill was also used as a point of solar

reference or as a place for celestial observations of the winter and summer solstice. A ceremony at a *heiau* on Pu'uokapolei provides a vantage point to capture the sun setting directly behind Pu'ula'ila'i, a peak farther west in the Wai'anae Range. A coinciding ceremony at Kūpalaha Heiau in Waikīkī captures the same essence as the sun sets behind Pu'uokapolei.

6. Additional *heiau* located within Honouliuli included Pu'u Ku'ua located at Palikea, in addition to two unidentified *heiau*. These two unidentified *heiau* are located at the foot of Pu'u Kanehoa and Pu'u Kuina, respectively.
7. In later historic times, a network of trails 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 circumscribing the shoreline of O'ahu (Īī 1959:96–98). The main trail along the south shore of O'ahu would have been approximately 1.5 km to the southeast. A main trail extending up the central valley of O'ahu would have been approximately 3 km to the east. The 1825 Malden map shows a trail extending from the main trail along the south shore of O'ahu into the uplands in the Pālehua area as passing just a couple hundred meters to the southwest of the project area.
8. The rich resources of Pu'uloa—the fisheries in the lochs, the shoreline fishponds, the numerous springs, and the irrigated lands along the streams—made 'Ewa a prize for competing chiefs. 'Ewa Moku was also a political center and home to many chiefs in its day. Oral accounts of *ali'i* 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.
9. In early historic times, the population of Honouliuli was 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.
10. Early foreign accounts describe the southwest coast of O'ahu, including Honouliuli Ahupua'a, as an area “a little distance from the sea, the soil is rich and all the necessities of life are abundantly produced” (Vancouver 1798:215). A sailor among Vancouver's crew observed, however, that “from the number of houses within the harbour it should seem to be very populous; but the very few inhabitants who made their appearance were an indication of the contrary” (Vancouver 1798:216).
11. Following the Māhele of 1848, 99 individual land claims in the *ahupua'a* of Honouliuli were registered and awarded by King Kamehameha III. No *kuleana* land claims were made for land within the current project area or vicinity. The vast majority of the LCA parcels were located in Honouliuli near the taro lands of the 'ili of Pu'uloa and the Pu'uloa Salt Works. The largest award (Royal Patent 6071, LCA 11216, 'Āpana 8) in Honouliuli Ahupua'a was granted to Miriam Ke'ahi-Kuni Kekau'onohi on January 1848 (Native Register 1848) who acquired a deed to all unclaimed land within the *ahupua'a*, including the present project area.

12. Beginning with the time of Western Contact, however, Hawaiian populations were introduced to many virulent western diseases which began to decimate the native populations. Thus, four years following the 1832 census, the 'Ewa population had dropped to 3,423 (Schmitt 1973:9, 36), "a decrease of 592 in 4 years" (Ewa Station Reports 1836). Between 1848 and 1853, there was a series of epidemics of measles, influenza, and whooping cough that often wiped out whole villages.
13. 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 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 for a total of \$95,000.
14. 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. Campbell's first well was named Waianiani ("crystal waters") by the *kama'āina* of Honouliuli (Nellist 1925). 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).
15. In 1897, B.F. Dillingham established the Oahu Sugar Company (OSC) on 12,000 acres leased from the estates of John Papa 'Ī'ī, Bishop, and Robinson. The Oahu Sugar Company had over 900 field workers, composed of 44 Hawaiians, 473 Japanese, 399 Chinese, and 57 Portuguese. The first sugar crop was harvested in 1899, ushering in the sugar plantation era in Waipahu (Ohira 1997). Prior to commercial sugar cultivation, these lands were described as being "of near desert proportion until water was supplied from drilled artesian wells and the Waiahole Water project" (Condé and Best 1973:313).
16. The Waiahole Water Company was formally incorporated in 1913 and was originally a subsidiary of the Oahu Sugar Company. The Waiahole Ditch was designed by engineer Jorgen Jorgensen, with recommendations by engineer J.B. Lippencott and assisted by W.A. Wall. Upon its completion in 1916, the Waiahole Ditch was 35 km (21.9 miles) long and cost \$2.3 million. The 32 million gallons of daily water enabled the O'ahu Sugar Company to grow to "some 20 square miles [...] ranging in elevation from 10 ft at the Waipio Peninsula [...] to 700 ft at the Waiahole Ditch" (Condé and Best 1973:313). The ditch system is included on the state inventory of archaeological sites as SIHP # 50-80-09-2268. The Waiahole Ditch System crossed through the western portion of the present project area.
17. The early twentieth century saw the lands of Honouliuli heavily utilized by both civilians and the U.S. military for transportation. The U.S. Government began acquiring the coastal lands of 'Ewa for development of a naval base at Pearl Harbor. In 1901, the U.S. Congress formally ratified annexation of the Territory of Hawaii, and the first 1,356.01 acres of Pearl Harbor land were transferred to U.S. ownership.

18. In 1937, 18 miles of roads were built in the coastal Honouliuli area, and in 1939-1940 the U.S. bought 3,500 acres of land in this area (Landrum et al. 1997:62–67), to build several other military camps and installations, including Barbers Point Naval Air Station.
19. Following the Japanese Navy's attack on Pearl Harbor on 7 December 1941, the Territory of Hawaii was declared under martial law and the writ of *habeas corpus* (the requirement for a person under arrest to be brought before a judge or into court) was suspended (U.S. Department of the Interior 2014:6–7). Persons of Japanese and European ancestry in Hawai'i suspected of disloyalty to the United States were rounded up and imprisoned by the U.S. military and the FBI (U.S. Department of the Interior 2014:xii). In 1943, the Honouliuli Internment Camp was constructed to intern citizens, resident aliens, and prisoners of war. Located in Honouliuli Gulch, east of the project area, the camp was the "last, largest, and longest-used World War II confinement site in Hawai'i," holding approximately 320 internees and nearly 4,000 prisoners of war (U.S. Department of the Interior 2014:xiv).

## 8.2 Results of Community Consultations

CSH attempted to contact Hawaiian organizations, agencies, and community members as well as cultural and lineal descendants in order to identify individuals with cultural expertise and/or knowledge of the project area and vicinity. Community outreach letters were sent to a total of 70 individuals or groups; 12 responded, one provided written testimony, and three of these *kama 'āina* and/or *kūpuna* met with CSH for more in-depth interview. Consultation was received from community members as follows:

1. Christian Kaimanu Yee, *kama 'āina* and knowledgeable of *mo 'olelo* and *wahi pana*
2. Shad Kāne, member of 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.
3. Tom Berg, former Councilman, District 1
4. Lynette Paglinawan, cultural practitioner; educator, teaches a course on Native Hawaiian Healing at University of Hawai'i West O'ahu

On 24 January 2020, an *In-Progress Draft Cultural Impact Assessment for the West O'ahu Solar Project* was provided via email to two parties representing the Aha Moku Council, two parties at Nā Ala Hele, two parties at the SHPD History and Culture Branch, and OHA. The parties were invited to review and comment, or provide notification of their intent to comment, prior to the reports inclusion in the Draft Environmental Assessment. CSH followed up with the seven parties via email on 25 February 2020, and has not received any comments or notification of an intent to comment to date.

## 8.3 Impacts and Recommendations

Based on information gathered from the community consultation, participants voiced and framed their concerns in a cultural context.

1. Mr. Shad Kāne stated he is not in opposition to the proposed project. He noted the project area has been previously disturbed by sugarcane production.
2. Mr. Tom Berg stated that the project has been “proposed on a pueo (owl) foraging and breeding ecosystem.” He noted records indicate that per earliest colonial contact, the *pueo* is most abundant on the slopes from Pu‘u Kapua‘i to West Loch, in the area where the project is slated. He added that “Hunehune Gulch, Kaloi Gulch, and Honouliuli Gulch are migratory routes used by the pueo to go from mountain to sea to court, mate, forage, and raise their brood.” He stated the proposed project will “encroach on prime pueo habitat—considered to be graded A+—“a ten (10)”—when it comes to the degree of pueo habitat in use on this project site.”
3. Mr. Berg added that the *pueo* has “a direct connection to Native Hawaiian family lineage in Ewa Beach,” noting the *pueo* is the ‘*aumakua* for the Michael Lee family and their accounts, which go back over seven generations, are documented at the State Archives Building in Honolulu.
4. Mr. Berg also stated that the project site is “inhabited by the ōpe‘ape‘a at various times of the seasons,” noting that in 1910, the State of Hawai‘i documented ‘*ōpe‘ape‘a* within a half-mile of the project area.
5. Mr. Berg stated his concern that the “property in question will not receive the proper protocol to conclude no endangered species inhabit the area.” He recommended that “a thorough and complete protocol is adopted to repeat the inventory exercise for pueo and ‘ōpe‘ape‘a over the course of a calendar year would be in order so the project does not inadvertently contribute to more endangered species habitat loss.” He also recommended consulting with Dr. Melissa Price and Dr. Javier Cotin of the Project Pueo Biologist Team and DLNR’s Division of Forestry and Wildlife (DOFAW) Biologist Afsheen Siddiqi regarding pueo protocol.
6. Mr. Berg also expressed his concern over the possible negative aspects of light at an adjacent parcel. He expressed concern that a solar panel may be reflecting neighboring lighting operations into “the flight patterns of migrating birds and the ‘ōpe‘ape‘a and pueo in particular need to be addressed.”
7. Ms. Lynette Paglinawan stated that “the area from Waimānalo Gulch over to Kapolei to the location of UHWO was known by very early residents there to be the place where “*ao kuewa*,” wandering spirits, congregated from *makai* to *mauka* up Pālehua and especially near the cluster of *wiliwili* trees in Kaupe‘a.” She expressed her concerns regarding the effects that the proposed project will have on the *ao kuewa*, which she believes are attracted to energy. She also expressed her concerns of the effect of the spirits on the solar panels, noting “that’s high energy. It will be like going to the game room.” She also noted that UHWO experiences numerous electrical problems due to the presence of these spirits.
8. Ms. Paglinawan noted that “this area where the University [of Hawai‘i West O‘ahu] is located has a lot of trails that go from *mauka-makai*, come from Honolulu going towards Nānākuli.” She stated that project proponents should be mindful of the locations of ancient

trails, noting that the ancient trails are still used by spirits to travel from *mauka* to *makai* within Honuliuli Ahupua'a.

9. Ms. Paglinawan recommended planting "a wall of trees" surrounding the proposed project area as restitution to the spirits who may be displaced by the proposed project. She also noted that planting of "a wall of trees" around the proposed project area would have other benefits including the production of oxygen and providing a habitat for Native Hawaiian birds.
10. Ms. Paglinawan also expressed her concerns regarding the psychological impacts for the people that encounter the spirits, noting trauma on workers at the UHWO, as well as, families who live in the area. She was particularly concerned for the children who encounter these spirits, noting her belief that children "see many more things than adults do."
11. Project construction workers and all other personnel involved in the construction and related activities of the project should be informed of the possibility of inadvertent cultural finds, including human remains. In the event that any potential historic properties are identified during construction activities, all activities will cease and the SHPD will be notified pursuant to HAR §13-280-3. In the event that *iwi kūpuna* are identified, all earth moving activities in the area will stop, the area will be cordoned off, and the SHPD and Police Department will be notified pursuant to HAR §13-300-40. In addition, in the event of an inadvertent discovery of human remains, the completion of a burial treatment plan, in compliance with HAR §13-300 and HRS §6E-43, is recommended.
12. In the event that *iwi kūpuna* and/or cultural finds are encountered during construction, project proponents should consult with cultural and lineal descendants of the area to develop a reinterment plan and cultural preservation plan for proper cultural protocol, curation, and long-term maintenance

## 8.4 *Ka Pa'akai* Analysis

In *Ka Pa'akai vs Land Use Commission*, 94 Hawai'i (2000) the Court held the following analysis also be conducted:

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

Based on information gathered from the cultural and historical background, and community consultation of the CIA for this project, no culturally significant resources were identified within the project area. At present, there is no documentation or 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 project area. While no cultural resources, practices, or beliefs were identified as currently existing within the project area, Honouliuli Ahupua'a maintains a rich cultural history in the exercise of traditional or customary Native Hawaiian rights within the project *ahupua'a*.

Honouliuli Ahupua'a is the largest *ahupua'a* in the *moku* of 'Ewa (and on the island of O'ahu). 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 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 Oahu Sugar Company. Extensive *mauka* lands in northern Honouliuli, including ridges and deep gulches, were unsuitable for commercial sugar cultivation and remained pasture land for grazing livestock. The Donn 1906 map suggests the present project area was at the *mauka* edge of sugarcane cultivation at that time (see Figure 15). By 1920, however, commercial sugarcane cultivation had expanded into the uplands including the present project area (Frierson 1972:18).

The project area is situated between Pu'u Kapua'i which is located 0.5 km to the northwest and Pu'u Makakilo located 1.2 km to the southwest. These are understood as “very late cones [of the Wai'anae volcano] [...] composed of a varied mixture of cinder, spatter and lava flows” (Macdonald et al. 1983:429). Pukui et al. (1974:199) translate “Pu'u Kapua'i” as “footprint hill,” however, the association with that name is unknown. “Pu'u Makakilo” is translated as “observing eyes” (Pukui et al. 1974:201). The association of this name is also unknown.

The project area is also located between two deeply dissected gulches, Kalo'i Gulch which is located 300 m to the southwest and Honouliuli Gulch located 700 m to the northeast. These gulches are at a comparable elevation and are believed to rarely run with water. The name “Ka-lo'i”



translates to “the taro patch” (Pukui et al. 1974:77). Sterling and Summers (1978:35) associates Kalo'i Gulch with a number of vignettes regarding the “Waihuna” or “Punahuna” hidden spring. It was also noted that the hidden spring “had been one of the principal sources of water for all that country, which was quite heavily populated before the smallpox epidemic of 1840” (Ida E.K. von Holt in Sterling and Summers 1978:35).

#### 8.4.1 A Summary of Cultural, Historical, or Natural Resources in the Project Area

##### 8.4.1.1 Archaeological Resources

An AIS conducted for the University of Hawai'i West O'ahu Campus which encompassed the entirety of the project area (Dega et al. 1998) identified no surface Hawaiian features. Dega et al. (1998:i) noted several plantation-era “flumes, aqueducts, ditches, pumps, and other irrigation features occurring within the heavily modified landscape of the project area.” The features represented an irrigation complex (SIHP # 50-80-08-5593) which was used for sugarcane cultivation from the 1920s through more recent times. A portion of the Waiahole Ditch System (SIHP # 50-80-09-2268) was also documented crossing through the northwest section of the project area and continuing southwest through the lower agricultural fields.

A companion *Archaeological Inventory Survey Report for the AES West O'ahu Solar Project* (Welser et al. 2019 draft) only identified the same two twentieth century historic properties associated with commercial sugarcane cultivation as were identified in the Dega et al. (1998) study. The historic properties previously identified in the general vicinity are virtually all post-Contact (Welser et al. 2019:42–44). Two basalt cobble and boulder mounds identified 800 m to the west of the project area (CSH2 described in Tulchin and Hammatt 2007) were thought to be possible trail markers but their age is unclear. The reader is referred to that archaeological study for further details of the archaeological resources in the vicinity.

##### 8.4.1.2 Burials

The “Ewa Karst,” which consists of limestone caves formed in the uplifted coral, was undoubtedly more extensive during traditional Hawaiian times than present exposures suggest. Where not covered by alluvium or stockpiled material, this Pleistocene limestone outcrop has characteristic dissolution “pit caves” (Mylroie and Carew 1995) which were sometimes also used as burial caves. Burials have been encountered frequently in coastal areas of Honouliuli Ahupua'a, however, previous archaeological studies (Dega et al. 1998) within the project area have not documented any burials within the project area nor within the vicinity of the project area. No *iwi kūpuna* have been identified within the project area or within a kilometer of the project area (Welser et al. 2019:42–44). No burials are believed to be present.

##### 8.4.1.3 Faunal Resources

In written testimony provided to CSH via email on 19 August 2019, Mr. Tom Berg, former City Councilman, expressed concern for two 'aumākua and celebrated species (*pueo* and 'ōpe'ape'a). Mr. Berg stated the project has been “proposed on a pueo (owl) foraging and breeding ecosystem.” The *pueo*, which are found on all of the main Hawaiian islands, are listed by the State of Hawai'i as endangered on the island of O'ahu (DLNR 2005). The DLNR states that *pueo* are most commonly found in “open habitats such as grasslands, shrublands, and montane parklands, including urban areas and those actively managed for conservation” (DLNR 2005).

Mr. Berg also noted records indicate that per earliest colonial contact, the *pueo* is most abundant on the slopes from Pu'u Kapua'i to West Loch, adding that "Hunehune Gulch, Kaloi Gulch, and Honouliuli Gulch are migratory routes used by the pueo to go from mountain to sea to court, mate, forage, and raise their brood." He also noted *pueo* are not forest dwellers, preferring "scrub, open fields/dirt landscapes with some grass." He stated that the proposed project will "encroach on prime pueo habitat—considered to be graded A+—"a ten (10)"—when it comes to the degree of pueo habitat in use on this project site."

Mr. Berg also stated that the project site is "inhabited by the *ōpe'ape'a* at various times of the seasons." The *ōpe'ape'a* or Hawaiian hoary bat was listed as an endangered species under the Endangered Species Conservation Act of 1969. Mr. Berg noted that in 1910, the State of Hawai'i documented *ōpe'ape'a* within a half-mile of the project area. *ōpe'ape'a* is "the only land mammal native to the Hawaiian archipelago" and is found on all of the main Hawaiian islands except for Ni'ihau (DLNR 2005:3-13).

Mr. Berg stated his concern that the "property in question will not receive the proper protocol to conclude no endangered species inhabit the area." He recommended that "a thorough and complete protocol is adopted to repeat the inventory exercise for pueo and *ōpe'ape'a* over the course of a calendar year would be in order so the project does not inadvertently contribute to more endangered species habitat loss." He also recommended consulting with Dr. Melissa Price and Dr. Javier Cotin of the Project Pueo Biologist Team and DOFAW Biologist Afsheen Siddiqi regarding *pueo* protocol.

Mr. Berg also expressed his concern for the possible negative aspects of lighting operations at an adjacent parcel which may reflect off of a solar panel into "the flight patterns of migrating birds and the *ōpe'ape'a* and *pueo* in particular need to be addressed."

The cultural impact assessment acknowledges the role of *pueo* as one of the most important *'aumākua* gods and ancestral deities of the family (Valeri 1985:19, 21). While *ōpe'ape'a* are rarely documented as *'aumākua*, they fit the intersection of classes of animals (mammal and bird) and intersection of two domains (air and land) that would make them an appropriate manifestation of the *'aumākua*. (Valeri 1985:23). Without question both *pueo* and *ōpe'ape'a* are greatly celebrated in the *mo'olelo* of Hawai'i's past.

No accounts of hunting have been identified in association with this project area.

#### 8.4.1.4 Earth Resources

No traditional use of the stones (or soft sediments) within the project area has been documented.

#### 8.4.1.5 Plant Resources

Vegetation composition within the project area has been significantly impacted by human activities with the result that the overwhelming majority of the vegetation is exotic. Today the project area is largely covered with *haole koa* (*Leucaena leucocephala*) and exotic grasses. *Wiliwili* (*Erythrina sandwicensis*), sweet acacia or *klu* (*Acacia farnesiana*), and *kiawe* (*Prosopis pallida*) were also observed within the project area. No evidence of traditional gathering practices in the project area or vicinity was encountered.

Ms. Paglinawan stated that as a result of the development of the *moku* of 'Ewa including the *ahupua'a* of Honouliuli, "we destroyed the habitat of the *ao kuewa* which is the *wiliwili* trees."

She recommended planting “a wall of trees” surrounding the proposed project area which would provide a home for the displaced spirits. She also discussed the types of plants that were previously found in the area which include *noni* plants, coconut trees, *lauhala* trees, and ‘*ulu*’ trees. She noted that these plants were “very plentiful but sparse not like a big grove where it’s like a park of trees, it was interspersed throughout.”

#### 8.4.1.6 Trails

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. Early historic maps depict a trail that branches off the cross-*ahupua‘a* trail into the uplands in the Pālehua area. The 1825 Malden map (see Figure 7) shows a trail extending into the Pālehua area a couple hundred meters to the southwest of the project area. A 1919 map (see Figure 16) shows an unimproved road alignment just south of the project area, understood as the Pālehua Road, approximating a traditional Hawaiian footpath into the uplands, on the north slope of Pu‘u Makakilo and a less formal trail into the uplands skirting the west side of Pu‘u Kapua‘i to the west of the project area. However, a 1922 map (see Figure 17 and Figure 18 showing annotations), shows the Pālehua trail as arcing through the western portion of the project area before arcing north of Pu‘u Makakilo. This trail may have always been somewhat braided. The trail appears to only be depicted on the 1922 map (see Figure 17 and Figure 18) and appears to have been largely under Sugar Cane Field 30 in the 1925 map (Figure 19). This trail was not identified on the ground in either of the AIS studies of this area (Dega et al. 1998 and Welser et al. 2019). Access into the southeastern Wai‘anae Range today is facilitated by Makakilo Drive. Development of the present project area is suggested to have no adverse impact to traditional Hawaiian trails or access to upland resources.

Interviewee Lynette Paglinawan stated that “this area where the University [of Hawai‘i West O‘ahu] is located has a lot of trails that go from *mauka-makai*, come from Honolulu going towards Nānākuli.” She noted that “spirits travel on ancient trails” which they use to “go from *mauka* going down to *makai*.” She added that these “ancient trails are still in use,” noting that people who live in homes that have been built on or near these ancient pathways have experienced “strange happenings” which she believes are due to the ‘*uhane*’ that still use these ancient trails to travel from *mauka* to *makai*.

#### 8.4.1.7 Wahi Pana

While Pu‘u Kapua‘i (located 0.5 km to the northwest) and Pu‘u Makakilo (located 1.2 km to the southwest) are certainly prominent, they are not particularly “storied” places. They are some distance away.

Kalo‘i Gulch is arguably a more renowned *wahi pana* with a number of vignettes regarding a “Waihuna” or “Punahuna” hidden spring. It was also noted that the hidden spring “had been one of the principal sources of water for all that country, which was quite heavily populated [...]” Historic maps indicate a spring located approximately 2.2 km to the north. It is believed that a significant spring may have been identified during an inventory survey for a neighboring Pālehua East B project (Tulchin and Hammatt 2005). The project area per se would not appear to merit consideration as a *wahi pana*.

#### **8.4.2 The Extent to which Traditional and Customary Native Hawaiian Resources will be Affected by the Proposed Action**

While acknowledging Mr. Berg's concern for *ʻōpeʻapeʻa* and *pueo* as a cultural concern, in addition to a concern for endangered species, the impact of the project on these natural populations, if any, is suggested as appropriately a matter for zoological analysis.

#### **8.4.3 Feasible Action, if any, to be Taken by the LUC to Reasonably Protect Native Hawaiian Rights**

In order to evaluate any possible adverse impact to cultural resources it is recommended that consideration of review of the biological study pertaining to populations of *ʻōpeʻapeʻa* and *pueo* be undertaken. With that possible exception, no adverse impact on cultural resources or practices is anticipated. No other customary resource has come to light in the historic background research or in the consultation outreach to 70+ individuals and NHOs and Mr. Berg was the only party to express concern for the *ʻōpeʻapeʻa* and *pueo*.

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# Appendix A Written Testimony from Tom Berg

August 19, 2019

TO: Mr. Kellen Tanaka  
Cultural Researcher  
Cultural Surveys Hawaii, Inc.  
41-1537 Kalanianaʻole Hwy., Suite 204  
Waimanalo, Hawaii 96795

FROM: Tom Berg  
91-203 Hanapouli Circle  
Ewa Beach, Hawaii 96706  
Phone: 808-685-1932  
Email: tomberg00@yahoo.com

RE: CULTURAL IMPACT ASSESSMENT (CIA) FOR THE AES WEST O'AHU SOLAR PLUS STORAGE PROJECT, APPROXIMATELY 80-ACRES

AREA: TAX MAP KEY (TMK) 9-2-002.007, OWNED BY THE UNIVERSITY OF HAWAII (UH)

Aloha Mr. Kellen Tanaka,

My name is Tom Berg, and I am aware that a solar farm has been proposed on a pueo foraging and breeding ecosystem and how that solar farm may have potential impacts to cultural resources, cultural practices, and beliefs as a result of the proposed project (AES West O'ahu Solar Plus Storage). This project site is also inhabited by the 'Ōpe'ape'a at various times of the seasons.

I have two areas of concern that I would appreciate you taking into consideration for the Cultural Impact Assessment (CIA)- they are:

The State of Hawaii Department of Land and Natural Resources (DLNR) and the United States Department of Fish and Wildlife Service (USFWS) have developed a protocol to conduct biological surveys to inventory for endangered species that are considered sacred- of great spiritual value, and these relations are known as 'aumakua- and of them, are the pueo (Hawaiian owl) and the 'Ōpe'ape'a (Hoary bat) that are being systematically extirpated due to poor, inadequate, faulty, Environmental Assessments (EA) and or Environmental Impact Statements (EIS) that lack proper protocol.

A protocol is defined as the methodology an observer undertakes when performing the biological survey for the property to be developed. This protocol is to be deployed on the site to ensure that prior to development, it can be concluded the property did not serve endangered species- or if found, mitigated as the law requires.

My concern is this property in question will not receive the proper protocol to conclude no endangered species inhabit the area- when they are indeed there- 'you just have to know when and where to look.' For instance, what protocol will be deployed to determine if the population of both the pueo and 'Ōpe'ape'a are served by habitat on the property? Five points to address are:

1. Who will look for the pueo and 'Ōpe'ape'a on the land? What is their expertise and qualifications as observers?
2. Did the observation to inventory for the species transpire before sunrise and after the sunset periods when the 'Ōpe'ape'a and pueo are most active and can be recorded?

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3. Did the observer conduct the biological survey whereby the inventory for the species was repeated year-round over the wet and dry seasons?
4. What tools were used- visual aids in the field – techniques to identify the species while observing/conducting the inventory?
5. Was the inventory to assess and survey for pueo and 'Ōpe'ape'a done completely on foot- or was a vehicle used?

The State of Hawaii has documented 'Ōpe'ape'a (1910) sighted within a half-mile of the project (State Office of Planning) which begs the question: When was the last population survey for 'Ōpe'ape'a in the proposed project area done?

Records illustrate the pueo being most abundant on the very slopes where this project is slated (Pu'ukapuai to West Loch) per earliest colonial contact. Hunehune Gulch, Kaloi Gulch, and Honouliuli Gulch are migratory routes used by the pueo to go from mountain to sea to court, mate, forage, and raise their brood. This solar project- is slated in the heart, direct line of the pueo and use of these gulches.

Pueo love scrub, open fields/dirt landscapes with some grass- and as such, they are not forest dwellers. This project site is to encroach upon prime pueo habitat-considered to be graded A+ - "a ten (10)" - when it comes to the degree of pueo habitat in use on this project site.

The pueo has a direct connection to Native Hawaiian family lineage in Ewa Beach-- with the Michael Lee family -- and the pueo is their 'aumakua and these accounts with the pueo are documented at the State Archives Building in Honolulu going back over seven generations for the Lee family. <https://www.youtube.com/watch?v=sfW8FG1Xil>

To elaborate on my first concern, the DLNR and USFWS developed a protocol to properly account for 'Ōpe'ape'a and pueo and stated that a survey to inventory for them should be executed over the changing seasons year-round. This practice, to deploy the protocol, year-round, is not being done in either the EA and/or EIS review processes. Furthermore, the inventory exercise conducted by the observer is to be undertaken after sunset and before the sunrise periods, otherwise:

"The observer is more apt to miss the species since the pueo and 'Ōpe'ape'a are migratory- transient in nature and rotate plots with the changing seasons." (Wildlife Biologist Jenny Hoskins, USFWS; August 18, 2016, UHWO Town Hall Meeting on Pueo.). <https://www.youtube.com/watch?v=i1Tm98gpmcQ>

A population distribution survey for pueo was completed recently for the island of Oahu that included the area of UHWO (University of Hawaii West Oahu Mauka Segment) where I and Mike Lee have relations with the pueo. The observer began their inventory exercise December 31, 2017, and terminated it early August of 2018. The pueo that inhabited UHWO per my experience came to the property throughout the months of late August through September, October, November, and vacate late December. However, the survey didn't include those months for observation.

[https://docs.wixstatic.com/ugd/35ff1d\\_864845984aec47e58618e97ca46e578f.pdf](https://docs.wixstatic.com/ugd/35ff1d_864845984aec47e58618e97ca46e578f.pdf)

Therefore, the survey mistakenly concluded no pueo or its habitat existed on the property at UHWO- because the observer simply avoided conducting the inventory exercise on the property during the months when the pueo were historically and traditionally known to be most prevalent.

#### Breeding ecology surveys

To collect information on Pua breeding activities, we conducted 121 surveys at six sites between December 10, 2017 and August 10, 2018. Following the methodology of our 2017 distribution survey, breeding activity surveys started 30 minutes before sunset and ended at civil twilight. We recorded any courtship display, prey provisioning, hunting behavior, and vocalizations, and tracked Pua to their destination or point of origin. In addition, we included behavioral data from our 26 daily activity surveys, and from 30 of our 135 observation surveys in 2017 those which were conducted in our study area (Fig. 2). To standardize survey length, only observations recorded during the hour following sunrise or hour preceding sunset of daily activity surveys were used for this analysis. Data that observations were incidental/recorded.

I have stipulated, that had the survey exercise at UHWO been conducted year-round as recommended as the proper protocol to inventory for pueo, the results of the survey would have reported a pueo ecosystem thriving on the property and many Native Hawaiians' 'aumakua would be protected rather than purged from the property.

Your assurances a thorough and complete protocol is adopted to repeat the inventory exercise for pueo and 'Ōpe'ape'a over the course of a calendar year would be in order so the project does not inadvertently contribute to more endangered species habitat loss.

Here is a video of Mike Lee performing a chant to the pueo on January 1, 2018 at UHWO- note:

UHWO / UH Board of Regents / DLNR / Attorney General, have stated that the pueo you see in the video- all taken at UHWO- "DID NOT and HAVE NOT EVER EXISTED THERE"- meaning, that I and Mike Lee fabricated the pueo recordings.  
<https://www.youtube.com/watch?v=d9yoxlGeNCA>

This claim by government entities, that pueo never used the property at UHWO and no habitat ever existed there to serve pueo, is not only an affront to our State, its people, but also a violation of the law- HRS Ch. 343 that protects endangered species and their habitat.

Again, this claim by Hawaii's governor- the Ige Administration, that absolutely no pueo used UHWO property, is not only patently false- but a deliberate act of Administrative Bias, Institutional Prejudice- and a willful act of Malice- to cause direct harm to an endangered specie- a 100% violation of Article XII, Section VII of Hawaii's State Constitution that protects Native Hawaiian Religious and Cultural Practices and their 'aumakua ---- <https://www.youtube.com/watch?v=d9yoxlGeNCA> --

This is significant, in that UH to this day, denies the pueo had any habitat on the UHWO Mauka Segment property when the evidence depicts otherwise. Will you too- be orchestrating another fake EIS or EA for this solar farm project that falsifies true characteristics of the property and misrepresents it's significance to sustain endangered species?

My other concern has to do with the illumination of property owned nearby by Monsanto that the AES West Oahu Solar Project may interface with. The lights when activated by Monsanto on its fields may have a negative effect on many avian species. How a solar panel may be reflecting Monsanto's lighting operations into the flight patterns of migrating birds and the 'Ōpe'ape'a and pueo in particular needs to be addressed.

Please reference the lights in operation next to your proposed solar farm operations: <https://www.youtube.com/watch?v=S8Ba0zpSBI0>

*Your favorable review of my concerns in the CIA and any answers to my inquiries that you can provide are greatly appreciated.*

Mahalo Nui,

*Tom Berg*

# Attachment H

## Site Plan and Drawings